

# RIL-C IFM METHODOLOGY ELEMENT/RIL-C NORTH AND EAST KALIMANTAN PERFORMANCE METHOD MODULE FIRST ASSESSMENT REPORT



Document Prepared by Environmental Services, Inc.

<b>Methodology Title</b>	VM0035 RIL-C IFM Methodology (Reduced Impact Logging Practices to Reduce Carbon Emissions)	
	VMD0047 RIL-C North and East Kalimantan Performance Method Module	
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	Methodology	X
<b>Methodology Category</b>	Methodology Revision	
	Module	X
	Tool	
<b>Sectoral Scope(s)</b>	14, Improved Forest Management (IFM) – Reduced Impact Logging	

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**Summary:**

Environmental Services Inc. was commissioned by The Nature Conservancy to perform the first assessment of the new “Reduced Impact Logging Practices to Reduce Carbon Emissions” (RIL-C) Methodology, and RIL-C East Kalimantan Performance Method Module in accordance with the VCS Methodology Approval Process, VCS Standard, VCS Program Guide, and the VCS AFOLU Requirements.

The methodology provides a means to quantify carbon emissions reductions through the implementation of reduced impact logging practices. Post-harvest impacts are evaluated according to an approach which utilizes set additionality benchmarks for each emission source (i.e. felling, skidding). The emissions reductions are determined as the difference between project sources and benchmark sources. The East Kalimantan Performance Method Module describes the accounting methods of the RIL-C Methodology for a specified location of East Kalimantan, Indonesia.

The purpose and scope of the methodology element first assessment was to evaluate whether or not the methodology and module were prepared in line with VCS program requirements. ESI’s assessment included a detailed review of eligibility criteria, baseline approach, additionality, project boundary, emissions, leakage, monitoring, data and parameters, and adherence to the project level principles of the VCS program (relevance, completeness, consistency, accuracy, transparency and conservativeness). ESI’s assessment also included a detailed analysis of the methodology, literature reviews, technical reviews and The Nature Conservancy’s responses to all non-conformity reports (NCRs), clarifications (CLs) and opportunities for improvement (OFIs).

The ESI assessment team identified 98 NCRs/CLs/OFIs. All were addressed satisfactorily by The Nature Conservancy during the methodology assessment process. These NCRs and CLs provided necessary clarity to ensure that the methodology was in compliance with VCS rules and requirements. ESI confirms all methodology assessment activities, including objectives, scope and criteria, level of assurance and the methodology adherence to the VCS Program and VCS Standard Version 3 (and associated updates), as documented in this report, are complete. ESI concludes without any qualifications or limiting conditions that the RIL-C Methodology (DRAFT 7Dec2015.docx) and Performance Method module (DRAFT 7Dec2015.docx) meet the requirements of the VCS. ESI recommends that VCSA approve the methodology element and module.

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## 1 Introduction

### 1.1 Objective

The purpose of this methodology element assessment report was to evaluate the likelihood that implementation of the methodology element and associated module would result in accurate calculations and appropriate eligibility criteria of the GHG emission reduction/removal program (ISO 14064-3:2006). This report summarizes the findings of the first assessment of the Verified Carbon Standard (VCS) double approval process for a new VCS AFOLU (Agriculture, Forestry, and other Land Uses) methodology element, referred to as the “Methodology”. The Nature Conservancy, Tropical Forest Foundation referred to as the “Methodology Developer”, has commissioned Environmental Services Inc. (ESI), referred to as the “Assessment Team” to perform an assessment of the new RIL-C Methodology element “Reduced Impact Logging Practices to Reduce Carbon Emissions”. The assessment of the methodology was performed in conjunction with assessment of an accompanying module (RIL-C Performance Method Module) which serves to provide support for application to a specified geography in East Kalimantan, Indonesia. The module is based on a case study<sup>1</sup> (Griscom et al. 2004) performed to set the baseline scenario from specific impact parameters (details on determination of the baseline scenario can be found in section 3.6).

This report presents the findings of a qualified assessment team of auditors and experts in methodologies for GHG emissions or who have assessed the methodology element for compliance under the applicable VCS rules. This methodology assessment report focuses on suitability of the methodology element and associated module for application to IFM (Improved Forest Management) and RIL (Reduced Impact Logging) projects, but specifically allowing for the accurate quantification of emissions from reduce impact logging practices. As the methodology and module were assessed simultaneously, hereafter they are collectively referred to as the “Methodology Element” unless otherwise specified.

### 1.2 Summary Description of the Methodology

The methodology utilizes a performance based method to reduce carbon emissions through the implementation of reduced impact logging practices. Logging practices are broken into three emissions source groups: timber felling, skidding and hauling. A wide range of reduce impact logging impact practices are permitted and are evaluated for emissions reductions based on their impacts post-harvest. This performance based method ensures emissions reductions are quantitative and based upon the effectiveness of the reduce impact logging practices. Emissions reductions are the result of the association between surrogate impact parameters and a set crediting benchmark for each emissions source group (timber felling, skidding and hauling). Thus, the emissions reductions are determined as the difference between project sources and benchmark sources.

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<sup>1</sup> Griscom, B., Ellis, P., Putz, F., 2014. Carbon emissions performance of commercial logging in East Kalimantan, Indonesia. *Global Change Biology* 20: 923-937

As harvest levels remain the same in baseline and project scenarios, the harvested wood products pool is not taken into consideration and leakage assumed zero. Harvest related emissions are of concern in this methodology and improved growth as the result of harvesting is ignored

The methodology element serves as the framework for the module (RIL-C Performance Method Module) to set conditions for implementation of reduce impact logging practices in East Kalimantan, Indonesia.

## 2 Assessment Approach

### 2.1 Method and Criteria

This assessment is based upon standard auditing techniques in line with VCS Requirements to assess the correctness of the information provided. The assessment of a proposed methodology element and module are guided by ISO 14064-3:2006 (E), “the systematic, independent and documented process for the evaluation of a greenhouse gas assertion in a GHG project plan against agreed validation criteria.” In accordance with VCS rules, a methodology assessment encompasses applicability conditions, project boundary, procedure for demonstrating additionality, procedure for determining baseline scenario, baseline emissions, leakage, quantification of net GHG emission reduction and/or removals, monitoring, data and parameters, and relationships to approved or pending methodologies.

The criteria will follow the VCS Program documents located at <http://v-c-s.org/program-documents>. These documents include the following:

- VCS Program Guide (v3.5, October 2013)
- VCS Standard (v3.4, October 2013)
- Program Definitions (v3.5, October 2013)
- Agriculture, Forestry and Other Land Use (AFOLU) Requirements (v3.4, October 2013)
- Methodology Approval Process (v3. 5, October 2013)

During the course of this assessment of the proposed methodology, revisions to guidance documentation were issued by VCS in October 2013. VCS rules (Methodology Approval Process v3.5, October 2013) allow for a 6 month grace period for implementation by methodology developers and validation/verification bodies. Due to the timeliness of the guidance issued, the methodology element and module were written to adhere to the previous update. The assessment team performed the assessment according to program guidance documentation released in October, 2013.

As this is an assessment of a new methodology element and module, the specific scope included an assessment of all components and how they fit into the broader VCS vision. The assessment team has also assessed whether all provisions of the proposed methodology have been prepared in line with guidance under the VCS Program, specifically whether the following criteria are adequate and appropriate per Section 4 of VCS AFOLU Requirements Version 3.4:

- a) Eligibility criteria
- b) Baseline approach
- c) Additionality

- d) Project boundary
- e) Emissions
- f) Leakage
- g) Monitoring
- h) Data and parameters
- i) Adherence to the project-level principles of the VCS Program

## 2.2 Document Review

The methodology element was submitted to Environmental Services Inc. in December, 2013. The assessment team conducted a detailed review of important methodology documentation (Table 1) against the criteria of the VCS guidance documents listed in Section 3.1. Other items the assessment team reviewed were completeness, logical coherence, and consistency with current best practices for quantification of emissions reductions. A complete list of methodology documentation received for assessment can be found in Appendix A.

Name	First version assessed	Final version assessed
"RIL-C IFM Methodology"	RIL-C IFM Methodology DRAFT Dec2013.docx	RIL-C IFM Methodology DRAFT 7Dec2015.docx
"RIL-C Performance Method Module"	RIL-C Performance Method Module DRAFT Dec_2013.docx	RIL-C Performance Method Module DRAFT 7Dec2015.docx
<i>Carbon emissions performance of commercial logging in East Kalimantan, Indonesia</i> , journal article from "Global Change Biology"	gcb_12386_proof_corrected v1.pdf	Griscom Ellis Putz 2014_logging emissions performance Ekali_GCB.pdf
Winrock Logging Report, study details	Winrock_FINAL_logging_report_TNC_04-13-2011.pdf	Same
Data submitted to assessment team from above study	Summary Source Data_Impact Parameters and ERs_April 25_2014.xlsx	Same

Table 1. Important documents received from methodology developers.

## 2.3 Interviews

The objective of the interview process was to resolve requests for clarifications, corrective action and other outstanding issues which are required as part of the methodology assessment. After issuance of a round of NCRs/CLs, conference calls between the assessment team and the authors were arranged to reconcile understanding of the issues. As a guarantee of transparency in the resolution process, concerns raised and responses given were documented in greater detail, given in Section 3.5.

The official opening meeting was conducted on 6 December 2013 between representatives from the methodology developer with authority to approve the Methodology Assessment Plan; the Lead Validator and Forestry, Carbon, and GHG Services Director from Environmental Services Inc. Attendees were: Bronson Griscom (TNC Main Contact), Guy Pinjuv (ESI), Shawn McMahan (ESI) and Janice McMahan (ESI). The agenda of the meeting consisted of review and mutual understanding of the components in the Methodology Assessment Plan including; potential revisions, project timeframes and the standardized processes to solicit feedback among the parties.

The methodology assessment audit process began with confirmation of the Assessment Plan. Upon confirmation of the plan, the assessment leads to the issuance of Round 1 of Non-conformance Reports (NCRs), Clarification Requests (CLs), and Opportunities for Improvement (OFIs). A categorical breakdown of findings is outlined in detail in Section 2.5

Additional interviews were arranged, as needed, after the authors addressed NCRs/CLs in subsequent versions of the methodology and reviewers required additional clarification on changes applied. The table below lists the individuals involved in the major meetings and their organizational affiliation for this first methodology assessment.

## 2.4 Assessment Team

The assessment team consisted of qualified individuals (Table 2) linked to the sectoral scope and technical areas of the methodology. The composition of the assessment team operated at several qualification levels:

- Lead Assessor (L)
- Assessment Team Member (TM)
- Assessment Expert (E)
- Assessment QA/QC (QA/QC)

Team Member	Expertise/Experience
Dr. Guy Pinjuv (L)	Senior Scientist. Expertise lies in forest carbon growth modelling, carbon project development, forest offset project validation and/or verification and forestry related methodology assessments. Dr. Pinjuv is responsible for team management, client coordination, and performance of senior technical project management.

Shawn McMahon (TM)	Senior Project Manager. Approved to conduct third-party carbon sequestration validations and verifications under VCS. Specializes in third-party carbon offset validations and verifications, carbon sequestration project development, development and implementation of management plans for enhancement of carbon stocks, development of carbon and environmental asset tracking programs, and team management.
Stewart McMorrow (TM)	Senior Scientist. Responsible for project management, client coordination and technical aspects; vegetative community characterizations, mitigation area monitoring studies, forest inventories and assessments, and GHG validations/verifications associated with agricultural, forestry and other land use sectors.
Eric Jaeschke (TM)	Project Forester and Remote Sensing Specialist. Duties include technical GIS and remote sensing support for carbon offsetting projects through validations/verifications under various rule sets, data analysis, and field validations.
Scott Sager (E)	VCS AFOLU IFM Expert. Responsible for technical review of the IFM methodology assessment. Experienced in a broad range of forest management related work and is currently the forest manager for the Austin Cary Forest at University of Florida.
Janice McMahon (QA/QC)	GHG Services Division Director for ESI. Specializes in natural resource management projects including carbon sequestration feasibility assessments, development/implementation of management plans for enhancement of ecosystem services, assessment of GHG emissions and reductions, development of environmental asset tracking programs, GHG validations and verifications, endangered/ threatened species assessments, habitat management plans, and integrated ecosystem services plans. Responsible for leading the Forestry, Carbon, and GHG Services Division, which includes client and team coordination, proposal preparation and review, marketing presentations, maintenance of ESI’s ANSI accreditation and management System, and quality assurance and quality control for projects in the United States as well as the international market.

Table 2. Assessment team members and relevant expertise/experience.

## 2.5 Resolution of Findings

The process of methodology assessment involved 2 formal rounds of assessment by the assessment team and resulted in a methodology version which was in conformance to VCS rules. Findings related to corrective action, clarification requests or other findings were resolved during communication between the assessment team and the methodology developer. More specifically, where noted by the assessment team, methodology developers implemented corrective actions by amending the methodology element components and providing written clarification responses. Types of findings were characterized in the following manner:

**Non-Conformity Reports (NCRs)** were issued as a response to material discrepancies in a part of the methodology and generally fell into one of the following categories:

- Non-conformity to VCS guiding documents listed in Section 2.1
- Internal consistency among sections was lacking
- Mathematical formulae in sections were incorrect
- Additional information was required by the assessment team in order to confirm reasonable assurance for compliance

**Clarifications (CL)** were issued when language within a section needed extra clarification to avoid ambiguity or to clarify an assertion made by the methodology developer.

**Opportunities for Improvement (OFI)** were issued to the methodology developer when an opportunity for improvement was identified.

Important findings and points of discussion from the methodology element are presented (Table 3). Detailed summaries of each finding, including the issue raised, responses and final conclusions are provided in Appendix A.

Finding/Discrepancy	Assessed	Resolution
<p>The AFOLU Requirements v3.4 indicate that for Reduced Impact Logging (RIL) with no or minimal (&lt;25%) effect on total timber extracted, that dead wood is a required pool. It is understood that dead wood may be included in the above ground carbon pool, but this is not clear.</p> <p>NCR- Please clarify why the project is excluding dead wood, or please explain how dead wood is being included in the carbon pools.</p>	<p>VCS AFOLU Requirements Version 3.4 section 4.3, VCS AFOLU Requirements Version 3.4 (IFM) section 4.3.14</p>	<p>The pool has been renamed "above ground carbon stocks", and the pools table in the framework document has been revised and expanded to clarify how the accounting of various pools, including dead wood, is factored into direct emission reduction calculations from this "source." We have additionally provided a schematic to illustrate the accounting. Further, the subscript AGB has been changed to AGC to reflect this definitional change. Per email from Andrew Beauchamp, VCS, on Jul 25 2014, the dead wood pool need not be broken out in accounting, only that it must be included in accounting, as the current framework of calculation of emission reductions does. The pools table in the framework document is followed by the added explanation below: "Note that above ground carbon stocks include both live and dead (standing and lying) pools. Emission reductions calculated</p>

		<p>for the aboveground carbon pool, represent transfer of biomass carbon from live trees to dead wood followed by steady emissions via decomposition, without explicitly breaking out accounting of these elements. Emissions from dead wood included in accounting is from dead wood produced during harvest (i.e. slash and new standing dead from harvest and collateral damage). The methodology conservatively does not account for changes in pre-existing standing and lying dead wood after harvest; these stocks would be expected to be greater in the with-project case post-harvest due to less impact from RIL-C practices; the applicability condition that RIL practices implemented as part of the project activity do not include slash management, salvage harvesting or other planned removal of dead wood, further assures this assumption."</p> <p><b>Finding Closed:</b> The methodology now includes dead wood in the accounting structure of the framework document and supporting.</p>
<p>The methodology shall establish criteria and procedures for monitoring, and specify the data and parameters to be monitored, as set out in the VCS Standard.</p> <p>Parameter SKIDdam,t is monitored by sampling along skid trail sections measured above. On the sampled skid trail network or skid trail network sections, systematically sample damaged trees using fixed area rectangular plots oriented along the skid trail axis with width equal to observed skid trail width. A minimum</p>	<p>VCS AFOLU Requirements Version 3.4, section 4.8.1</p>	<p>Text was added to section 5.2.2 of the East Kalimantan module document to clarify these methods. Note that since the sample size was increased to a full tally of trees <math>\geq 20</math> cm DBH damaged by skidding within all skid trail networks mapped, the methods and equation are simpler than that described in Griscom et al. (2014). This is logical because our SKID parameter is a more efficient (more quickly measured) variable than the full inventory of skidding damage conducted within skid trail plots by Griscom et al. (2014).</p> <p><b>Finding Closed:</b> Information in Section 5.2.2 of the East Kalimantan module document has been added to clarify the location of the sampling plots relative to the skid trails.</p>

<p>of 20 plots will be sampled from skid trails in each annual harvest block. Within sample plots, count all damaged trees greater than or equal to 20 cm DBH to produce parameter Treedam,t,i,j. Damaged trees are trees that have fallen to the ground, been uprooted or with trunk snapped below the first branch. Note that any felled harvest trees encountered in the immediate skid trail are not included in the counts.</p> <p>Please define the minimum distance between sampling plots used for SKID dam,t. Please better define the location of the sampling plots relative to the skid trails. Should the plots include the skid trail? The description indicates oriented along the axis of the skid trail. Please better explain this aspect. It is suggested that a simple definition of the plot length be included so that there is no question of this metric.</p>		
<p>Please clarify how a verifier can confirm that harvest levels have not changed when a 10-year management plan is not provided.</p>	<p>General Technical Expert Review Comments</p>	<p>The methodology development team removed the references (in both framework doc and East Kalimantan module) to "substantial departures (&gt;20%) from planned harvest volumes." In the framework document they replaced this language, in the Applicability Conditions section, with the following text: "The project activity does not involve a deliberate reduction in harvest levels. The criteria to demonstrate this applicability condition are provided in the applicable performance method module." In</p>

		<p>the East Kalimantan module they replaced references to departures from planned harvest volumes with specified bounds for "normal" harvest intensity that must be maintained. We made these changes, to avoid a requirement to follow management plan, because our recent analysis of the history of logging levels in East Kalimantan (see "vol calcs by year" worksheet in 'RKT data vol calcs' workbook) shows that BAU harvest levels are extremely variable, despite the fact that all concessionaires must submit long-term management plans that specify consistent harvest levels over 30 year rotation system for entire concession. In other words, actual bau harvest levels are extremely unpredictable, and rarely follow (i.e. often fall below) what is planned out in management plans. The development team believes these have to do with vagaries in both the market for timber and the process for acquiring logging permits - which are inherently unpredictable and we do not think it is reasonable to think that project developers can escape these uncertainties. Thus, the only practical way is to enforce the intent that RIL-C must not involve a "deliberate reduction in harvest levels" is require that project developers maintain a "normal" range of harvest intensity based on actual historical logging intensity data (rather than management plans). The methodology development team attached an excel workbook (RKT data vol calcs) showing the calculation of this lower threshold for harvest intensity as bottom end of one standard deviation on historic mean volume across 15 logging concessions in East Kalimantan. The methodology development team also submitted to the assessment team an upper harvest intensity boundary in the form of a lower tree diameter limit (50 cm dbh- the current legal limit). The methodology development team notes that they are not aware of a scenario in which implementing RIL-C would cause a change in harvest</p>
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		<p>levels, since RIL-C practices are by definition those that do not change harvest volumes/intensity.</p> <p><b>Finding Closed:</b> The methodology framework document and module now provide a "historic range" to verify a deliberate reduction in harvest levels. Under the current regional circumstances, with logging permits being inherently unpredictable, the proposed method seems reasonable from both an application, and verification standpoint.</p>
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Table 3. Main assessment team findings and resolutions.

### 3 Assessment Findings

The proposed methodology was found to be in full compliance with the principles set out in the VCS Standard. Specifically, the methods for determination of emissions from reduce impact logging practices contained in this methodology are consistent with best practice and scientific consensus. Applicability conditions are appropriate for the project activities directed by the methodology and the quantification procedures set out. Procedures are included in the methodology to quantify emissions for all carbon pools and sources included within the project boundary per the VCS Standard. Baseline scenarios are defined in accordance with AFOLU Requirements and effectively account for emissions using a performance method. The procedure for demonstrating additionality appropriately uses a performance method which ensures that "impact parameters" are set below "additionality benchmarks". Quantification of GHG emissions reductions is handled for the specific geography as a function of baseline and project emissions.

Guidance is provided for development of standardized baselines and proxy emission relationships for application to other geographies. The intention of the methodology developers is to expand the geographic scope by developing and validating new performance benchmarks for new RIL-C Performance Method modules.

The only external tool the methodology references is VCS approved Non-Permanence Risk tool, which is required by the VCS AFOLU Requirements Version 3.4, section 4.7.3 . Verified Carbon Units eligible for issuance within the module framework are calculated by subtracting the VCS AFOLU pooled buffer account contribution from the Net GHG emissions reductions in year  $t$ , referencing the project's risk rating at time  $t$  using the most recent version of the VCS AFOLU Non-permanence Risk Tool. The validation team assessed that this tool is both required and used appropriately within the methodology.

The assessment process focused on the principles set forth by the VCS Standard:

- The methodology element adheres to the principle of relevance by selecting the GHG sources, GHG sinks, GHG reservoirs, data and methodologies appropriate to the needs of the VCS Program.

- The methodology element adheres to the principle of completeness by including all relevant GHG emissions and removals, and including all relevant information to support criteria and procedures.
- The methodology element adheres to the principle of consistency by enabling meaningful comparisons in GHG-related information.
- The methodology element adheres to the principle of accuracy by reducing bias and uncertainties as far as is practical.
- The methodology element adheres to the principle of transparency by disclosing sufficient and appropriate GHG-related information (i.e. giving sufficient and appropriate justification of procedures and criteria) to allow intended users to make decisions with reasonable confidence.
- The methodology element adheres to the principle of conservativeness by using conservative assumptions, values and procedures to ensure that net GHG emission reductions or removals are not overestimated.

### 3.1 Relationship to Approved or Pending Methodologies

This assessment was performed on a proposed methodology which (as of this report submission) is the only available to account for emissions reductions from reduced impact logging as a project activity.

### 3.2 Stakeholder Comments

The RIL-C methodology framework and module were open for public comment from 14 January 2014 until 13 February 2014. Three public comments were received. Comments, responses, and assessment team responses are listed in Table 4. All comments have been appropriately addressed per VCS Methodology Approval Process V3.4 (section 3.6.6).

Source	Comment	Development Team Response	Assessment Team Findings
Bruce French, U.S.A,  Submitted: via email	I respectfully suggest you explore linking-up with the International Biochar Initiative: <a href="http://www.biochar-international.org/">http://www.biochar-international.org/</a> and possibly Cornell University: <a href="http://www.css.cornell.edu/faculty/lehmann/research/terra%20preta/terrapretamain.html">http://www.css.cornell.edu/faculty/lehmann/research/terra%20preta/terrapretamain.html</a> . Doing so could enhance your efforts	An interesting idea; however, biochar is beyond the scope of our draft VCS RIL-C methodology. We have conservatively excluded the soils pool from calculations of baseline and avoided emissions.	This comment has been appropriately addressed. The development team has demonstrated the insignificance of the comment per VCS Methodology Approval Process V3.4 (section 3.6.6)

	regarding the “New Reduced Impact Logging Methodology” by incorporating biochar and terra preta into this (and other) VCS project(s).		
Simon Largo, Chile, Silva Ecosystems Services LLC.  Submitted: via email	Reduced Impact Logging practices that reduce Carbon Emissions (RIL-C) must include harvest planning practices (skids/roads) associated with an improved logging system such as: non-guyline yarding combined with a Cut-to-Length for medium topographic condition (35-100%). This combined yarding/forwarding method could be the optimum logging method for the maximum environmental protection in timber harvesting operations. I would like that you can consider this proposal as part of the RIL-C methodology.	We agree with this observation. Appropriate impact parameters will need to be developed and calibrated for each logging landscape through the development of geography-specific modules. In the case of East Kalimantan (the first geography-specific module included with the framework methodology), our skidding impact parameter (SKID) would capture the emissions reductions from the improved skidding technologies – specifically long-lining winching systems, which are the principle reduced impact skidding technology available in this region. As a more general observation, it is important to understand that RIL-C involves both “RIL-C MRV” (i.e. the draft VCS methodology, including geography-specific modules), and “RIL-C Practices”. Our RIL-C MRV methodology is designed to be “open source” – that is, it is designed to verify emissions reductions from a wide range of RIL practices, both those already exist (e.g. TFF RIL standard©) and those emerging to more specifically target emissions reductions (e.g. “RIL-C Practice guidelines” in development – which are not formally related to VCS RIL-C methodology). Also, it is important to be aware of a qualifier: there are limitations to the detection of emissions	This comment has been appropriately addressed. The East Kalimantan modules skidding impact parameter (SKID) would capture the emissions reductions from the improved skidding technologies – specifically long-lining winching systems, which are the principle reduced impact skidding technology available in this region. The suggestion can be used to describe other logging landscapes (and impact parameters) outside of East Kalimantan. The development team has demonstrated the insignificance of the comment per VCS Methodology Approval Process V3.4 (section 3.6.6).

		<p>reductions by our initial set of impact parameters. In other words, our initial set of impact parameters for the East Kalimantan module are conservative and will not detect all of the benefits from all potential RIL-C practices. While our impact parameters will detect most emissions reductions (e.g. those achieved by use of long-line winching technology), new impact parameters will need to be developed to detect some more nuanced emissions reductions practices (e.g. cutting lianas).</p>	
<p>Anonymous Technological Research Institute - IPT - São Paulo Brazil  Submitted: via online portal</p>	<p>Interesting method to estimate and reduce emissions from logging operations. Has it been tested? How does it work in tropical forests other than those of East Kalimantan, such as in Central and South America and Africa? Have specialists assessed it? Will such issues be addressed to in the coming webinar?</p>	<p>We are testing the draft VCS RIL-C East Kalimantan module with logging concessionaires in East Kalimantan now. While the draft framework VCS RIL-C methodology provides a framework for the development of modules for other logging landscapes (i.e. other countries and ecoregions), other modules have yet to be formally drafted. We are aware of initial efforts towards developing such modules in southern Mexico and eastern Peru.</p>	<p>This comment has been appropriately addressed per VCS Methodology Approval Process V3.4 (section 3.6.6). No changes were requested to the methodology or supporting module document.</p>

Table 4. Public comments, responses, and findings and resolutions.

### 3.3 Structure and Clarity of Methodology

The methodology has been presented in a logical fashion and appears in line with other approved VCS methodologies. The methodology framework contains all information necessary for project implementation and is in good structural agreement with the module. The body of the document contains relevant equations and background information where it is needed by the reader in appropriate sections. For instance, a procedural section in the module presents precise methods utilized for determination of impact parameters, crediting benchmarks and additionality benchmarks. The VCS template was properly employed and facilitated the assessment and all requirements of the template were reviewed.

The terminology used in the methodology is consistent with the VCS Program and GHG accounting and language chosen is precise. Specific key terms were used appropriately; must,

should, and may to indicate a firm requirement and permissible or allowable options, respectively. The notation of the methodology makes sufficient use of VCS rules and procedures. Overall, it is of the assessment team's opinion that the structure of the document meets the strict requirements of the VCS Program. Opportunities for improvement were offered for 4 items detailed findings in Appendix A.

### **3.4 Definitions**

The key terms defined in the methodology are presented clearly and appropriately in section 3 (definitions) at the beginning of the document for ease of use by project proponents. While the list of terms is not comprehensive, they are relevant to the methodology and ordered alphabetically. Definitions of key terms are presented concisely and assist the reader in comprehension for effective implementation of the methodology.

### 3.5 Applicability Conditions

Applicability conditions are appropriate for the project activities directed by the methodology and the quantification procedures set out and adhere to VCS Standard section 4.3.1. A key applicability condition of this methodology is that the project activity harvest levels are essentially the same as baseline harvest levels. This methodology assessment determined that the applicability conditions contained within the methodology are appropriate, adequate and in compliance with the VCS rules (Table 5). The results of the assessment are summarized:

Applicability Conditions	Assessment Team Findings
<p>1. The project activity does not involve a deliberate reduction in harvest levels. The criteria to demonstrate this applicability condition are provided in the applicable performance method module.</p>	<p>This condition is unique to this methodology and falls under several sections of VCS guidance documentation, specifically; VCS AFOLU Requirements Version 3.4 section 4.6, and VCS AFOLU Requirements Version 3.4 (IFM) section 4.6. The methodology framework document and module provide a "historic range" to verify a deliberate reduction in harvest levels. Under the current regional circumstances, with logging permits being inherently unpredictable, the proposed method seems reasonable from both an application, and verification standpoint. This applicability condition is entirely appropriate and written in a concise manner for project proponents to assess if conditions are met.</p>
<p>2. Both the project activity (involving authorized logging using RIL-C practices) and the baseline scenario (which is represented by the average-performing logging operation in aggregate from the applicable logging landscape; see below) do not involve conversion of forest to a non-forest land use/land cover (i.e. both represent forests remaining as forests, sensu IPCC GL 2006 ).</p>	<p>This condition is consistent with AFOLU Requirements section 4.2.3 that “The baseline and project scenarios for the project area shall qualify as forests remaining as forests, such as set out in the IPCC 2006 Guidelines on National GHG Inventories.”</p>
<p>3. RIL practices implemented as part of the project activity will not increase business-as-usual levels of impact on pre-existing dead wood stocks through slash management, salvage harvesting or other planned removal of dead wood.</p>	<p>This condition is consistent with AFOLU Requirements section 4.3.14 and methodology developers appropriately include the dead wood pool as a part of the aboveground live pool. The project activity is required by the methodology to not impact preexisting dead wood stocks but an expected reduction in slash input which is equal to the difference in aboveground live retained. In</p>

	short, the methodology uses a dead wood decay rate for estimating aboveground live as a function of the input to deadwood.
4. Project proponent must hold legal authorization, for all logging activities referenced in the project, from the relevant government authority through the crediting period.	This condition is consistent with AFOLU Requirements section 4.4.4, 2 that “Adherence to the legal requirements for forest management and land use in the area unless verifiable evidence is provided demonstrating that common practice in the area does not adhere to such requirements.”
5. The project area is within a “logging landscape” for which empirical measurements have been collected as the basis for crediting benchmarks, additionality benchmarks, and emissions reductions equations, which are available and validated. With GIS analysis, project proponents must demonstrate that their entire project areas are contained within the applicable logging landscape (defined in the referenced RIL-C Performance Method Module).	This condition is consistent with VCS Standard section 4.3.5 as the methodology establishes specific criteria for project proponents demonstrate that their entire project areas are contained within the logging landscape of the module they are referencing. The intention of the methodology developers is to expand the geographic scope by developing and validating new performance benchmarks for new RIL-C Performance Method modules.
6. The entire project area meets the definition of forest, either host country specific UNFCCC or FAO definition.	This condition is consistent with AFOLU Requirements section 4.2.5 that “The project area shall meet an internationally accepted definition of forest, such as those based on UNFCCC host-country thresholds or FAO definitions”.
7. Other geographies may develop similar benchmarks, documented and validated through incorporation of additional performance method modules. General requirements for applicable crediting/additionality benchmarks and proxy emission reduction relationships are [presented beneath existing Applicability Conditions in methodology].	Although not strictly an Applicability Condition, the assessment team evaluated expansion of the geographic scope. The geographic scope of the methodology can only be expanded by developing and validating new performance benchmarks, via incorporation of new RIL-C Performance Method Modules. Description was appropriately added to the methodology, and establishment of regionally-specific factors is not needed per guidance from VCS (VCS_Andrew_Beauchamp_letter_to_ESI_2_3_2014.pdf).

Table 5. Applicability conditions and assessment team findings.

### 3.6 Project Boundary

The VCS Standard requires that the methodology establish criteria and procedures for describing the project boundary and identifying and selecting optional carbon pools, i.e. sources, sinks, and reservoirs relevant to the baseline and project scenarios. Procedures are included in the methodology to quantify emissions for all carbon pools and sources included within the project boundary. The methodology *only* accounts for aboveground and belowground biomass as it is conservative to exclude other optional pools per AFOLU Requirements section 4.3.3. No optional pools are included in the methodology. Further, the harvested wood products pool is appropriately excluded as no change is expected in this pool from baseline harvest volumes. Thus, no change is expected in fossil fuel consumption as related to harvested wood products and gaseous fossil fuel emissions were appropriately excluded in baseline and project scenarios.

The methodology addresses the establishment of spatial, temporal, and pools/sources boundaries to meet VCS AFOLU Requirements for AFOLU project categories and applicable to IFM and RIL-C project scenarios. Mandatory and optional pools (Table 6) in this methodology are appropriate for emissions reductions of reduced impact logging.

The general spatial boundaries in this methodology were assessed for conformance to the VCS rules and found to be sufficiently detailed for project scenarios and in compliance with AFOLU Requirements. Similarly, temporal boundaries were reviewed within the context of VCS rules and found to be detailed and sufficient. The methodology further defines temporal boundaries as the period of time when initial harvests using RIL-C practices are performed until the end of the project crediting period.

Pools/sources of gaseous emissions accounted for are in compliance with AFOLU Requirements sections 4.3.3, 4.3.4 and the following table presents a brief review of all considered carbon pools and the assessment findings.

<b>Pool</b>	<b>Included</b>	<b>Justification/Comments</b>	<b>Assessment Findings</b>
Aboveground tree biomass	Yes, in project and baseline scenarios	Major pool considered when accounting for emissions from project activities.	This pool is appropriately included and is consistent with Table 2 of AFOLU Requirements section 4.3.1. In the case of this methodology this pool has been combined with dead wood and has been renamed above ground carbon stocks.
Aboveground non-tree biomass	No	Conservatively excluded and is expected to increase compared to the	This pool is appropriately excluded per AFOLU Requirements section 4.3.1.

		baseline from implementation of improved logging practices (i.e. reduced skidding damage).	The exclusion of aboveground non-tree biomass is appropriate given anticipated project activities.
Belowground biomass	Yes, in project and baseline scenarios	Major pool considered when accounting for emissions from project activities.	This pool is appropriately included and is consistent with Table 2 of AFOLU Requirements section 4.3.1.
Dead wood	Yes, included in project and baseline scenarios as part of above ground carbon stocks	The aboveground live tree biomass retained is equal to dead wood pool inputs and factors in an applicable dead wood decomposition rate.	This pool is implicitly included due to accounting for aboveground tree biomass and is consistent with Table 2 of AFOLU Requirements section 4.3.1.
Harvested wood products	No	No change in harvest levels between baseline and project scenarios	This pool is appropriately excluded as there is no change in this pool from baseline harvest volumes.
Litter	No	No change anticipated from project activities	This is consistent with AFOLU Requirements section 4.3.1 and appropriate given the assumption of no change between baseline and project harvest activities.
Soil organic carbon (SOC)	No	No change anticipated from project activities	This is consistent with AFOLU Requirements section 4.3.1 and appropriate given the assumption of no change between baseline and project harvest activities.

Table 6. Relevant carbon pools.

### 3.7 Baseline Scenario

The assessment team evaluated the methods to determine the baseline scenario and whether they are appropriate, adequate, and in compliance with VCS rules and AFOLU Requirements for IFM and RIL project activities. Procedures and assumptions for determination of the baseline scenario are developed using the associated module, where the baseline is determined based on the regional benchmark parameter for each impact parameter. In other words, the baseline

scenario is determined by impact parameters which are used to set the crediting and additionality parameters.

Detailed guidance is provided in the performance module table 5.1 for determination of the baseline scenario according to harvest activity category (felling, skidding and hauling). The performance metrics presented in the module (impact parameters, crediting benchmarks and additionality benchmarks) are adequate and appropriate for the project activities applicable under the methodology. Compliance with AFOLU Requirements section 4.5.3 is ensured by using peer reviewed literature and a region specific analyses (RIL-C Performance Method Module and Griscom et al. 2014) where empirical measurements have been collected as the basis for crediting benchmarks, additionality benchmarks, and emissions reductions equations, which have been validated. This analysis includes predicting the most plausible baseline scenario or aggregated baseline scenario per VCS Standard sections 4.5.3 - 4.5.6

The methods sections in Griscom et al. 2014 provides additional details for impact parameter sampling methods and are appropriately referenced in the associated module. Griscom et al. 2014 is an empirical study which examined 9 logging concessions in the East Kalimantan region of Borneo. The study demonstrates general conformance to IPCC accounting principles (per AFOLU Requirements section 4.4.1) by specifying sources of allometric equations, carbon fraction of biomass, and other elements in the derivation of estimates, all of which have been through the peer review process in the publication of Global Change Biology.

Methodology developers indicated in section 5.1 of the performance module that in formulating the logging impacts study they unintentionally introduced a conservative bias to the data (i.e. lower baseline emissions conditions than actually exist). This element of transparency was appropriately included for consideration by project proponents in evaluating the results of baseline scenario determination.

Per the Methodology Approval Process section 5.2.1, 2a, the methodology appropriately states that it uses a different approach for assessing the baseline scenario by employing a performance method.

### 3.8 Additionality

The methodology satisfies VCS rules for providing a procedure to demonstrate additionality by requiring projects to use a performance method composed of 2 parts, Regulatory Surplus and a Performance Benchmark. Regulatory Surplus appropriately refers to VCS Standard section 4.63 and meets the requirement. The Performance Benchmark appropriately states that projects must “exceed the region-specific performance benchmark for each impact parameter (i.e. proxy factor), as demonstrated in the RIL-C Performance Method Module.” Credits are only accrued for the emissions reductions of a parameter if it is deemed additional, which is the case when an impact parameter is below the “additionality benchmark” and “crediting benchmark” assigned for that impact parameter.

Per the Methodology Approval Process section 5.2.1, 2a, the methodology appropriately states that it uses a different approach for assessing additionality by employing a performance method.

The procedures for demonstrating additionality are appropriate, adequate and conform to VCS rules and VCS Standard section 4.6.2.

### 3.9 Quantification of GHG Emission Reductions and Removals

#### 3.9.1 Baseline Emissions

See next section for assessment findings related to the quantification of baseline emissions.

#### 3.9.2 Project Emissions

The procedures for calculating both baseline and project emissions are performed concurrently in order to find the net difference or emission reduction value. Major findings related to the assessment of quantification methods for baseline and project emissions are presented:

- As per section 4.5.1 of the AFOLU Requirements, the performance module appropriately includes basic calculations for each of the impact parameters. The individual calculations are reasonable and follow the logic explained in both the methodology and module.
- As per section 4.5.2 of the AFOLU Requirements, the methodology uses sound procedures from IPCC 2006 to quantify GHG emissions specifically, emissions reductions equations are broken down according to decomposition of above-ground tree biomass (76.5% of emissions reductions) and belowground biomass (23.5% of emissions reductions). These proportions are appropriately based on Mokany et al. 2006<sup>2</sup>.
- As per section 4.5.3 of the AFOLU Requirements, the module explicitly states that below ground carbon emissions reductions will be credited over a 10 year period, incrementally equal to one tenth per year. A 10 year decay model is appropriately employed.

Parameters and equations to calculate baseline and project emissions were checked and found to be appropriate and without apparent errors. Section 8.2 of the methodology describes the criteria and procedures, including relevant equations, for the quantification of GHG emissions and/or removals for the selected GHG sources, sinks and/or reservoirs for the project. The assessment team found that the procedures for calculating baseline and project emissions cover all GHG sources, sinks and reservoirs and are adequate and in compliance with VCS rules.

#### 3.9.3 Leakage

Leakage is defined in the methodology by the applicability condition (section 3.5 of this report) which says that because there is no deliberate reduction of harvest levels (defined by a historical range) from baseline to project scenarios. No change is expected in harvest volumes which can be associated with project activities as implementation of RIL-C practices does not encourage or discourage harvesting. Under this assumption, leakage is appropriately zero for all RIL-C practices. Per AFOLU Requirements section 4.61, a clear criteria and procedure for excluding

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<sup>2</sup> Mokany, K., Raison, R. J., and Prokushkin, A. S. 2006. Critical analysis of root:shoot ratios in terrestrial biomes. *Global Change Biology* 12: 84-96

potential activity and market shifting leakage is appropriately presented in one of the applicability conditions. In this case, project proponents must demonstrate the harvest levels to not deviate from a historic range (defined in performance method module). This requirement ensures that activity and market shifting leakage are excluded.

Although the methodology doesn't follow the typical approach for leakage, the methodology is in compliance with the AFOLU Requirements section 4.6.1 for IFM and RIL project categories.

### 3.9.4 Net GHG Emission Reductions and Removals

Any uncertainties associated with the quantification of net GHG emission reductions and removals are addressed appropriately. The methodology calls for quantifying net GHG emissions reductions and removals by subtracting project emissions from baseline emissions. In this fashion, methodology developers require that projects exceed the East Kalimantan performance benchmarks for each impact parameter.

The methodology is in compliance with VCS Standard, section 4.7.3 by ensuring that project's GHG emission reductions or removals cannot be quantified as negative.

Uncertainty is addressed in the methodology using a mixed methods approach consisting of conservative calculations of impact parameters and deductions for uncertainty in the development of the impact parameters. The deductions for impact parameters utilize the bottom of a 95% confidence interval, ensuring conservativeness across all parameters. The methodology document (section 8.4) also requires a minimum sampling intensity that will achieve an estimate within 15% or less of the mean at 95% confidence (as required by VCS Standard 4.1.4). The methodology development team determined required sample sizes based on analysis of coefficients of variation for each impact parameter, using field dataset from 9 concessions across the East Kalimantan logging landscape, this method is documented in (Griscom et al. 2014).

The assessment team concludes that methods for calculation of emission reductions and removals are appropriately developed for the intended purpose and adequate and in compliance with the VCS Standard, section 4.7.1.

### 3.10 Monitoring

The methodology establishes criteria for monitoring by requiring project proponents to monitor impact parameters after completion of annual harvest activities. The methodology notes appropriately that data and parameters for felling impacts, skidding impacts and hauling impacts be measured on an annual basis to monitor changes in carbon stocks.

Default factors used in the module for correlating the impact parameters to emissions reductions are appropriately valid for 5 years following methodology validation. The module properly identifies that all default factors are required to undergo re-assessment after 5 years per VCS Standard section 4.1.7. For a complete list of data and parameters refer to section 9.1 of the methodology and section 6 of the module.

Methodology data and parameters available at validation

Data parameter	Assessment team findings
$f_{AGB} (FELL_t)$	This data/parameter was appropriately chosen because it pertains to estimates of emissions reductions from aboveground biomass related to felling in year $t$ ( $ER_{fell\_AGB,t}$ ) as a function of felling impacts measured in year $t$ ( $FELL_t$ ).
$f_{BGB} (FELL_t)$	This data/parameter was appropriately chosen because it pertains to estimates of emissions reductions from belowground biomass related to felling in year $t$ ( $ER_{fell\_BGB,t}$ ) as a function of felling impacts measured in year $t$ ( $FELL_t$ ).
$f_{AGB} (SKID_t)$	This data/parameter was appropriately chosen because it pertains to estimates of emissions reductions from aboveground biomass related to skidding in year $t$ ( $ER_{skid\_AGB,t}$ ) as a function of skidding impacts measured in year $t$ ( $SKID_t$ ).
$f_{BGB} (SKID_t)$	This data/parameter was appropriately chosen because it pertains to the savings factor for emissions from belowground biomass related to skidding in year $t$ ( $ER_{skid\_BGB,t}$ ) as a function of skidding impacts measured in year $t$ ( $SKID_t$ ).
$f_{AGB} (HAUL_t)$	This data/parameter was appropriately chosen because it pertains to the savings factor for emissions from aboveground biomass related to hauling in year $t$ ( $ER_{haul\_AGB,t}$ ) as a function of hauling impacts measured in year $t$ ( $HAUL_t$ ).
$f_{BGB} (HAUL_t)$	This data/parameter was appropriately chosen because it pertains to the savings factor for emissions from belowground biomass related to hauling in year $t$ ( $ER_{haul\_BGB,t}$ ) as a function of hauling impacts measured in year $t$ ( $HAUL_t$ ).
$K$	This data/parameter was appropriately chosen because it pertains to the dead wood annual decomposition rate. This percentage value was properly obtained from relevant scientific literature and ensures that the rate used is from a climate and forest type of the project area.

Table 7. Methodology data and parameters available at validation.

Methodology data and parameters monitored

Data parameter	Assessment team findings
$A_t$	This data/parameter was appropriately chosen because it pertains to the area of authorized harvest in year $t$ . Note that this area excludes any un-stocked areas or areas where timber harvest and skidding would be infeasible (e.g. due to geographic features). This

	area in hectares is an important parameter and QA/QC procedures required by methodology developers ensures accuracy is maintained.
$FELL_t$	The felling impact parameter, measured in year $t$ is an important data/parameter. This parameter is properly assessed according to procedures outlined in the performance module at the completion of annual harvests.
$SKID_t$	The skidding impact parameter, measured in year $t$ is an important data/parameter. This parameter is properly assessed according to procedures outlined in the performance module at the completion of annual harvests.
$HAUL_t$	The Hauling impact parameter, measured in year $t$ is an important data/parameter. This parameter is properly assessed according to procedures outlined in the performance module at the completion of annual harvests.
$ER_{fell\_AGB,t}$	This data/parameter was appropriately chosen because it pertains to the emissions reductions from aboveground biomass related to felling in year $t$ . This parameter is properly assessed according to procedures outlined in the performance module at the completion of annual harvests.
$ER_{skid\_AGB,t}$	This data/parameter was appropriately chosen because it pertains to the emissions reductions from aboveground biomass related to skidding in year $t$ . This parameter is properly assessed according to procedures outlined in the performance module at the completion of annual harvests.
$ER_{haul\_AGB,t}$	This data/parameter was appropriately chosen because it pertains to the emissions reductions from aboveground biomass related to hauling in year $t$ . This parameter is properly assessed according to procedures outlined in the performance module at the completion of annual harvests.
$ER_{fell\_BGB,t}$	This data/parameter was appropriately chosen because it pertains to the emissions reductions from belowground biomass related to felling in year $t$ . It accounts for emission reductions from the belowground biomass pool that are properly annualized over a 10 year period.
$ER_{skid\_BGB,t}$	This data/parameter was appropriately chosen because it pertains to the emissions reductions from belowground biomass related to skidding in year $t$ . It accounts for emission reductions from the belowground biomass pool that are properly annualized over a 10

	year period.
$RILC_{AGB,t}$	This data/parameter was appropriately chosen because it pertains to the emission reductions from aboveground biomass from RIL-C in year $t$ . This parameter is properly assessed according to procedures outlined in the performance module at the completion of annual harvests.
$RILC_{BGB,t}$	This data/parameter was appropriately chosen because it pertains to the emission reductions from belowground biomass from RIL-C in year $t$ . It accounts for emission reductions from the belowground biomass pool that are properly annualized over a 10 year period. This parameter is properly assessed according to procedures outlined in the performance module at the completion of annual harvests.
$C_{RIL,t}$	Total emission reductions at time $t$ is an important data/parameter. This parameter is properly assessed according to procedures outlined in the performance module at the completion of annual harvests.
$ER_T$	<i>Net GHG emission reductions in year <math>t</math></i> is an important data/parameter. This parameter is properly assessed according to procedures outlined in the performance module at the completion of annual harvests.

Table 8. Methodology data and parameters monitored.

$FELL1_t$	This data/parameter was appropriately chosen because it pertains to the felling impact for application in East Kalimantan: % felled trees abandoned in annual harvest block from year $t$ . This carefully sampled parameter is important to estimate the felling impact parameter, sampling methods are sound and in best practice and adequate QA/QC procedures are in place.
$FELL2_t$	This data/parameter was appropriately chosen because it pertains to the felling impact for application in East Kalimantan: average % felled log length extracted in annual harvest block from year $t$ . This carefully sampled parameter is important to estimate the felling impact parameter, sampling methods are sound and in best practice and adequate QA/QC procedures are in place.
$SKID_{dens,t}$	This data/parameter was appropriately chosen because it pertains to the skidding impact for application in East Kalimantan density component: average meters length of skid trails per hectare in annual harvest block from year $t$ . This carefully sampled parameter is important to estimate the skidding impact parameter, calculation

	methods are sound and in best practice.
$SKID_{dam,t}$	This data/parameter was appropriately chosen because it pertains to the skidding impact for application in East Kalimantan damage component: average number of trees $\geq 20$ cm DBH damaged trees per m skid trail in annual harvest block from year t. This carefully sampled parameter is important to estimate the skidding impact parameter, calculation methods are sound and in best practice.
$L_{SKIDi,t}$	This data/parameter was appropriately chosen because it pertains to the length of skid trail network i in annual harvest block from year t. This carefully sampled parameter is important to estimate the skidding impact parameter, sampling methods are sound and in best practice and adequate QA/QC procedures are in place.
$A_{SKIDi,t}$	This data/parameter was appropriately chosen because it pertains to the area corresponding to skid trail network i in annual harvest block from year t. This parameter is properly derived from well-documented GIS analysis utilizing best practice techniques and monitored annually post-harvest.
$Tree_{dam,t,i,j}$	This data/parameter was appropriately chosen because it pertains to the number of damaged trees $\geq 20$ cm DBH counted in rectangular plot sampling skid trail section j along skid trail network i in annual harvest block from year t.
$Skid_t$	Skidding impact for application in East Kalimantan. This data/parameter was appropriately chosen because it represents the average number of trees $> 20$ cm DBH damaged in skid trails per ha in annual harvest block from year t. Units are appropriately chosen in number/ha. Its monitoring frequency is appropriate, which is following completion of each annual harvest.
$Haul_{EK,t}$	This parameter was appropriately chosen as it represents Hauling impact for application in East Kalimantan. It is regionally specific and describes the average width of cleared haul road corridors accessing annual harvest block from year t. This parameter was developed with an average derived from measurements via field surveys or analysis of remote imagery. The units used are appropriate and measured in meters, and the QA/QC procedures for this parameter are in place and appear appropriate.

Table 9. Performance method parameters.

The assessment team concludes that monitoring procedures are appropriate, adequate and in compliance with the VCS rules.

## 4 Assessment Conclusion

Environmental Services Inc. completed the first assessment of the new “Reduced Impact Logging Practices to Reduce Carbon Emissions” (RIL-C) Methodology (DRAFT\_v3.1\_Dec 2015) and East Kalimantan Performance Method Module (DRAFT\_v3.1\_ Dec 2015). The assessment team confirms that the RIL- C methodology and module adhere to the criteria established for this assessment and are documented and complete. ESI approved revisions to the RIL-C methodology and module and concludes without any qualifications or limiting conditions that the methodology documentation meets the requirements of the: VCS Program Guide v3.5, VCS Standard v3.4, VCS AFLOU Requirements v3.4, and the VCS Methodology Approval Process v3.5. Therefore, ESI recommends that VCSA approve the new “Reduced Impact Logging Practices to Reduce Carbon Emissions” (RIL-C) Methodology (DRAFT 7Dec 2015) and East Kalimantan Performance Method Module (DRAFT 7Dec 2015) as prepared by The Nature Conservancy, Tropical Forest Foundation.

## 5 Report Reconciliation

ESI (the first assessor) reviewed the Second Assessment report drafted by Rainforest Alliance (second assessor) and all findings issued. The revisions made during this assessment were for the most part grammatical and clarified language in the document. ESI did not feel that these additions negatively affected the content of the methodology or associated module.

The methodology was however further revised as a result of the first assessor’s response to revisions that were made during the second assessment. During the second assessment an applicability condition was stricken from the methodology that ESI felt was an important part of carbon accounting structure and suggested this be put re-included. The original applicability condition read, “*RIL practices implemented as part of the project activity will not modify business-as-usual levels of impact on pre-existing dead wood stocks through slash management, salvage harvesting or other planned removal of dead wood*”. Since, the methodology has no clear way of accounting for reduced impact to dead wood, ESI suggested this condition be re-included in the methodology document. After some discussion with the second assessor and methodology development team, a slightly different version of the original condition was included in the methodology along with a footnote for clarification. ESI agrees that this version did not compromise the accounting structure of the methodology and would provide a requirement that could be validated and verified through time. The final version of the conditions included in the methodology states, “*RIL practices implemented as part of the project activity will not increase business-as-usual levels of impact on pre-existing dead wood stocks through slash management, salvage harvesting or other planned removal of dead wood.*<sup>3</sup>”.

Final version numbers for both the Methodology (VM0035) and Module (VMD0047) documents are v3.1, and they were issued on 07 December 2015.

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<sup>3</sup> A verifier need only confirm that this is the case through one of the following: a qualitative assessment of no evidence of removal of dead wood onsite (looking for evidence of removal, or comparing dead wood carbon stocks in the project area to surrounding areas), interviewing project proponents, reviewing management plans, or a quantitative assessment of inventory data of dead wood carbon stocks (if they exist).

**6 Evidence of Fulfilment of VVB Eligibility Requirements**

As set out in the VCS Methodology Approval Process for Non-ARR AFOLU Methodology elements:

- 1) Both validation/verification bodies shall be eligible under the VCS Program to perform validation for sectoral scope 14 (AFOLU); AND
- 2) At least one of the validation/verification bodies shall use an AFOLU- expert in the assessment; AND
- 3) At least one of the validation/verification bodies shall have completed at least ten project validations in any sectoral scope. Project validations can be under the VCS Program or an approved GHG program, with the projects having been registered under the applicable program. A validation of a single project under more than one program (e.g., VCS and CDM) counts as one project validation. The validation/ verification body that meets this eligibility requirement may be the same validation/verification body that uses an AFOLU expert.

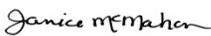
ESI fulfils the eligibility requirements in the following ways:

- 1) ESI is accredited by the American Standards Institute under ISO 14065:2007 for GHG Validation and Verification Bodied; including validation/verification of assertions related to GHG emission reductions and removals at the project level for Land Use and Forestry (Group 3). VCS accepts this accreditation.
- 2) During the methodology assessment, ESI utilized Scott Sager VCS approved AFOLU-IFM Expert
- 3) To date, ESI has completed 30 VCS project validations and 9 Methodology Assessments under AFOLU Requirements. Please see Appendix C for the required evidence.

**7 Signature**

Signed for and on behalf of:

Name of entity: Environmental Services, Inc.

Signature:   
\_\_\_\_\_

Name of signatory: Janice McMahon  
Vice President & Regional Technical Manager

Date: 08 December 2015

Appendix A – NCRs/CL/OFls

<b>Item Number</b>	1
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	4.1.3 Methodologies may employ a modular approach in which a framework document provides the structure of the methodology and separate modules and/or tools are used to perform specific methodological tasks. Such methodologies shall use the VCS Methodology Template for the framework document and the VCS Module Template for the modules and tools. The framework document shall clearly state how the modules and/or tools are to be used within the context of the methodology.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	VCS_Andrew Beauchamp letter.pdf. The VCS AFOLU Additionality Tool , RIL-C Performance Method Module DRAFT Dec_2013.docx, and RIL-C IFM Methodology DRAFT Dec2013.docx, <a href="http://www.v-c-s.org/program-documents">http://www.v-c-s.org/program-documents</a> .
<b>ESI Findings - Round 1 (01-17-2014)</b>	The methodology is allowed to use v3.2 of the Methodology template as v3.3 does not have to be used until April 2014. All of the requirements of v3.2 have been checked in the VCS Meth Template 3.2 tab. However it does not appear that the actual template Methodology and Module templates has been used as the header footers do not match (see <a href="http://www.v-c-s.org/program-documents">http://www.v-c-s.org/program-documents</a> ).
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please ensure the methodology uses the VCS Methodology Template for the framework document and the VCS Module Template for the modules and tools (v 3.3 is the most current but v3.2 is allowed until April 2014).
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We received permission from VCS, communicated by email by Andrew Beauchamp on 11/26/2013, to use the previous template version. A copy of this email was forwarded to the ESI audit team on 2/20/2014.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, Response sufficient. VCS_Andrew Beauchamp letter.pdf confirms permission from VCS, communicated by email on 11/26/2013, to use the previous template version.

<b>Item Number</b>	2
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	4.1.4 Methodology elements shall be guided by the principles set out in Section 2.4.1. They shall clearly state the assumptions, parameters and procedures that have significant uncertainty, and describe how such uncertainty shall be addressed. Where applicable, methodology elements shall provide a means to estimate a 90 or 95 percent confidence interval. Where a methodology applies a 90 percent confidence interval and the width of the confidence interval exceeds 20 percent of the estimated value or where a methodology applies a 95 percent confidence interval and the width of the confidence interval exceeds 30 percent of the estimated value, an appropriate confidence deduction shall be applied. Methods used for estimating uncertainty shall be based on recognized statistical approaches such as those described in the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories. Confidence deductions shall be applied using conservative factors such as those specified in the CDM Meth Panel guidance on addressing uncertainty in its Thirty Second Meeting Report, Annex 14.

<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>The VCS AFOLU Additionality Tool, RIL-C Performance Method Module DRAFT Dec_2013.docx, and RIL-C IFM Methodology DRAFT Dec2013.docx section 8.4</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>Section 8.4 of the methodology states "Sources of uncertainty in this approach include uncertainty around calculation of emission reductions from impact parameters and uncertainty around estimates of impact parameters. These two sources of uncertainty are addressed through setting demonstrably conservative emission reductions. Methods for including deductions in the calculations of emissions reductions, as a function of uncertainty, are described in the performance method module. "However these methods for including deductions in the calculations of emissions reductions as a function of uncertainty could not be found in the performance module.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>NCR: Please reference or describe methods for including deductions in the calculations of emissions reductions as a function of uncertainty. This should include a description of how such uncertainty shall be addressed. Where applicable, the performance module shall provide a means to estimate a 90 or 95 percent confidence interval. Where a methodology applies a 90 percent confidence interval and the width of the confidence interval exceeds 20 percent of the estimated value or where a methodology applies a 95 percent confidence interval and the width of the confidence interval exceeds 30 percent of the estimated value, an appropriate confidence deduction shall be applied. Methods used for estimating uncertainty shall be based on recognized statistical approaches such as those described in the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories. Confidence deductions shall be applied using conservative factors such as those specified in the CDM Meth Panel guidance on addressing uncertainty in its Thirty Second Meeting Report, Annex 14.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>New text and graphs have been included in the Ekalimantan module (section 5.1) to address this finding. Overview of methods for calculating ERs, conservative calculations, and deductions for uncertainty is given in intro section of 5.1. Equations for each impact parameter were re-structured to be easier to understand and link input variables with source data. New graphs were added to display conservativeness deductions made. For source data used to generate each graph in section 5.1 see attached "Indicator ER relationships" workbook for source data calculations. Uncertainty deductions were applied by using the bottom end of 95% confidence intervals for all key input parameters, regardless of whether the width of the confidence intervals exceeded 30 percent.</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>It is recognized by the assessment team that the development of impact parameters uses conservative calculations and deductions for uncertainty (in the development of these parameters) is given in section of 5.1. However, uncertainty deductions are usually applied to inventory and monitoring measurements based on precision of measurement (i.e., population mean, variance, number of observations, and SE).</p>

<p><b>Round 2 NCR/CL/OFI (04-11-2014)</b></p>	<p>CL: Please provide an evidence/description why it is not applicable that this methodology element shall provide a means to estimate a 90 or 95 percent confidence interval for monitoring data collected at the project level. It is the understanding of the assessment team that uncertainty deductions are normally applied to monitoring measurements rather than the development of module parameter (i.e. impact parameters, or allometric equations as in the case of most REDD methodologies).</p>
<p><b>Round 2 Response from Methodology Developer (09-09-2014)</b></p>	<p>We have revised the East Kalimantan module document (section 5.2 and parameter tables) to required sample sizes for monitoring that achieve an estimate within 15% or less of the mean at 95% confidence (as required by VCS). This general approach was also clarified in the framework methodology doc (section 8.4). We determined required sample sizes based on analysis of coefficients of variation for each impact parameter, using our field dataset from 9 concessions across the East Kalimantan logging landscape (Griscom et al. 2014). See new table 5.2 and revised text in Section 5 of East Kalimantan module for these revisions. Also, see attached "sample size calcs" excel workbook for source calculations. Thus, our empirical data from East Kalimantan are the empirical basis for establishing sample sizes that will achieve VCS required 95% confidence estimates. Given these sample size requirements, it is not necessary to estimate 95% confidence at the project level in order to apply a deduction. Please note that based on this additional analysis of sample size we determined it was more robust to establish sample sizes based on "felled trees" rather than "gaps" (the latter can contain one or more felled trees) - thus the term "gaps" has been revised to "felled trees" as appropriate in East Kalimantan module.</p>
<p><b>Final ESI Findings (09-12-2014)</b></p>	<p>Finding Closed: Response sufficient, text has been added to clarify a minimum sampling intensity that will achieve an estimate within 15% or less of the mean at 95% confidence (as required by VCS). Section 8.4 states, "These two sources of uncertainty are addressed through setting demonstrably conservative emission reductions associated with each impact parameter and through imposed minimum sampling intensity requirements for estimation of impact parameters, all established in the applicable RIL-C Performance Method Module."</p>

<b>Item Number</b>	3
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	<p>1) Models shall be publicly available, though not necessarily free of charge, from a reputable and recognized source (e.g., the model developer’s website, IPCC or government agency).</p> <p>2) Model parameters shall be determined based upon studies by appropriately qualified experts that identify the parameters as important drivers of the model output variable(s).</p> <p>3) Models shall have been appropriately reviewed and tested (e.g., ground-truthed using empirical data or results compared against results of similar models) by a recognized, competent organization, or an appropriate peer review group.</p> <p>4) All plausible sources of model uncertainty, such as structural uncertainty or parameter uncertainty, shall be assessed using recognized statistical approaches such as those described in 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 1, Chapter 3.</p> <p>5) Models shall have comprehensive and appropriate requirements for estimating uncertainty in keeping with IPCC or other appropriate guidance, and the model shall be calibrated by parameters such as geographic location and local climate data.</p> <p>6) Models shall apply conservative factors to discount for model uncertainty (in accordance with the requirements set out in Section 4.1.4), and shall use conservative assumptions and parameters that are likely to underestimate, rather than overestimate, the GHG emission reductions or removals.</p>
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	<p>RIL-C Performance Method Module DRAFT Dec_2013.docx sections 5.1.1, 5.1.2, 5.1.3, 5.1.4 and RIL-C IFM Methodology DRAFT Dec2013.docx, Griscom, B., Ellis, P., Putz, F., 2013. Carbon emissions performance of commercial logging in East Kalimantan, Indonesia. Global Change Biology In press. doi: 10.1111/gcb.12386</p>
<b>ESI Findings - Round 1 (01-17-2014)</b>	<p>The performance module uses equations (models), 2.1.1a, 2.1.1b, 2.1.2a, 2.1.2b, 2.1.3a, 2.1.3b, 2.1.4a, and 2.1.4b. All of which were developed by or based on results of Griscom et. al. (2013). It is likely that these models meet the criteria listed in 4.1.6, although the paper has not yet finished the peer review process in Global Change Biology, and the paper has not been provided for validation review. Further, since this methodology is intended to be applied to other regions where this study does not cover. Criteria for model development listed in 4.1.6 should be added to, or referenced in the methodology. See note below on the option to disregard criteria that may not apply.</p>
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	<p>CL: Please provide a copy of Griscom et. al. (2013) and information on where in the process of publication the paper is. Please also add requirements of 4.1.6 to the methodology or supporting documentation to guide model development in other regions not covered by Griscom et. al. (2013).</p>

<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>Griscom et al was accepted by Global Change Biology on 8/2/2013 and published in the first issue of 2014. A copy of the published paper has been shared with the ESI audit team, accompanying these responses to findings. We have added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies is not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed, response sufficient. A copy of Griscom et al was provided and has been accepted in the peer reviewed publication Global Change Biology on 8/2/2013 and published in the first issue of 2014.</p>

<p><b>Item Number</b></p>	<p>4</p>
<p><b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b></p>	<p>1) Where the methodology uses third party default factors and/or standards, such default factors and standards shall meet with the requirements for data set out in Section 4.5.6, mutatis mutandis.                  2) Where the methodology itself establishes a default factor, the following applies:                  a) The data used to establish the default factor shall comply with the requirements for data set out in Section 4.5.6, mutatis mutandis.                  b) The methodology shall describe in detail the study or other method used to establish the default factor.                  c) The methodology developer shall identify default factors which may become out of date (i.e., those default factors that do not represent physical constants or otherwise would not be expected to change significantly over time). Such default factors are subject to periodic re-assessment, as set out in VCS document Methodology Approval Process.                  3) Where methodologies allow project proponents to establish a project-specific factor, the methodology shall provide a procedure for establishing such factors.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C Performance Method Module DRAFT Dec_2013.docx sections 5.1 and RIL-C IFM Methodology DRAFT Dec2013.docx, Griscom, B., Ellis, P., Putz, F., 2013. Carbon emissions performance of commercial logging in East Kalimantan, Indonesia. Global Change Biology In press. doi: 10.1111/gcb.12386</p>

<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>The methodology itself applies default factors, section 5.1 of the methodology states, "FTB = Felled Tree Biomass (MgC/ha) = 23.23 default value. CDB = Collateral Damage Biomass (MgC/ha) = 8.55 default value. We calculated conservative default values of Felled Tree Biomass (FTB) and Collateral Damage Biomass (CDB) shown above as the bottom end of the 95% confidence intervals based on measurements in Griscom et. al. 2013. FLB = Mean felled tree log biomass (MgC/ha) = 9.85 default value. We calculated the conservative default value given above for Felled Log Biomass (FLB) as the bottom end of the 95% confidence intervals based on measurements in Griscom et. al. 2013." The methodology does appear to describe in detail the study or other method used to establish the default factor as n Griscom et. al. 2013. However the methodology does not identify default factors which may become out of date (i.e., those default factors that do not represent physical constants or otherwise would not be expected to change significantly over time). Such default factors are subject to periodic re-assessment, as set out in VCS document Methodology Approval Process. Since this methodology allows project proponents to establish a project-specific factor, the methodology shall provide a procedure for establishing such factors, and this procedure does not appear to currently exist within the methodology or supporting documentation.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>NCR: Please identify default factors which may become out of date (i.e., those default factors that do not represent physical constants or otherwise would not be expected to change significantly over time). Such default factors are subject to periodic re-assessment, as set out in VCS document Methodology Approval Process.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>In the East Kalimantan Performance Method Module, under applicability conditions, we have now specified that all of the proxy relationships between impact parameters and emission reduction, and crediting and additionality benchmarks, are valid through 5 years following approval (final methodology validation), per VCS Methodology Approval 10.1.1 and 10.3.1, after which they will be re-assessed.</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Open. Could not locate the addition to the applicability conditions</p>
<p><b>Round 2 NCR/CL/OFI (04-11-2014)</b></p>	<p>CL: Please provide a reference to the added language in the applicability conditions.</p>
<p><b>Round 2 Response from Methodology Developer (09-09-2014)</b></p>	<p>Language has been added to the EK performance method module under applicability conditions to specify valid timeframe.</p>
<p><b>Final ESI Findings (09-12-2014)</b></p>	<p>Finding Closed: Text has been added to the applicability conditions in the EK performance method module that states, "<i>All parameters derived in this module are subject to periodic re-assessment. The parameters below are valid for five years following VCS approval of this module, after which they will be re-assessed and this module updated. Note though that projects may use the same crediting/additionality benchmarks from the time of validation through the project crediting period.</i>"</p>

<b>Item Number</b>	5
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	<p>1) Where the methodology uses third party default factors and/or standards, such default factors and standards shall meet with the requirements for data set out in Section 4.5.6, mutatis mutandis.</p> <p>2) Where the methodology itself establishes a default factor, the following applies:</p> <p>a) The data used to establish the default factor shall comply with the requirements for data set out in Section 4.5.6, mutatis mutandis.</p> <p>b) The methodology shall describe in detail the study or other method used to establish the default factor.</p> <p>c) The methodology developer shall identify default factors which may become out of date (i.e., those default factors that do not represent physical constants or otherwise would not be expected to change significantly over time). Such default factors are subject to periodic re-assessment, as set out in VCS document Methodology Approval Process.</p> <p>3) Where methodologies allow project proponents to establish a project-specific factor, the methodology shall provide a procedure for establishing such factors.</p>
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf, See 4.1.7 Evidence Used to Assess (Location in PD/MR or Supporting Documents)
<b>ESI Findings - Round 1 (01-17-2014)</b>	See 4.1.7 ESI findings (Since this methodology allows project proponents to establish a project-specific factor, the methodology shall provide a procedure for establishing such factors, and this procedure does not appear to currently exist within the methodology or supporting documentation. )
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Since this methodology allows project proponents to establish a project-specific default factor, please provide a procedure for establishing such factors.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies is not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: Response sufficient, VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing project-specific default factors.

<b>Item Number</b>	6
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	4.1.8 Where proxies are used, it shall be demonstrated that they are strongly correlated with the value of interest and that they can serve as an equivalent or better method (e.g., in terms of reliability, consistency or practicality) to determine the value of interest than direct measurement of the value itself.

<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf, and RIL-C Performance Method Module DRAFT Dec_2013.docx sections 5.1.1</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>One of many proxy values in the methodology is discussed in Section 5.1.1, which states "Felling Impact Parameter 1 (FELL1) is the average percent of felled trees abandoned, where a "felled tree" is any tree felled with the intention of harvesting a section of the trunk. The crediting benchmark (baseline value) for FELL1 was set at 25.0%., the grand mean whole number value across all nine logging concessions sampled. "It is implied that this and other proxy values are strongly correlated with the value of interest (or in this case baseline average percent of felled trees abandoned specific to the project area) and that this can serve as an equivalent or better method (e.g., in terms of reliability, consistency or practicality) to determine the value of interest than direct measurement of the value itself (a project specific baseline). This and other proxy values are meant to represent the average across the East Kalimantan region where nine logging concessions were sampled.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: The methodology does meet the requirements of proxy values for East Kalimantan. However, the methodology allows project proponents to establish regionally-specific proxies, please provide a procedure for establishing such factors in other regions. Alternatively, the geographic scope of the methodology could be limited in the applicability conditions.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We have clarified that the East Kalimantan module is only applicable in that landscape (the module has been re-titled to make this clear, a map and accompanying KML file have been added to the module to make clear the geographic bounds within which the module parameters are applicable). Also to clarify, proxy factors are not developed independently of standardized baselines - they are produced from the same base research, and project proponents do not develop project-specific proxies, or redefine regionally-specific proxies, when applying this methodology in the development of a project. Further guidance on development of proxies is not necessary per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014; however we have added general criteria and guidance to the framework module under applicability conditions. Because the methodology does not allow project proponents to develop project-specific factors, procedures logically should not be necessary per VCS Standard 4.1.7 "Where methodologies allow project proponents to establish a project specific factor, the methodology shall provide a procedure for establishing such factors."</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: Response sufficient, VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific proxy factors.</p>

<b>Item Number</b>	7
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	4.1.12 Methodologies shall include sufficient information and evidence to allow the reader to reach the same assessment conclusion on the appropriateness and rigor of the standardized method reached by the two validation/verification bodies in the methodology approval process, noting that the confidentiality of proprietary data may be protected as set out in Section 4.5.6(5). To aid the readability and clarity of methodologies, such information and evidence may be included in appendices to methodology documents rather than in the body of the documents themselves. Following their initial approval, methodologies are subject to periodic re-assessment, as set out in VCS document Methodology Approval Process.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C Performance Method Module DRAFT Dec_2013.docx, and RIL-C IFM Methodology DRAFT Dec2013.docx section 2
<b>ESI Findings - Round 1 (01-17-2014)</b>	The methodology and performance module include references that allow the reader to reach the same assessment conclusion on the appropriateness and rigor of the standardized method reached by the two validation/verification bodies in the methodology approval process. It might be useful to include Griscom et. al. (2013) in the appendices. .
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	OFI: Consider attaching Griscom et. al. (2013) in the appendices of either the methodology or performance module for clarity.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We think that while the Griscom et al 2014 dataset and field collection methods and analysis are obviously relevant (they are the basis for the parameters derived in the module), much of the results and discussion are not relevant, or present findings in different ways than the methodology parameters, thus we feel that its inclusion as an appendix would create unnecessary confusion in application of the methodology, and choose to limit its mention as a reference only.
<b>ESI Findings - Round 2 (04-11-2014)</b>	OFI not addressed, methodology development team feels the inclusion of Griscom et al 2014 as an appendix would create unnecessary confusion in application of the methodology.
<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	OFI: Consider attaching Griscom et. al. (2013) in the appendices of either the methodology or performance module for clarity.
<b>Round 2 Response from Methodology Developer (09-09-2014)</b>	No response from
<b>Final ESI Findings (09-12-2014)</b>	OFI not addressed: the methodology development team feel that inclusion of Griscom et al 2014 as an appendix would create unnecessary confusion in application of the methodology.

<b>Item Number</b>	8
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	4.1.13 All new performance methods shall be prepared using the VCS Methodology Template. A performance method is an integral part of a methodology and therefore it cannot be developed and approved as a separate module that is then applied by projects in conjunction with other methodologies.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf, RIL-C Performance Method Module DRAFT Dec_2013.docx, and RIL-C IFM Methodology DRAFT Dec2013.docx
<b>ESI Findings - Round 1 (01-17-2014)</b>	It appears that the performance method was prepared using the VCS Module Template (as a separate module). To ensure the performance method cannot be developed and approved as a separate module that is then applied by projects in conjunction with other methodologies, there should be some clarifying language added to both this performance document and the methodology. The performance document should also be prepared in the VCS Methodology template (or added to the methodology) ensuring that all sections of the template are addressed.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: To ensure compliance 4.1.13 a few things needed to be changed with the current methodology and module. How these changes are implemented is open, but compliance with the language of 4.1.13 must be achieved. Possibly the name of the Performance method module should be changed (East Kalimantan Module?). Clarify that the module is only applicable to this methodology. Re-write the current module in VCS template (or insert the main structure of the performance method into the methodology) and include all aspects of the template.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	For clarity, we have renamed the module the "East Kalimantan Performance Method Module", further specified the geography of its applicability, and explain in the applicability conditions that the module is only valid for application using the RIL-C framework methodology. VCS has confirmed in an email 2/3/2014 from Andrew Beauchamp that "Though the VCS requirements (Section 4.1.13 of the VCS Standard) states that standardized methods cannot be in a separate module, we discussed with our Chief Program Officer that it is okay that the performance benchmark for this methodology is in its own module, as long as the module references back to the methodology framework and states that it cannot be used by itself with another methodology. The current language of Section 6 of the framework methodology stating that it is region-specific to East Kalimantan and cites the performance method module is appropriate."
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: Response sufficient, the module has been renamed the "East Kalimantan Performance Method Module", further the geography of its applicability has been further specified, and explain in the applicability conditions that the module is only valid for application using the RIL-C framework methodology. VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific proxy factors.

<b>Item Number</b>	9
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	4.1.15 Where the methodology uses a performance method for determining additionality and the crediting baseline, the methodology shall list all methodologies that use a project method for determining the crediting baseline that are applicable to similar project activities and are approved under the VCS Program or an approved GHG program. The purpose of this requirement is to facilitate the transition to standardized methods, as further set out in Section 3.1.6.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C Performance Method Module DRAFT Dec_2013.docx, and RIL-C IFM Methodology DRAFT Dec2013.docx
<b>ESI Findings - Round 1 (01-17-2014)</b>	The methodology does not appear to list all methodologies that use a project method for determining the crediting baseline that are applicable to similar project activities and are approved under the VCS Program or an approved GHG program. .
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please list all methodologies that use a project method for determining the crediting baseline that are applicable to similar project activities and are approved under the VCS Program or an approved GHG program. If none exist, please add language to be specific about this point.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We have added language "As of February 2014 there are no methodologies that use a project method for accounting emission reductions from implementation of RIL IFM activities under VCS or another approved GHG program" to the framework methodology document.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, response sufficient. Language has been added to section 2 of the methodology that states, " <i>As of February 2014 there are no methodologies that use a project method for accounting emission reductions from implementation of RIL IFM activities under VCS or another approved GHG program.</i> "

<b>Item Number</b>	10
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	1) The methodology shall provide a description and analysis of the current distribution of performance within the sector as such performance relates to the applicability of the methodology or each performance benchmark (see Section 4.3.5 for further information on applicability of methodologies and performance benchmarks). The methodology shall also provide an overview of the technologies and/or measures available for improving performance within the sector, though an exhaustive list is not required recognizing that performance methods may be somewhat agnostic with respect to the technologies and/or measures implemented by projects.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C Performance Method Module DRAFT Dec_2013.docx sections 5.1.1, 5.1.2, 5.1.3, and 5.1.4, RIL-C Performance Method Module DRAFT_rev1.docx section 5.1

<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>It appears that the performance module of the methodology meets all the requirements of 4.1.17_1). The performance module provides a description and analysis of the current distribution of performance within the sector as such performance relates to the applicability of the methodology or each performance benchmark. However, some of this analysis is referenced in Griscom et. al. 2013, and is not directly presented (i.e. the distribution of performance for some of the impact parameters). The performance module also provide an overview of the technologies and/or measures available for improving performance, these are discussed in sections 5.1.1, 5.1.2, 5.1.3, and 5.1.4.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please provide Griscom et. al. 2013, and outline where in this document an analysis of the current distribution of performance within the sector as such performance relates to the applicability of the methodology or each performance benchmark.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>See Figure 3 in Griscom et. al. 2013 for overall performance patterns across 9 concessions. We have included a new synthesis table (Table 5.1b) in the Ekali module showing all concession level means for all impact parameters, and showing how baselines and additionality benchmark were established based upon the distribution of concession level means. We also include a new sub-section in section 5.1 on "Procedures for establishing a performance benchmark based upon available technologies and/or current practices, and trends, within the sector." - described intentional conservative bias of concessions sampled. For actual calculations see attached "Summary Source Data.." excel workbook.</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: Response sufficient, the distribution of performance for impact parameters, and an overview of the technologies and/or measures available for improving performance within the sector have been added to in Table 5.1.b and section 5.1 of the RIL-C Performance Method Module DRAFT_rev1.docx.</p>

<p><b>Item Number</b></p>	<p>11</p>
<p><b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b></p>	<p>4.3.3 The applicability conditions shall limit the applicability of the methodology to project activities whose performance can be described in terms of the performance benchmark metric set out in the methodology.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C IFM Methodology DRAFT Dec2013.docx section 4</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>The applicability conditions in the methodology make no mention of project areas being required to be forested. Further, applicability conditions also make no mention of the type of silvicultural treatment that should be applied to the methodology (i.e. would these same factors apply to a clear cutting situation?). Footnote 2 covers some of points in a general way by expanding what is meant by a "similar geography", though they should be made explicitly in the applicability conditions.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>NCR: Please further limit the applicability conditions of the methodology to project activities whose performance can be described in terms of the performance benchmark metric set out in the methodology.</p>

<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We have added text to further flesh out the applicability conditions in the methodology framework document, so that projects must match applicable "logging landscapes" (where methodology parameters have been derived and approved) in terms of geography, major forest type, class of actors/sector and major logging system. We have also added an applicability condition that the project area must meet the relevant forest definition.</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed, response sufficient. Language added to Section 4 of the methodology further limits the applicability conditions to project activities whose performance can be described in terms of the performance benchmark metric set out in the methodology.</p>

<p><b>Item Number</b></p>	<p>12</p>
<p><b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b></p>	<p>4.3.4 Where the methodology uses a performance method for determining additionality, the applicability conditions shall ensure that the project implements technologies and/or measures that cause substantial performance improvement relative to the crediting baseline and what is achievable within the sector, and the methodology shall explicitly specify such technologies and/or measures (or examples thereof). Note that the implementation date of such technologies and/or measures is the project start date and the VCS rules with respect to project start date apply (i.e., implementation will need to have occurred within timeframes permitted under the VCS rules on project start date). Activities that have not implemented any such technologies and/or measures, or that have implemented them on a date that is earlier than that permitted under the VCS rules on project start date, shall be excluded from the methodology.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C IFM Methodology DRAFT Dec2013.docx section 4</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>The applicability conditions (alone) do not appear to ensure that the project implements technologies and/or measures that cause substantial performance improvement relative to the crediting baseline and what is achievable within the sector. It would appear that the applicability conditions need to be expanded to include the types of technologies and/or measures that cause substantial performance improvement.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>NCR: Please limit the applicability conditions to ensure that the project implements technologies and/or measures that cause substantial performance improvement relative to the crediting baseline and what is achievable within the sector. The methodology shall explicitly specify such technologies and/or measures (or examples thereof).</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We have expanded the applicability conditions in the framework document to provide further clarity on what is meant by RIL-C, and provided some examples (though not an exclusive list), leaving some flexibility in terms of specifics so that we are not stifling innovation.</p>

<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed, the methodology explicitly specifies such technologies and/or measures (or examples thereof). Section 3 of the methodology states, "RIL-C –Reduced Impact Logging measures that reduce emissions from timber harvest in one or more of three emission source categories: felling, skidding and hauling. Component practices may include, but are not limited to, directional felling, improved log bucking, improved harvest planning via pre-harvest inventory, skid trail planning, mapping, and oversight and/or long cable winching, and reduction in width of haul roads and size of log landings. Note that some practices may apply to more than one emission category (directional felling, for example, can serve to align logs with the planned skidding network, reducing skidding damage, and reduce damage to the felled log, improving round wood recovery). RIL-C does not involve a deliberate reduction in harvest levels."</p>
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<p><b>Item Number</b></p>	<p>13</p>
<p><b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b></p>	<p>4.3.5 The applicability conditions shall establish the scope of validity of the methodology, and where multiple benchmarks are established, each performance benchmark, including the geographic scope. In establishing the scope of validity of the methodology or each performance benchmark, the methodology shall clearly demonstrate that there is similarity across the sub-areas of the geographic scope in factors such as socio-economic conditions, climatic conditions, energy prices, raw material availability and electricity grid emission factors, as such factors relate to the baseline scenario and additionality, noting that variation is permitted where correction factors address such variation as set out in Section 4.1.18.</p> <p>It may be necessary to stratify and establish multiple performance benchmarks, or to limit the applicability of the methodology, to comply with this requirement.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C IFM Methodology DRAFT Dec2013.docx section 4</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>Footnote 2 of the applicability condition 3 addresses this requirement in a general way, stating " A specified geography should be defined by broad parameters of consistent forest structure and composition, for example the WWF forested Ecoregions (Olson et. al. 2001). The major type of logging activity covered by empirical measurements within a given geography should also be specified. For example, if all commercial logging operations are covered within commercial logging concessions leased by the government, yet small scale logging for local use is not covered, this should be specified." This footnote could be expanded or clarified to include more of the specific language in 4.3.5.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please establish criteria in the methodology (or reference where they exist) that project proponents can meet to clearly demonstrate compliance with this requirement (i.e. documentation that must be included in the project document).</p>

<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>The applicable geography (i.e. logging landscape) is established as part of the process to develop new benchmarks and proxy relationships (which are independently established and validated in separate modules, not by project proponents), and detailed requirements guiding their development (and defining applicable logging landscape) are not necessary in the methodology (per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014) as both approach and results will be validated for each new set of benchmarks and proxies. We have expanded the applicability conditions in the framework document to specify that project proponents must demonstrate that their entire project areas are contained within the logging landscape of the module they are referencing (and a map figure and KML file have been added to the East Kalimantan Performance Method Module to facilitate this).</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed, the methodology establishes criteria that project proponents can meet to clearly demonstrate compliance with this requirement . The applicability conditions have been expanded to specify that project proponents must demonstrate that their entire project areas are contained within the logging landscape of the module they are referencing (and a map figure and KML file have been added to the East Kalimantan Performance Method Module to facilitate).</p>

<p><b>Item Number</b></p>	<p>14</p>
<p><b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b></p>	<p>3) Compare the GHG sources, sinks and reservoirs identified for the project with those identified in the baseline scenario, to ensure equivalency and consistency.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C IFM Methodology DRAFT Dec2013.docx section 5</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>Carbon pool table in section 5 does compare GHG sources, sinks and reservoirs identified for the project with those identified in the baseline scenario, to ensure equivalency and consistency. However, this is only explicitly done for fossil fuel emissions.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please expand carbon pool table in section 5 of the methodology to compare GHG sources, sinks and reservoirs identified for the project with those identified in the baseline scenario, to ensure equivalency and consistency (for all carbon pools considered).</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We have provided clarifications in the narrative and pools table in the Pools/sources section that included pools are accounted in both the project and baseline cases. Discussions of comparative stocks in the baseline and project cases are included in the table under justifications for excluded pools.</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: Response sufficient, section 5 of the methodology has been expanded to compare GHG sources, sinks and reservoirs identified for the project with those identified in the baseline scenario, to ensure equivalency and consistency (for all carbon pools considered). Section 5 states, "Note thus that there are no optional pools, and that the included pools/sources (above- and below-ground tree biomass) are accounted in both the baseline and with-project cases".</p>

<b>Item Number</b>	15
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	4.5.2 Methodologies using a standardized method for determining the crediting baseline shall describe (taking into account the factors set out Section 4.5.1 above), as far as is possible, the technologies or measures that represent the most plausible baseline scenario or the aggregated baseline scenario (see Section 4.5.4 for further information on aggregate baseline scenarios), though it is recognized that it may not be possible to specify precisely all technologies or measures given that the baseline may represent a variety of different technologies and measures.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C Performance Method Module DRAFT Dec_2013.docx
<b>ESI Findings - Round 1 (01-17-2014)</b>	The requirements of 4.5.2 are met with the region specific analyses (such as RIL-C Performance Method Module and Griscom et al. 2013) where empirical measurements have been collected as the basis for crediting benchmarks, additionality benchmarks, and emissions reductions equations, which have been validated. This analysis will also require expert consultation on the technologies or measures that represent the most plausible baseline scenario or the aggregated baseline scenario. However, general criteria should be added to the methodology to ensure that this analysis can be replicated in other regions. However, general criteria should be added to the methodology to ensure that this analysis can be replicated in other regions.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please add general criteria to the methodology to ensure that this analysis can be replicated in other regions. Methodologies using a standardized method for determining the crediting baseline shall describe (taking into account the factors set out Section 4.5.1 above), as far as is possible, the technologies or measures that represent the most plausible baseline scenario or the aggregated baseline scenario (see Section 4.5.4 for further information on aggregate baseline scenarios), though it is recognized that it may not be possible to specify precisely all technologies or measures given that the baseline may represent a variety of different technologies and measures.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We have added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies are not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: Response sufficient, VCS Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific proxy factors.

<b>Item Number</b>	16
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	4.5.3 Standardized methods shall be developed with the objective of predicting, as accurately as is practicable, the most plausible baseline scenario or aggregated baseline scenario. Notwithstanding this principle, it is recognized that standardized methods cannot perfectly capture the precise baseline behavior for all proposed projects eligible under a standardized method.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C Performance Method Module DRAFT Dec_2013.docx, and Griscom, B., Ellis, P., Putz, F., 2013. Carbon emissions performance of commercial logging in East Kalimantan, Indonesia. Global Change Biology In press. doi: 10.1111/gcb.12386
<b>ESI Findings - Round 1 (01-17-2014)</b>	The requirements of 4.5.3 are met with the region specific analyses (such as RIL-C Performance Method Module and Griscom et al. 2013) where empirical measurements have been collected as the basis for crediting benchmarks, additionality benchmarks, and emissions reductions equations, which have been validated. This analysis includes predicting, as accurately as is practicable, the most plausible baseline scenario or aggregated baseline scenario. In the case of Griscom et al. 2013. This was done by averaging values across nine logging concessions sampled to conservatively represent the region.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please add general criteria to the methodology to ensure that this analysis can be replicated in other regions. Standardized methods shall be developed with the objective of predicting, as accurately as is practicable, the most plausible baseline scenario or aggregated baseline scenario. Notwithstanding this principle, it is recognized that standardized methods cannot perfectly capture the precise baseline behavior for all proposed projects eligible under a standardized method.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We have added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies are not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: Response sufficient, VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific proxy factors.

<b>Item Number</b>	17
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	4.5.4 The methodology shall identify alternative baseline scenarios and determine either the most plausible baseline scenario or an aggregate baseline scenario for the project activity. Aggregate baseline scenarios shall be determined by combining likely scenarios on a probabilistic (i.e., likelihood) basis.

<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C Performance Method Module DRAFT Dec_2013.docx section 5.1, and Griscom, B., Ellis, P., Putz, F., 2013. Carbon emissions performance of commercial logging in East Kalimantan, Indonesia. Global Change Biology In press. doi: 10.1111/gcb.12386</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>This requirement has been met with the site specific analysis completed (such as RIL-C Performance Method Module and Griscom et al. 2013). Section 5.1 of the performance module states, "Despite this methodical sampling approach, there are two reasons to believe there may have been a tendency to select concessions with better-than-average logging practices: (1) the authors were limited to accessing concessions that had an existing relationship with The Nature Conservancy, and thus were exposed to information about improved practices (as a result of this limitation, three logging concessions selected for sampling were tossed out), and (2) the three FSC certified concessions in East Kalimantan at the time of sampling were intentionally included in the sample of nine concessions. These two factors probably resulted in a conservative bias to the data (i.e. lower "business as usual" baseline emissions conditions than actually exist across East Kalimantan)". However, general criteria should be added to the methodology to ensure that this analysis can be replicated in other regions.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please add general criteria to the methodology to ensure that this analysis can be replicated in other regions. The methodology shall identify alternative baseline scenarios and determine either the most plausible baseline scenario or an aggregate baseline scenario for the project activity. Aggregate baseline scenarios shall be determined by combining likely scenarios on a probabilistic (i.e., likelihood) basis.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We have added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies are not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: Response sufficient, VCS_Andrew Beauchamp letter to ESI_2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific proxy factors.</p>

<b>Item Number</b>	18
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	4.5.5 The performance benchmark shall be established based upon available technologies and/or current practices, and trends, within the sector. Where the analysis of trends shows a clear trend of improvement in the baseline scenario over time, the performance benchmark shall take account of the trend. This means that where the performance benchmark does not use a dataset that is updated at least annually, an autonomous improvement factor shall be used that provides a performance benchmark that tightens annually. Notwithstanding this requirement, methodologies may allow projects to use the level of the performance benchmark metric available at project validation for the duration of their project crediting periods (see also Section 4.5.7 below). Where the analysis of trends shows a trend of increasing GHG emissions or decreasing GHG removals in the baseline scenario over time, the performance benchmark shall not consider such trend.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C Performance Method Module DRAFT Dec_2013.docx, and Griscom, B., Ellis, P., Putz, F., 2013. Carbon emissions performance of commercial logging in East Kalimantan, Indonesia. Global Change Biology In press. doi: 10.1111/gcb.12386
<b>ESI Findings - Round 1 (01-17-2014)</b>	Neither the methodology, performance module, nor supporting study of Griscom et al. 2013 indicate if an analysis of trends was completed.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please provide evidence that The performance benchmark was established based upon available technologies and/or current practices, and trends, within the sector. Where the analysis of trends shows a clear trend of improvement in the baseline scenario over time, the performance benchmark shall take account of the trend. This means that where the performance benchmark does not use a dataset that is updated at least annually, an autonomous improvement factor shall be used that provides a performance benchmark that tightens annually. Notwithstanding this requirement, methodologies may allow projects to use the level of the performance benchmark metric available at project validation for the duration of their project crediting periods (see also Section 4.5.7 below). Where the analysis of trends shows a trend of increasing GHG emissions or decreasing GHG removals in the baseline scenario over time, the performance benchmark shall not consider such trend. Further, please add general criteria to the methodology to ensure that this analysis can be replicated in other regions.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Please see new section starting on page 6 in East Kalimantan module titled "Procedures for establishing a performance benchmark based upon available technologies and/or current practices, and trends, within the sector."
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: Responses sufficient. Page 6 in East Kalimantan module titled "Procedures for establishing a performance benchmark based upon available technologies and/or current practices, and trends, within the sector" now describes how the performance benchmark was established based upon available technologies and/or current practices, and trends, within the sector. In the case of a future adoption of FSC certification among logging operators in the region, the sample taken to develop the performance benchmark has been purposefully biased toward this future trend (and is likely very conservative).

<b>Item Number</b>	19
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	4.5.6 Appropriate data sources for developing performance methods include economic and engineering analyses and models, peer-reviewed scientific literature, case studies, empirical data, and common practice data. The data and dataset derived from such data sources shall meet the requirements below. The CDM Guidelines for quality assurance and quality control of data used in the establishment of standardized baselines also provides useful related guidance.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C Performance Method Module DRAFT Dec_2013.docx, and Griscom, B., Ellis, P., Putz, F., 2013. Carbon emissions performance of commercial logging in East Kalimantan, Indonesia. Global Change Biology In press. doi: 10.1111/gcb.12386
<b>ESI Findings - Round 1 (01-17-2014)</b>	The requirements of 4.5.6 are clearly met with the region specific analyses (such as RIL-C Performance Method Module and Griscom et al. 2013) where Appropriate data sources for developing performance methods include economic and engineering analyses and models, peer-reviewed scientific literature, and case studies, empirical data, and common practice data. However, general criteria should be added to the methodology to ensure that this analysis can be replicated in other regions.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please add general criteria to the methodology to ensure that this analysis can be replicated in other regions. Appropriate data sources for developing performance methods include economic and engineering analyses and models, peer-reviewed scientific literature, case studies, empirical data, and common practice data. The data and dataset derived from such data sources shall meet the requirements below. The CDM Guidelines for quality assurance and quality control of data used in the establishment of standardized baselines also provides useful related guidance.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We have added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies are not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: Response sufficient, VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific proxy factors.

<b>Item Number</b>	20
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	1) Data collected directly from primary sources shall comply with relevant and appropriate standards, where available, for data collection and analysis, and be audited at an appropriate frequency by an appropriately qualified, independent organization.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C Performance Method Module DRAFT Dec_2013.docx, and RIL-C IFM Methodology DRAFT Dec2013.docx
<b>ESI Findings - Round 1 (01-17-2014)</b>	Data collected directly from primary sources for developing performance methods in the example of Griscom et al. 2013 appear to comply with relevant and appropriate standards. However, general criteria should be added to the methodology to ensure that this analysis can be replicated in other regions.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please add general criteria to the methodology to ensure that this analysis can be replicated in other regions. Data collected directly from primary sources shall comply with relevant and appropriate standards, where available, for data collection and analysis, and be audited at an appropriate frequency by an appropriately qualified, independent organization.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We have added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies are not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: Response sufficient, VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific proxy factors.

<b>Item Number</b>	21
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	2) Data collected from secondary sources shall be available from a recognized, credible source and must be reviewed for publication by an appropriately qualified, independent organization or appropriate peer review group, or be published by a government agency.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C Performance Method Module DRAFT Dec_2013.docx section 5.1, and RIL-C IFM Methodology DRAFT Dec2013.docx, Mokany K, Raison RJ, Prokushkin AS (2006) Critical analysis of root: shoot ratios in terrestrial biomes. Global Change Biology, 12, 84–96.

<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>Data collected from secondary sources for developing performance methods in the example of East Kalimantan appear to meet the requirements 4.5.6_2. Section 5.1 of the Performance Module states, "Emissions reductions equations below are broken down into those due to decomposition of above-ground tree biomass (76.5% of emissions reductions) and belowground biomass (23.5% of emissions reductions). These proportions are based on Mokany et. al. (2006)". However, general criteria should be added to the methodology to ensure that this analysis can be replicated in other regions.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please add general criteria to the methodology to ensure that this analysis can be replicated in other regions. Data collected from secondary sources shall be available from a recognized, credible source and must be reviewed for publication by an appropriately qualified, independent organization or appropriate peer review group, or be published by a government agency.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We have added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies are not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: Response sufficient, VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific proxy factors.</p>

<p><b>Item Number</b></p>	<p>22</p>
<p><b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b></p>	<p>3) Data shall be from a time period that accurately reflects available technologies and/or current practice, and trends, within the sector. Selection of the appropriate temporal range shall be determined based on the guidance provided in the GHG Protocol for Project Accounting, Chapter 7 (WRI-WBCSD).</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C Performance Method Module DRAFT Dec_2013.docx section 5.1, and Griscom, B., Ellis, P., Putz, F., 2013. Carbon emissions performance of commercial logging in East Kalimantan, Indonesia. Global Change Biology In press. doi: 10.1111/gcb.12386</p>

<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>Data appear to be from a time period that accurately reflects available technologies and/or current practice, and trends, within the sector. Section 5.1 of the Performance Module states, "All data presented here are based on field measurements reported in Griscom et. al. (2013). These field measurements were completed in 2012 in nine logging concessions in East Kalimantan, Indonesia. A stratified random sampling approach was used to select nine concessions for sampling from 73 logging concessions across East Kalimantan occurring on the most common laterite soil types supporting commercially valuable Dipterocarp forests, and stratified to cover a range of conditions including distance to market, slope, and elevation". However, general criteria should be added to the methodology to ensure that this analysis can be replicated in other regions.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please add general criteria to the methodology to ensure that this analysis can be replicated in other regions. Data shall be from a time period that accurately reflects available technologies and/or current practice, and trends, within the sector. Selection of the appropriate temporal range shall be determined based on the guidance provided in the GHG Protocol for Project Accounting, Chapter 7 (WRI-WBCSD).</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We have added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies are not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: Response sufficient, VCS_Andrew Beauchamp letter to ESI_2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific proxy factors.</p>

<p><b>Item Number</b></p>	<p>23</p>
<p><b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b></p>	<p>4) Where sampling is applied in data collection, the requirements set out in Section 4.1.4 shall be adhered to. The methodology developer shall demonstrate that sampling results provide an unbiased and reliable estimate of the true mean value (i.e., the sampling does not systematically underestimate or overestimate the true mean value).</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C Performance Method Module DRAFT Dec_2013.docx section 5.1, and Griscom, B., Ellis, P., Putz, F., 2013. Carbon emissions performance of commercial logging in East Kalimantan, Indonesia. Global Change Biology In press. doi: 10.1111/gcb.12386</p>

<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>The data collected in Griscom et al. 2013 appears to use a methodological approach to sampling, but may have systematically underestimated business as usual. Section 5.1 of the Performance module states, "These field measurements were completed in 2012 in nine logging concessions in East Kalimantan, Indonesia. A stratified random sampling approach was used to select nine concessions for sampling from 73 logging concessions across East Kalimantan occurring on the most common laterite soil types supporting commercially valuable Dipterocarp forests, and stratified to cover a range of conditions including distance to market, slope, and elevation. Despite this methodical sampling approach, there are two reasons to believe there may have been a tendency to select concessions with better-than-average logging practices: (1) the authors were limited to accessing concessions that had an existing relationship with The Nature Conservancy, and thus were exposed to information about improved practices (as a result of this limitation, three logging concessions selected for sampling were tossed out), and (2) the three FSC certified concessions in East Kalimantan at the time of sampling were intentionally included in the sample of nine concessions. These two factors probably resulted in a conservative bias to the data (i.e. lower "business as usual" baseline emissions conditions than actually exist across East Kalimantan). ". It is the view of this verifier that this bias (if it actually exists) is conservative. Further, acceptance of this study into a peer reviewed publication such as Global Change Biology will assess the acceptability of the sampling approach taken. General criteria should also be added to the methodology to ensure that this analysis can be replicated in other regions.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please add general criteria to the methodology to ensure that this analysis can be replicated in other regions. Where sampling is applied in data collection, the requirements set out in Section 4.1.4 shall be adhered to. The methodology developer shall demonstrate that sampling results provide an unbiased and reliable estimate of the true mean value (i.e., the sampling does not systematically underestimate or overestimate the true mean value).</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We have added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies are not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: Griscom et al has been accepted by Global Change Biology (2014), doi: 10.1111/gcb.12386. Further, VCS_Andrew_Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific proxy factors.</p>

<b>Item Number</b>	24
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	5) Data shall be publicly available or made publicly available. Proprietary data (e.g., data pertaining to individual facilities) may be aggregated, and therefore not made publicly available, where there are demonstrable confidentiality considerations. However, sufficient data shall be publicly available to provide transparency and credibility to the dataset.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C Performance Method Module DRAFT Dec_2013.docx section 5.1, and Griscom, B., Ellis, P., Putz, F., 2013. Carbon emissions performance of commercial logging in East Kalimantan, Indonesia. Global Change Biology In press. doi: 10.1111/gcb.12386
<b>ESI Findings - Round 1 (01-17-2014)</b>	Data used in the Performance Module are from publicly available sources such as peer reviewed publications (e.g. Griscom et al. 2013). General criteria should be added to the methodology to ensure that this analysis can be replicated in other regions.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please add general criteria to the methodology to ensure that this analysis can be replicated in other regions. Data shall be publicly available or made publicly available. Proprietary data (e.g., data pertaining to individual facilities) may be aggregated, and therefore not made publicly available, where there are demonstrable confidentiality considerations. However, sufficient data shall be publicly available to provide transparency and credibility to the dataset.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We have added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies are not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: Response sufficient, VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific proxy factors.

<b>Item Number</b>	25
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	6) All data shall be made available, under appropriate confidentiality agreements as necessary, to the VCSA and each of the validation/verification bodies assessing the proposed performance benchmark methodology, to allow them to reproduce the determination of the performance benchmark. Data shall be presented in a manner that enables them to independently assess the presented data.

<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	Griscom Ellis Putz 2014_logging emissions performance Ekali_GCB.pdf, Summary Source Data_Impact Parameters and ERs_April 25_2014.xlsx, RIL-C Performance Method Module DRAFT Dec_2013.docx section 5.1, and Griscom, B., Ellis, P., Putz, F., 2013. Carbon emissions performance of commercial logging in East Kalimantan, Indonesia. Global Change Biology In press. doi: 10.1111/gcb.12386
<b>ESI Findings - Round 1 (01-17-2014)</b>	No data was presented in the Performance module or Griscom et al. 2013.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please present Griscom <i>et al.</i> 2013, and data collected to allow ESI to reproduce the determination of the performance benchmark. Data shall be presented in a manner that enables independent assessment of the presented data.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Please see attached excel workbook "ER-Indicator relationships" and publication (with supplemental materials doc).
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: Response sufficient, Griscom Ellis Putz 2014_logging emissions performance Ekali_GCB.pdf, and Summary Source Data_Impact Parameters and ERs_April 25_2014.xlsx have been provided. These files allow the VCSA and each of the validation/verification bodies assessing the proposed performance benchmark methodology to reproduce the determination of the performance benchmark and enables them to independently assess the presented data.

<b>Item Number</b>	26
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	8) All reasonable efforts shall be undertaken to collect sufficient data and the use of expert judgment as a substitute for data shall only be permitted where it can be demonstrated that there is a paucity of data. Expert judgment may be applied in interpreting data. Where expert judgment is used, good practice methods for eliciting expert judgment shall be used (e.g., IPCC 2006 Guidelines for National GHG Inventories).
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C Performance Method Module DRAFT Dec_2013.docx section 5.1 6 (Appendix)
<b>ESI Findings - Round 1 (01-17-2014)</b>	The Performance Module conducted both data collection and held expert workshops. The data collection and use of experts appears to meet the requirements of 4.5.6_8. Section 5.1 of the Performance Module states, "The selection of these thresholds for crediting benchmarks and additionality benchmarks was based on both empirical results of the field study (Griscom et. al. 2013), and feedback during an expert consultation held in East Kalimantan in May 2013 (outcomes summarized in Appendix)". General criteria should be added to the methodology to ensure that this analysis can be replicated in other regions.

<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please add general criteria to the methodology to ensure that this analysis can be replicated in other regions. All reasonable efforts shall be undertaken to collect sufficient data and the use of expert judgment as a substitute for data shall only be permitted where it can be demonstrated that there is a paucity of data. Expert judgment may be applied in interpreting data. Where expert judgment is used, good practice methods for eliciting expert judgment shall be used (e.g., IPCC 2006 Guidelines for National GHG Inventories).</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We have added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies are not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: Response sufficient, VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific proxy factors.</p>

<p><b>Item Number</b></p>	<p>27</p>
<p><b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b></p>	<p>4.6.7 Step 2: Performance Benchmark The GHG emissions generated (or carbon sequestered) per unit of output, unit of input or sequestration metric by the project shall be below (or above, for sequestration) the prescribed performance benchmark metric or proxy for such metric (see Section 4.1.16 for specification of the metric). Proxy metrics or conditions may be specified where it can be demonstrated that they are strongly correlated with the performance benchmark metric and that they can serve as an equivalent or better method (e.g., in terms of reliability, consistency or practicality) to determine whether performance is achieved to a level at least equivalent to that of the performance benchmark metric.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C IFM Methodology DRAFT Dec2013.docx, Section 3 and 7, step 2  RIL-C Performance Method Module DRAFT Dec_2013.docx</p>

<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>The methodology states "Projects must exceed the region-specific performance benchmark for each impact parameter (i.e. proxy factor), as demonstrated in the RIL-C Performance Method Module. One or more impact parameters are defined for each of three categories: felling impacts, skidding impacts, and hauling impacts (includes log landings)."</p> <p>A project can only accrue these emissions reductions for any one impact parameter if it is deemed "additional." A project is deemed "additional" for any one impact parameter if that impact parameter is below the "additionality benchmark" assigned for that impact parameter. Also, all impact parameters must be at or below their respective crediting benchmarks in order for the project to be deemed additional, such that credits may be generated from any one or more impact parameters. "</p> <p>The methodology establishes additionality and crediting benchmarks for each impact parameter. It is not entirely clear how the modules used (and developed) for other regions will establish the performance benchmarks.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please describe the procedure that each region specific performance benchmark will be established. What will be the criteria used so that this benchmark is sufficiently high enough and also consistent with the other performance benchmarks used in other region specific modules that would be created.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We have added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies are not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: Response sufficient, VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific proxy factors.</p>

<p><b>Item Number</b></p>	<p>28</p>
<p><b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b></p>	<p>4.7.1 The methodology shall establish criteria and procedures for quantifying GHG emissions and/or removals, and/or carbon stocks, for the selected GHG sources, sinks and/or reservoirs, separately for the project (including leakage) and baseline scenarios.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C IFM Methodology DRAFT Dec2013.docx, Sections 7 and 8 (steps 1-4)</p> <p>RIL-C Performance Method Module DRAFT Dec_2013.docx</p>

<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>The methodology states" Baseline and project emissions are addressed simultaneously, whereby an emissions reduction value (in units of tons CO2 reduced, i.e. net of baseline and project emissions) is assigned as a function of the difference between the impact parameter (proxy variable) in the project and in the crediting benchmark for each emission source category (felling, skidding and hauling). Assigned emissions reductions, expressed on a per hectare basis, are then summed for the three emission source categories, then multiplied by the number of hectares in the harvest area in year t. "</p> <p>The methodology then describes the procedure used to quantify reductions and removals. These calculations (Steps 1-4 in section 8.2 and equations 1-9) are valid and correctly developed for the intended purpose.</p> <p>The methodology defines the criteria for quantification as being "Projects must exceed the region-specific performance benchmark for each impact parameter (i.e. proxy factor), as demonstrated in the RIL-C Performance Method Module. A project can only accrue these emissions reductions for any one impact parameter if it is deemed "additional." A project is deemed "additional" for any one impact parameter if that impact parameter is below the "additionality benchmark" assigned for that impact parameter. Also, all impact parameters must be at or below their respective crediting benchmarks in order for the project to be deemed additional, such that credits may be generated from any one or more impact parameters. " (Section 7 of methodology).</p> <p>This description shows that the methodology is defining the criteria and procedures for quantification of GHG removals.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please expand on the explanation of the establishment of the baseline proxy variables, so that the methodology is very clear on how they can be developed in other specific forest regions.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>To clarify, proxy factors are not developed independently of standardized baselines - they are produced from the same base research, and project proponents do not develop project-specific proxies, or redefine regionally-specific proxies, when applying this methodology in the development of a project. Further guidance on development of proxies is not necessary per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, however we have added general criteria and guidance to the framework module under applicability conditions. Because the methodology does not allow project proponents to develop project-specific factors, procedures logically should not be necessary per VCS Standard 4.1.7 "Where methodologies allow project proponents to establish a project specific factor, the methodology shall provide a procedure for establishing such factors."</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: Response sufficient, VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific proxy factors.</p>

<b>Item Number</b>	29
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	4.7.3 In any given verification period, the methodology may result in the project's GHG emission reductions or removals being quantified as negative. This is permitted and the project shall be granted no credit in such periods.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx  RIL-C Performance Method Module DRAFT Dec_2013.docx
<b>ESI Findings - Round 1 (01-17-2014)</b>	This specific requirement is not listed in the methodology. It is imagined that this is a possibility with projects that apply this methodology, therefore it is requested that the developers add a qualifying statement to the methodology document.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please add language to the methodology document that indicates "In any given verification period, the methodology may result in the project's GHG emission reductions or removals being quantified as negative. This is permitted and the project shall be granted no credit in such periods."
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We have added the follow text in the framework document Section 8.2 "Note that if any impact parameter is at or below the crediting benchmark, parameter CRIL,t is set equal to zero."
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, Response sufficient. Text has been added to Section 8.2 that indicates, In any given verification period, the methodology may result in the project's GHG emission reductions or removals being quantified as negative. This is permitted and the project shall be granted no credit in such periods. Section 8.2 of the methodology now states, "Note that if any impact parameter is at or below the crediting benchmark, parameter CRIL,t is set equal to zero."

<b>Item Number</b>	30
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	4.8.2 When highly uncertain data and information are relied upon, conservative values shall be selected that ensure that the quantification does not lead to an overestimation of net GHG emission reductions or removals.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx  RIL-C Performance Method Module DRAFT Dec_2013.docx
<b>ESI Findings - Round 1 (01-17-2014)</b>	The methodology and current module use conservative values for the selection of the proxy values derived from the 9 sampling sites across East Kalimantan. These values are taken in most cases from the lower end of the confidence interval at a 95% CI or they are taken from the lower end of the lowest quartile. The selection of these values needs to be confirmed by verifiers.

<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please provide the source document that determined the range of values used to determine the proxy values for the additionality and crediting thresholds, as well as the other default values presented in the module. Please present the full range of values and the calculations used to determine these default and proxy values.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Griscom et al 2014 has been shared with the ESI audit team, accompanying these responses to findings. The raw dataset from which benchmarks and proxies were developed has been provided to ESI - see also response to finding row 108.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, response sufficient. Summary Source Data_Impact Parameters and ERs_April 25_2014.xlsx presents the full range of values and the calculations used to determine these default and proxy values.

<b>Item Number</b>	31
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	1) Purpose of monitoring.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx, section 9  RIL-C Performance Method Module DRAFT Dec_2013.docx, sections 5.2.1-5.2.3
<b>ESI Findings - Round 1 (01-17-2014)</b>	The purpose for monitoring of each impact parameter is listed in the module sections relating to the impact parameters. IF the purpose of the monitoring is for the establishment of metrics from which to calculate emissions reductions, then this is fairly obvious, however it is not explicitly stated as such in either the methodology or the module. The methodology does however mandate the use of the most current module.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please include a section in the methodology that explicitly describes the purpose of monitoring.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Text has been added in Section 9 of the framework document to explain the purpose of monitoring: "The purpose of monitoring is to generate field measurements after each harvest from which emission reductions can be estimated. Thus, following completion of each harvest, all impact parameters from all logging emission source categories (felling, skidding and hauling), as identified in the applicable RIL-C Performance Method Module, must be sampled in the field and estimated according to procedures detailed in the applicable RIL-C Performance Method Module." For clarity, we also revised the reference in the parameter tables from "See case study in..." to "APPLICABLE RIL-C Permanence Method Module)." Frequency of monitoring has also been clarified. Text explaining purpose of monitoring, as well as an introductory narrative summarizing monitoring procedures, have been added to Section 5.2 of the East Kalimantan Performance Method Module.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, response sufficient. Text has been added to section 9 of the methodology and Section 5.2 of the East Kalimantan Performance Method Module that explicitly describes the purpose of monitoring.

<b>Item Number</b>	32
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	3) Procedures for managing data quality
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx  RIL-C Performance Method Module DRAFT Dec_2013.docx
<b>ESI Findings - Round 1 (01-17-2014)</b>	The methodology does not include procedures for managing data quality.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please add quality control procedures for each of the data and parameters measured.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We have clarified in the parameter tables in the framework document that QA/QC procedures are specified in the applicable RIL-C performance method module, and have added QA/QC requirements to parameters (and added parameter tables) in the East Kalimantan Performance Method Module.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Open: These changes do not appear to have been added to the version of the revised framework document, and the East Kalimantan Performance Method Module.
<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	NCR: Please add quality control procedures for each of the data and parameters measured.
<b>Round 2 Response from Methodology Developer (09-09-2014)</b>	Quality control procedures have already been added to the parameter tables for both the framework document (parameters monitored) and the EK performance method module; the latter document is where most of the monitored parameters are covered.
<b>Final ESI Findings (09-12-2014)</b>	Finding Closed: QA/QC procedures have been added to parameter tables in the methodology and module document and appear sufficient.

<b>Item Number</b>	33
<b>VCS Standard VCS Version 3 Requirements Document 08 October 2013, v3.4</b>	4) Monitoring frequency and measurement procedures.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx,  RIL-C Performance Method Module DRAFT Dec_2013.docx, section 5.2

<b>ESI Findings - Round 1 (01-17-2014)</b>	The module indicates that some of the impact parameters will be monitored at the close of the harvest activates, but it is unclear how often these measurements should be taken after that point. If the projects are to have a minimum time span, then it is appropriate to monitor regularly. Monitoring procedures are outlined in the module, and those are specifically reviewed in detail in the AFOLU Requirements V3.4 tab of this workbook.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please specify the monitoring frequency in the module, noting that the projects will need to monitor regularly at some unknown interval. This is important to include since the projects that use this methodology need to have a project lifetime of at least 30 years according to the VCS Standards and the AFOLU Non-Permanence Risk Tool.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We have added the following text to Section 9 of the framework document: "Frequency of monitoring: Throughout the project crediting period, monitoring must be conducted after each harvest, on not less than annual intervals."
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: response sufficient, section 9 of the methodology states, " <i>Frequency of monitoring: Throughout the project crediting period, monitoring must be conducted after each harvest, on not less than annual intervals</i> ".

<b>Item Number</b>	34
<b>VCS AFOLU Requirements Version 3.4</b>	4.1.2 As set out in the VCS Standard, default factors and standards used to ascertain GHG emission data and any supporting data for establishing baseline scenarios and demonstrating additionality shall be publicly available from a recognized, credible source, such as IPCC 2006 Guidelines for National GHG Inventories or the IPCC 2003 Good Practice Guidelines for Land Use, Land-Use Change and Forestry. See the VCS Standard for the full rules and requirements for the use of default factors and standards.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C Performance Method Module DRAFT Dec_2013.docx, section 5.1.1
<b>ESI Findings - Round 1 (01-17-2014)</b>	It is understood that the default values for Felled Tree biomass, and collateral Damage biomass were determined from empirical studies based on 9 logging concessions in the East Kalimantan region of Borneo. It is not clear if the Griscom et. al. 2013 source followed the IPCC 2006 Guidelines for National GHG Inventories or the IPCC 2003 Good Practice Guidelines for Land Use, Land-Use Change and Forestry.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please provide evidence that the default values were determined using a publicly available and recognized, credible source, such as IPCC 2006 Guidelines for National GHG Inventories or the IPCC 2003 Good Practice Guidelines for Land Use, Land-Use Change and Forestry.

<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	A copy of Griscom et al 2014 has been shared with the ESI audit team, accompanying these responses to findings, demonstrating general conformance to IPCC accounting principles and specifying sources of allometric equations, carbon fraction of biomass, and other elements in the derivation of estimates.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, response sufficient. A copy of Griscom et al was provided and has been accepted in the peer reviewed publication Global Change Biology on 8/2/2013 and published in the first issue of 2014.

<b>Item Number</b>	35
<b>VCS AFOLU Requirements Version 3.4</b>	<i>See Table on Pages 31 to 32 for Carbon Pools Considered. Please indicate what pools they are claiming and the justification.</i>
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, Section 5
<b>ESI Findings - Round 1 (01-17-2014)</b>	The meth is only including above and below ground biomass. Harvested wood products pool is not included since as an applicability condition, there should be no change in this pool from the baseline harvest volume. If there is, then this methodology is not applicable. The AFOLU Requirements v3.4 indicate that for Reduced Impact Logging (RIL) with no or minimal (<25%) effect on total timber extracted that dead wood is a required pool. It is understood that dead wood may be included in the above ground carbon pool, but this is not clear.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please clarify why the project is excluding dead wood, or please explain how dead wood is being included in the carbon pools.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	While dead wood is not explicitly included as a separate accounting element, it is implicitly included in emission reductions estimated for the live aboveground biomass pool. Firstly, the project activity (RIL) does not impact pre-existing dead wood stocks, and the applicability conditions have been updated to require that RIL practices implemented as part of the project activity do not include slash management, salvage harvesting or other planned removal of dead wood. The difference expected from RIL is a reduction of (slash) inputs to the dead wood pool, and consequently smaller dead wood pool. This difference in inputs to the dead wood pool is exactly equal to the difference in aboveground live retained, and the emission reduction estimates from aboveground live derived in the East Kalimantan Performance Method Module are progressively accounted according to the dead wood decay rate (thus they implicitly account a reduction from aboveground live, input to dead wood, followed by steady decay of dead wood). We have incorporated this change in equation 9 in the framework document and revised the table in Section 5 of the framework document to further clarify this (that dead wood IS an included pool, though embedded within aboveground live).

<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>The project appears to be including dead wood pools, however it remains unclear as to exactly how. The applicability conditions have been updated to include restrictions on salvage harvest and slash management, however cutting and consequent wasting of standing dead wood is not always from simple salvage operations. If the point of this methodology is to reduce and quantify waste from logging operations, then the project needs to include standing dead trees in its Above Ground Carbon pool accounting. Stating dead wood is a component of the above ground <i>live</i> carbon pool is a misnomer. While verifiers understand the concept, this needs to be explicitly described as it is very conceivable that dead standing trees would be cut and wasted as part of the harvesting activity and therefore should be explicitly included in the entire above ground carbon pool.</p>
<p><b>Round 2 NCR/CL/OFI (04-11-2014)</b></p>	<p>NCR: Please include standing dead trees in the project scenario accounting procedures as a component of the above ground carbon pool, along with standing live carbon stocks. This should be referred to simply as above ground carbon stocks, rather than above ground live carbon stocks, since standing dead trees are just as susceptible to removal and wasting and they contribute to the accounting for carbon left standing after a logging operation.</p>
<p><b>Round 2 Response from Methodology Developer (09-09-2014)</b></p>	<p>The pool has been renamed "above ground carbon stocks", and the pools table in the framework document has been revised and expanded to clarify how the accounting of various pools, including dead wood, is factored into direct emission reduction calculations from this "source." We have additionally provided a schematic to illustrate the accounting. Further, the subscript AGB has been changed to AGC to reflect this definitional change. Per email from Andrew Beauchamp, VCS, on Jul 25 2014, the dead wood pool need not be broken out in accounting, only that it must be included in accounting, as the current framework of calculation of emission reductions does. The pools table in the framework document is followed by the added explanation below: "Note that above ground carbon stocks include both live and dead (standing and lying) pools. Emission reductions calculated for the aboveground carbon pool, represent transfer of biomass carbon from live trees to dead wood followed by steady emissions via decomposition, without explicitly breaking out accounting of these elements. Emissions from dead wood included in accounting is from dead wood produced during harvest (i.e. slash and new standing dead from harvest and collateral damage). The methodology conservatively does not account for changes in pre-existing standing and lying dead wood after harvest; these stocks would be expected to be greater in the with-project case post-harvest due to less impact from RIL-C practices; the applicability condition that RIL practices implemented as part of the project activity do not include slash management, salvage harvesting or other planned removal of dead wood, further assures this assumption."</p>
<p><b>Final ESI Findings (09-12-2014)</b></p>	<p>Finding Closed: The methodology now includes dead wood in the accounting structure of the framework document and supporting module as recommended by Andrew Beauchamp, VCS, on Jul 25 2014.</p>

<b>Item Number</b>	36
<b>VCS AFOLU Requirements Version 3.4</b>	4.3.4 Specific carbon pools and GHG sources do not have to be accounted for if their exclusion leads to conservative estimates of the total GHG emission reductions or removals generated. The methodology shall establish criteria and procedures by which a project proponent may determine a carbon pool or GHG source to be conservatively excluded. Such conservative exclusion may be determined by using tools from an approved GHG program, such as the CDM A/R methodological tool <i>Procedure to determine when accounting of the soil organic carbon pool may be conservatively neglected in CDM A/R project activities</i> , or by using peer-reviewed literature.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, Section 5
<b>ESI Findings - Round 1 (01-17-2014)</b>	The method is including only one optional pool, below ground biomass. This pool is required under this meth and is presented as a simple function of above ground biomass. Below Ground Carbon is considered an Optional Pool according to AFOLU Requirements v 3.4. Carbon pool, (below ground biomass) is optional and may be excluded from the project boundary. Where the pool is included in the methodology, the methodology shall establish criteria and procedures to set out when a project proponent shall or may include the pool.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: The methodology appears to require the quantification of below ground carbon however the AFOLU Requirements indicate it as an optional pool which mandates that "the methodology shall establish criteria and procedures to set out when a project proponent shall or may include the pool." Please add criteria to the methodology that satisfies this requirement.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	While AFOLU methodological guidance states that methodologies have the option of not including the belowground pool, the RIL-C methodology accounting boundary is more comprehensive than allowed in this respect, and requires inclusion of the belowground pool in all cases, clearly specifying in the table under pools/sources in Section 5 of the framework document that belowground biomass is "always included".
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: Response sufficient, section 5 of the methodology clearly states that belowground biomass is "always included".
<b>Item Number</b>	37
<b>VCS AFOLU Requirements Version 3.4</b>	4.4.1 The determination and establishment of a baseline scenario shall follow an internationally accepted GHG inventory protocol, such as the IPCC 2006 Guidelines for National GHG Inventories.

<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, section 8.1
<b>ESI Findings - Round 1 (01-17-2014)</b>	It is understood that the baseline scenario values were determined from empirical studies based on 9 logging concessions in the East Kalimantan region of Borneo. It is not clear if the Griscom et. al. 2013 source followed the IPCC Guidelines for National GHG Inventories.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please confirm if and how the Griscom et. Al. 2013 study determined the baseline default values upon internationally accepted GHG inventory protocol, such as the IPCC 2006 Guidelines for National GHG Inventories.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	A copy of Griscom et al 2014 has been shared with the ESI audit team, accompanying these responses to findings, demonstrating general conformance to IPCC accounting principles and specifying sources of allometric equations, carbon fraction of biomass, and other elements in the derivation of estimates.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: Response sufficient, A copy of Griscom et al 2014 has been made available. The study demonstrates general conformance to IPCC accounting principles by specifying sources of allometric equations, carbon fraction of biomass, and other elements in the derivation of estimates, all of which have been through the peer review process in the publication of Global Change Biology.

<b>Item Number</b>	38
<b>VCS AFOLU Requirements Version 3.4</b>	4.5.1 Methodologies shall establish procedures to quantify the GHG emissions or removals for the project and baseline scenario. The <i>IPCC 2006 Guidelines for National GHG Inventories</i> or the <i>IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry</i> shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions. The IPCC Guidelines shall also be followed in terms of quality assurance/quality control (QA/QC) and uncertainty analysis.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, section 8

**ESI Findings - Round 1 (01-17-2014)**

It is unclear from the current draft if the methodology is using the IPCC Guidelines as guidance for quantification, QA/QC and uncertainty analysis.

The Performance Method module does give specific procedures for quantification of GHG emissions. These are described in the Methodology document, sections 8.1 and 8.2. Baseline emissions are not described as they are established in each of the modules related to specific forest types and areas. Steps 1-4, section 8.2 outlines the basic procedures for quantification once the impact parameters are quantified. These calculations appear to be complete and simply stated in the methodology. They include the basic parameters needed to complete the calculation of credits within the harvest area, and incorporate each of the impact parameters.

The performance module includes basic calculations for each of the impact parameters. These calculations include specifics for each of the impact parameters. The individual calculations each appear to be reasonable and follow the logic explained in the methodology and module, however there are some inconsistencies in some of the calculations.

1. FELL1- It is unclear why eq 2.1.1a includes CDB = Collateral Damage Biomass (MgC/ha) = 8.55 default value. Felled tree biomass (FTB = Felled Tree Biomass (MgC/ha) = 23.23 default value) is clearly needed, however the default value source needs to be clearly indicated for both the number of samples, size classes, allometric calculation used and species this figure was derived from. Eq 2.1.2a and b don't use the CDB figure.

2. Equations 2.1.2a and 2.1.2b show an inconsistent order of operations for the crediting benchmark. They show the FELL2- 18% and the Equations 2.1.1 show the crediting benchmark as 25%-FELL1. Why are these different?

3. Section 5.1.3, "calculating emissions reductions", first sentence mentions trees >10 cm dbh as being the minimum size class. This appears to be a typo as the min size class is listed as 20cm dbh everywhere else.

4. Equations 2.1.3a and b show parameters that are not defined. These are 2.81 and 86.

5. The following parameters are unclear:  
 ESKB = emissions level at crediting benchmark for SKID = 38.80 MgCO<sub>2</sub>/ha  
 ESKID = emissions level for a given level of SKID = (0.527 \* SKID) + 2.127) - (4.669 \* SQRT(0.111 + (SKID - 18.985)0.0026))

6. Equations 2.1.4a and b numeric parameters are not fully explained and show ERhaul-AGB twice and does not show the equation for below ground biomass, although it defines it. This is probably a typo. SPM 2013-12-20

<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>NCR: Please explain the use of and derivation of CDB- Collateral Damage biomass.</p> <p>Please explain why it is only applied to FELL1 and not FELL2. Please add a full description of this metric, including how it was derived and why it is included in the module.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>No Response from Methodology Developer</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>No response provided.</p>
<p><b>Round 2 NCR/CL/OFI (04-11-2014)</b></p>	<p>NCR: Please explain the use of and derivation of CDB- Collateral Damage biomass. Please explain why it is only applied to FELL1 and not FELL2. Please add a full description of this metric, including how it was derived and why it is included in the module.</p>
<p><b>Round 2 Response from Methodology Developer (09-09-2014)</b></p>	<p>The "collateral damage biomass" variable (CDB) refers to the biomass of non-commercial (collateral) trees transferred from live to deadwood pool due to felling of the harvest tree (i.e. adjacent trees impacted by harvest tree) per hectare. CDB is estimated as the density of felled trees multiplied by the collateral damage per felled tree (where "felled tree" is defined as trees felled with the intent of commercial harvest, as identified by a chainsaw cut stump). As such, CDB is only relevant to FELL1 and FELL2 impact parameters, because it only refers to collateral damage associated with the felling of trees with chainsaws (it does not refer to the damage to trees associated with skidding of hauling activities). The variable CDB was derived from the sampling of collateral damage due to felling of trees as reported in our Global Change Biology paper (Griscom et al. 2014). We derived the default value for CDB (8.55 MgC/ha - as reported in East Kalimantan module p 9) as the bottom end of the 95% confidence intervals from the mean value reported in Griscom et al. 2014. See attached "collateral damage" excel workbook for derivation and source data. See pages 9, 19, and 20 in the East Kalimantan module document for full description of the variable CDB. Note that it is conservatively assumed that incidental (= collateral) damage to surrounding trees is the same on trees felled and recovered with and without RIL-C practices. Also, CDB is calculated based on a conservative default value for the collateral impacts per felled tree, and is not adjusted based on the size of felled trees since Griscom et al. (2014) found limited increases in collateral impacts with increasing felled tree size. As such, the optional adjustment of the CDB default value only adjusts for variability in the density of felled trees.</p>
<p><b>Final ESI Findings (09-12-2014)</b></p>	<p>Finding Closed: A full description of CBD, including how it was derived and why it is included in the module has been provided as requested. Additional language clarifying this metric has been added to pages 9, 19, and 20 in the East Kalimantan module document. .</p>

<b>Item Number</b>	39
<b>VCS AFOLU Requirements Version 3.4</b>	4.5.1 Methodologies shall establish procedures to quantify the GHG emissions or removals for the project and baseline scenario. The <i>IPCC 2006 Guidelines for National GHG Inventories</i> or the <i>IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry</i> shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions. The IPCC Guidelines shall also be followed in terms of quality assurance/quality control (QA/QC) and uncertainty analysis.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, section 8
<b>ESI Findings - Round 1 (01-17-2014)</b>	<p>It is unclear from the current draft if the methodology is using the IPCC Guidelines as guidance for quantification, QA/QC and uncertainty analysis.</p> <p>The Performance Method module does give specific procedures for quantification of GHG emissions. These are described in the Methodology document, sections 8.1 and 8.2. Baseline emissions are not described as they are established in each of the modules related to specific forest types and areas. Steps 1-4, section 8.2 outlines the basic procedures for quantification once the impact parameters are quantified. These calculations appear to be complete and simply stated in the methodology. They include the basic parameters needed to complete the calculation of credits within the harvest area, and incorporate each of the impact parameters.</p> <p>The performance module includes basic calculations for each of the impact parameters. These calculations include specifics for each of the impact parameters. The individual calculations each appear to be reasonable and follow the logic explained in the methodology and module, however there are some inconsistencies in some of the calculations.</p> <ol style="list-style-type: none"> <li>1. FELL1- It is unclear why eq 2.1.1a includes CDB = Collateral Damage Biomass (MgC/ha) = 8.55 default value. Felled tree biomass (FTB = Felled Tree Biomass (MgC/ha) = 23.23 default value) is clearly needed, however the default value source needs to be clearly indicated for both the number of samples, size classes, allometric calculation used and species this figure was derived from. Eq 2.1.2a and b don't use the CDB figure.</li> <li>2. Equations 2.1.2a and 2.1.2b show an inconsistent order of operations for the crediting benchmark. They show the FELL2- 18% and the Equations 2.1.1 show the crediting benchmark as 25%-FELL1. Why are these different?</li> <li>3. Section 5.1.3, "calculating emissions reductions", first sentence mentions trees &gt;10 cm dbh as being the minimum size class. This appears to be a typo as the min size class is listed as 20cm dbh everywhere else.</li> <li>4. Equations 2.1.3a and b show parameters that are not defined.</li> </ol>

	<p>These are 2.81 and 86.</p> <p>5. The following parameters are unclear:</p> <p>ESKB = emissions level at crediting benchmark for SKID = 38.80 MgCO<sub>2</sub>/ha  ESKID = emissions level for a given level of SKID = (0.527 * SKID) + 2.127) - (4.669 * SQRT(0.111 + (SKID - 18.985)0.0026))</p> <p>6. Equations 2.1.4a and b numeric parameters are not fully explained and show ERhaul-AGB twice and does not show the equation for below ground biomass, although it defines it. This is probably a typo. SPM 2013-12-20</p>
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please explain the inconsistent order of operations in equations 2.1.1 and 2.1.2 in relation to the subtraction of the crediting baseline.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	No Response from Methodology Developer
<b>ESI Findings - Round 2 (04-11-2014)</b>	No response provided.
<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	NCR: Please explain the inconsistent order of operations in equations 2.1.1 and 2.1.2 in relation to the subtraction of the crediting baseline.
<b>Round 2 Response from Methodology Developer (09-09-2014)</b>	Both equation 2.1.1 and 2.1.2 are now structured the same: as "baseline value" minus "measured project value" for FELL1 and FELL2. As such, positive emissions reductions are calculated when project values are lower than the baseline (i.e. FELL1: lower percentage of felled tree logs abandoned; FELL2: lower percentage of harvested log length left in the forest). This structure seems logical and consistent to us.
<b>Final ESI Findings (09-12-2014)</b>	Finding Closed: A description of order of operations in equations 2.1.1 and 2.1.2 in relation to the subtraction of the crediting baseline has been provided and follows: "baseline value" minus "measured project value". .

<b>Item Number</b>	40
<b>VCS AFOLU Requirements Version 3.4</b>	4.5.1 Methodologies shall establish procedures to quantify the GHG emissions or removals for the project and baseline scenario. The <i>IPCC 2006 Guidelines for National GHG Inventories</i> or the <i>IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry</i> shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions. The IPCC Guidelines shall also be followed in terms of quality assurance/quality control (QA/QC) and uncertainty analysis.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, section 8

**ESI Findings - Round 1 (01-17-2014)**

It is unclear from the current draft if the methodology is using the IPCC Guidelines as guidance for quantification, QA/QC and uncertainty analysis.

The Performance Method module does give specific procedures for quantification of GHG emissions. These are described in the Methodology document, sections 8.1 and 8.2. Baseline emissions are not described as they are established in each of the modules related to specific forest types and areas. Steps 1-4, section 8.2 outlines the basic procedures for quantification once the impact parameters are quantified. These calculations appear to be complete and simply stated in the methodology. They include the basic parameters needed to complete the calculation of credits within the harvest area, and incorporate each of the impact parameters.

The performance module includes basic calculations for each of the impact parameters. These calculations include specifics for each of the impact parameters. The individual calculations each appear to be reasonable and follow the logic explained in the methodology and module, however there are some inconsistencies in some of the calculations.

1. FELL1- It is unclear why eq 2.1.1a includes CDB = Collateral Damage Biomass (MgC/ha) = 8.55 default value. Felled tree biomass (FTB = Felled Tree Biomass (MgC/ha) = 23.23 default value) is clearly needed, however the default value source needs to be clearly indicated for both the number of samples, size classes, allometric calculation used and species this figure was derived from. Eq 2.1.2a and b don't use the CDB figure.

2. Equations 2.1.2a and 2.1.2b show an inconsistent order of operations for the crediting benchmark. They show the FELL2- 18% and the Equations 2.1.1 show the crediting benchmark as 25%-FELL1. Why are these different?

3. Section 5.1.3, "calculating emissions reductions", first sentence mentions trees >10 cm dbh as being the minimum size class. This appears to be a typo as the min size class is listed as 20cm dbh everywhere else.

4. Equations 2.1.3a and b show parameters that are not defined. These are 2.81 and 86.

5. The following parameters are unclear:

ESKB = emissions level at crediting benchmark for SKID = 38.80 MgCO2/ha

ESKID = emissions level for a given level of SKID =  $(0.527 * SKID) + 2.127 - (4.669 * \text{SQRT}(0.111 + (SKID - 18.985)0.0026))$

6. Equations 2.1.4a and b numeric parameters are not fully explained and show ERhaul-AGB twice and does not show the equation for below ground biomass, although it defines it. This is probably a typo. SPM 2013-12-20

<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please correct the possible typo in Section 5.1.3, "calculating emissions reductions", first sentence, where it mentions trees >10cm dbh.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	This is not a typo. The impact parameter (proxy) is the # of trees > 20 cm dbh per ha, which is used to estimate emissions from trees > 10 cm dbh resulting from skidding. Text is correct and left as is.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, response sufficient. Text has been confirmed to be correct.

<b>Item Number</b>	41
<b>VCS AFOLU Requirements Version 3.4</b>	4.5.1 Methodologies shall establish procedures to quantify the GHG emissions or removals for the project and baseline scenario. The <i>IPCC 2006 Guidelines for National GHG Inventories</i> or the <i>IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry</i> shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions. The IPCC Guidelines shall also be followed in terms of quality assurance/quality control (QA/QC) and uncertainty analysis.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx  RIL-C Performance Method Module DRAFT Dec_2013.docx, section 8

**ESI Findings - Round 1  
(01-17-2014)**

It is unclear from the current draft if the methodology is using the IPCC Guidelines as guidance for quantification, QA/QC and uncertainty analysis.

The Performance Method module does give specific procedures for quantification of GHG emissions. These are described in the Methodology document, sections 8.1 and 8.2. Baseline emissions are not described as they are established in each of the modules related to specific forest types and areas. Steps 1-4, section 8.2 outlines the basic procedures for quantification once the impact parameters are quantified. These calculations appear to be complete and simply stated in the methodology. They include the basic parameters needed to complete the calculation of credits within the harvest area, and incorporate each of the impact parameters.

The performance module includes basic calculations for each of the impact parameters. These calculations include specifics for each of the impact parameters. The individual calculations each appear to be reasonable and follow the logic explained in the methodology and module, however there are some inconsistencies in some of the calculations.

1. FELL1- It is unclear why eq 2.1.1a includes CDB = Collateral Damage Biomass (MgC/ha) = 8.55 default value. Felled tree biomass (FTB = Felled Tree Biomass (MgC/ha) = 23.23 default value) is clearly needed, however the default value source needs to be clearly indicated for both the number of samples, size classes, allometric calculation used and species this figure was derived from. Eq 2.1.2a and b don't use the CDB figure.

2. Equations 2.1.2a and 2.1.2b show an inconsistent order of operations for the crediting benchmark. They show the FELL2- 18% and the Equations 2.1.1 show the crediting benchmark as 25%-FELL1. Why are these different?

3. Section 5.1.3, "calculating emissions reductions", first sentence mentions trees >10 cm dbh as being the minimum size class. This appears to be a typo as the min size class is listed as 20cm dbh everywhere else.

4. Equations 2.1.3a and b show parameters that are not defined. These are 2.81 and 86.

5. The following parameters are unclear:

ESKB = emissions level at crediting benchmark for SKID = 38.80 MgCO<sub>2</sub>/ha

ESKID = emissions level for a given level of SKID = (0.527 \* SKID) + 2.127 - (4.669 \* SQRT(0.111 + (SKID - 18.985)0.0026))

6. Equations 2.1.4a and b numeric parameters are not fully explained and show ERhaul-AGB twice and does not show the equation for below ground biomass, although it defines it. This is probably a typo. SPM 2013-12-20

<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please explain and define in the module the parameters 2.81 and .86 found in equations 2.1.3a and b.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	These combined conversions from C to CO <sub>2</sub> , and fractions of Aboveground Biomass vs. Belowground Biomass. This equation (and all others in section 5.1) has been re-structured to unpacked each input variable. Thus, these two numbers are no longer in equation, but are represented by variables R (ratio of C to CO <sub>2</sub> ), FAGB, and FBGB, and values for each of these variables are listed below equation. Also, for clarity, the overall structure of equations is described in the introduction of section 5.1.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, response sufficient. Explanations have been provided for parameters 2.81 and .86 found in equations 2.1.3a and b.
<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	Finding Closed, response sufficient. Explanations have been provided for parameters 2.81 and .86 found in equations 2.1.3a and b.

<b>Item Number</b>	42
<b>VCS AFOLU Requirements Version 3.4</b>	4.5.1 Methodologies shall establish procedures to quantify the GHG emissions or removals for the project and baseline scenario. The <i>IPCC 2006 Guidelines for National GHG Inventories</i> or the <i>IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry</i> shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions. The IPCC Guidelines shall also be followed in terms of quality assurance/quality control (QA/QC) and uncertainty analysis.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, section 8

**ESI Findings - Round 1  
(01-17-2014)**

It is unclear from the current draft if the methodology is using the IPCC Guidelines as guidance for quantification, QA/QC and uncertainty analysis.

The Performance Method module does give specific procedures for quantification of GHG emissions. These are described in the Methodology document, sections 8.1 and 8.2. Baseline emissions are not described as they are established in each of the modules related to specific forest types and areas. Steps 1-4, section 8.2 outlines the basic procedures for quantification once the impact parameters are quantified. These calculations appear to be complete and simply stated in the methodology. They include the basic parameters needed to complete the calculation of credits within the harvest area, and incorporate each of the impact parameters.

The performance module includes basic calculations for each of the impact parameters. These calculations include specifics for each of the impact parameters. The individual calculations each appear to be reasonable and follow the logic explained in the methodology and module, however there are some inconsistencies in some of the calculations.

1. FELL1- It is unclear why eq 2.1.1a includes CDB = Collateral Damage Biomass (MgC/ha) = 8.55 default value. Felled tree biomass (FTB = Felled Tree Biomass (MgC/ha) = 23.23 default value) is clearly needed, however the default value source needs to be clearly indicated for both the number of samples, size classes, allometric calculation used and species this figure was derived from. Eq 2.1.2a and b don't use the CDB figure.

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6. Equations 2.1.4a and b numeric parameters are not fully explained and show ERhaul-AGB twice and does not show the equation for below ground biomass, although it defines it. This is probably a typo. SPM 2013-12-20

<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>NCR: Please better define the derivation of and relevance of the parameters listed in equation 2.1.3a and b:          ESKB = emissions level at crediting benchmark for SKID = 38.80 MgCO<sub>2</sub>/ha          ESKID = emissions level for a given level of SKID = (0.527 * SKID) + 2.127) – (4.669 * SQRT(0.111 + (SKID – 18.985)0.0026))</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>This equation (and all others in section 5.1) has been re-structured to unpackage each input variable to improve clarity. Also, source data calculations for each equation are provided in attached excel workbook, "Summary Source Data.." Also, for clarity, the overall structure of equations is described in the introduction of section 5.1.</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed, response sufficient. Equation 2.1.3a and b (and all others in section 5.1) has been re-structured to unpackage each input variable to improve clarity.</p>

<p><b>Item Number</b></p>	<p>43</p>
<p><b>VCS AFOLU Requirements Version 3.4</b></p>	<p>4.5.1 Methodologies shall establish procedures to quantify the GHG emissions or removals for the project and baseline scenario. The <i>IPCC 2006 Guidelines for National GHG Inventories</i> or the <i>IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry</i> shall be used as guidance for quantifying increases or decreases in carbon stocks and GHG emissions. The IPCC Guidelines shall also be followed in terms of quality assurance/quality control (QA/QC) and uncertainty analysis.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C IFM Methodology DRAFT Dec2013.docx          RIL-C Performance Method Module DRAFT Dec_2013.docx, section 8</p>

**ESI Findings - Round 1 (01-17-2014)**

It is unclear from the current draft if the methodology is using the IPCC Guidelines as guidance for quantification, QA/QC and uncertainty analysis.

The Performance Method module does give specific procedures for quantification of GHG emissions. These are described in the Methodology document, sections 8.1 and 8.2. Baseline emissions are not described as they are established in each of the modules related to specific forest types and areas. Steps 1-4, section 8.2 outlines the basic procedures for quantification once the impact parameters are quantified. These calculations appear to be complete and simply stated in the methodology. They include the basic parameters needed to complete the calculation of credits within the harvest area, and incorporate each of the impact parameters.

The performance module includes basic calculations for each of the impact parameters. These calculations include specifics for each of the impact parameters. The individual calculations each appear to be reasonable and follow the logic explained in the methodology and module, however there are some inconsistencies in some of the calculations.

1. FELL1- It is unclear why eq 2.1.1a includes CDB = Collateral Damage Biomass (MgC/ha) = 8.55 default value. Felled tree biomass (FTB = Felled Tree Biomass (MgC/ha) = 23.23 default value) is clearly needed, however the default value source needs to be clearly indicated for both the number of samples, size classes, allometric calculation used and species this figure was derived from. Eq 2.1.2a and b don't use the CDB figure.

2. Equations 2.1.2a and 2.1.2b show an inconsistent order of operations for the crediting benchmark. They show the FELL2- 18% and the Equations 2.1.1 show the crediting benchmark as 25%-FELL1. Why are these different?

3. Section 5.1.3, "calculating emissions reductions", first sentence mentions trees >10 cm dbh as being the minimum size class. This appears to be a typo as the min size class is listed as 20cm dbh everywhere else.

4. Equations 2.1.3a and b show parameters that are not defined. These are 2.81 and 86.

5. The following parameters are unclear:

ESKB = emissions level at crediting benchmark for SKID = 38.80 MgCO<sub>2</sub>/ha

ESKID = emissions level for a given level of SKID = (0.527 \* SKID) + 2.127 - (4.669 \* SQRT(0.111 + (SKID - 18.985)0.0026))

6. Equations 2.1.4a and b numeric parameters are not fully explained and show ERhaul-AGB twice and does not show the equation for below ground biomass, although it defines it. This is probably a typo. SPM 2013-12-20

<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please correct equation 2.1.4b to reflect below ground biomass. Please describe and define the derivation of the numeric parameters listed in equations 2.1.4a and b.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Correction has been made to reflect belowground biomass. This equation (and all others in section 5.1) has been re-structured to unpackage each input variable to improve clarity. Also, source data calculations for each equation are provided in attached excel workbook, "Summary Source Data..". Also, for clarity, the overall structure of equations is described in the introduction of section 5.1.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Please clarify the sources for default parameters, in equation 2.1.4b FAGB = Fraction of total tree biomass that is above ground = 0.765 FBGB = Fraction of total tree biomass that is belowground = 0.235.
<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	CL: Please clarify the sources for default parameters, in equation 2.1.4b FAGB = Fraction of total tree biomass that is above ground = 0.765 FBGB = Fraction of total tree biomass that is belowground = 0.235.
<b>Round 2 Response from Methodology Developer (09-09-2014)</b>	The default values for FAGB and FBGB in equation 2.1.4b is the now the same as that for equations 2.1.1, 2.1.2, 2.1.3, and 2.1.4a. Also, introductory text was added to page 5 of East Kalimantan module to explain these variables and the source for their assigned values, as follows, "All equations below include two fixed "emissions coefficients": 1) the ratio for converting from C to CO <sub>2</sub> ( <i>R</i> term in equations below), and 2) the fraction of stand-level tree biomass that occurs belowground versus aboveground (terms $F_{AGB}$ and $F_{BGB}$ in equations below). For each impact parameter, two equations are given, one for emissions from aboveground carbon (76.5% of emissions reductions) and one for emissions from belowground biomass (23.5% of emissions reductions). The values assigned for these proportions are based on Mokany et. al. (2006) <sup>[1]</sup> . Note that the figures in this section combine both above and below-ground emissions sources."
<b>Final ESI Findings (09-12-2014)</b>	Finding Closed: The source of default parameters, in equation 2.1.4b have been provide both in the response and East Kalimantan module.

<b>Item Number</b>	44
<b>VCS AFOLU Requirements Version 3.4</b>	4.6.1 Methodologies shall establish procedures to quantify all significant sources of leakage. Leakage is defined as any increase in GHG emissions that occurs outside the project boundary (but within the same country), and is measurable and attributable to the project activities. All leakage shall be accounted for, in accordance with this Section 4.6. The three types of leakage are:
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx, section 8.3 RIL-C Performance Method Module DRAFT Dec_2013.docx

<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>Leakage is defined in the methodology as being 0 as an applicability condition. Leakage for this methodology would include any adjustments to harvest levels relative to the baseline harvest level. The methodology indicates that the projects will not change their harvest volume by more than 20%. This implies that a project would have full knowledge of the baseline harvest amounts prior to initiation of the project. The methodology does not indicate that full knowledge of the pre project harvest level is an applicability condition; however, this condition needs to be added to the methodology so that a full accounting of this can be performed and verified.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>NCR: Please add an applicability condition to the methodology that requires a written, approved harvest volume statement that provides verifiable proof of the baseline harvest volume so that the direct comparison between project and baseline harvest volumes can be performed and confirmed.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>The project activity (RIL-C) as defined does not include reducing harvest volumes as a RIL-C practice, therefore any change in harvest volumes cannot be attributed to the project activity (and thus cannot be defined as leakage, e.g.). Nonetheless, we have included an applicability condition requiring that there are no substantial (&gt;20%) changes in harvest volumes from without-project (or prior) practice. In response to this finding we have further elaborated this applicability condition to specify how this must be demonstrated : "The project area must have .a pre-existing (i.e. before project start date) management plan with a projection of harvest volumes extending to a minimum of 10 years after the project start date. The plan must be authorized by the relevant government oversight agency. It must be demonstrated at project start that either (a) the pre-existing plan is still in effect, or, if a new, similarly authorized plan has replaced the former that (b) the difference in total projected volumes for the period through 10 years after the project start date does not exceed 20% of the pre-existing total planned harvest volume for that period."</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed, response sufficient: Applicability conditions have been expanded to require a written, approved harvest volume statement that provides verifiable proof of the baseline harvest volume so that the direct comparison between project and baseline harvest volumes can be performed and confirmed.</p>

<p><b>Item Number</b></p>	<p>45</p>
<p><b>VCS AFOLU Requirements Version 3.4</b></p>	<p>2) Activity-shifting leakage occurs when the actual agent of deforestation and/or forest or wetland degradation moves to an area outside of the project boundary and continues its deforestation or degradation activities elsewhere.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C IFM Methodology DRAFT Dec2013.docx, section 8.3 RIL-C Performance Method Module DRAFT Dec_2013.docx</p>

<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>This type of leakage is applicable and needs to be addressed in the methodology. The project has applicability criteria that specifically indicate that the meth shall not be used if there is any leakage and that leakage is set to 0 by default. The meth suggests that it will also not be used if the harvest volume is changed by more than 20%. Each of these elements need to have a method for quantification as a means for confirming these conditions for eligibility. Further, the methodology includes a calculation for leakage, which is confusing as it is supposed to be 0 by default.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>NCR: Please include a calculation or other quantitative means for confirming the lack of activity shifting leakage outside of the project area boundary, (but on lands controlled by the harvesting agent), prior to the use of this methodology and as a means for qualification of use. This needs to be part of the applicability criteria and needs to have a means for confirmation.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>As for our response to finding row 53, we have expanded on the applicability condition to require a comparison (and calculation of the difference in projected harvest volumes) of pre-existing and current (as of the project start date) authorized management plans for the project area. This now incorporates a clear criteria and procedure for excluding potential of both activity and market shifting leakage (note that activity shifting and market leakage are excluded by the same applicability condition - the activity that would be shifted is logging). <i>We again note, more importantly, that the project activity (RIL-C) as defined does not include reducing harvest volumes as a RIL-C practice, therefor any change in harvest volumes cannot be attributed to the project activity (and thus cannot be defined as leakage, e.g.), and this has been added to the RIL-C definition in the framework document.</i></p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed, response sufficient. A new applicability condition has been added that will assure leakage does not occur. This now incorporates a clear criteria and procedure for excluding potential of both activity and market shifting leakage.</p>

<p><b>Item Number</b></p>	<p>46</p>
<p><b>VCS AFOLU Requirements Version 3.4</b></p>	<p>4.6.2 Leakage that is determined, in accordance with Section 4.3.3, to be below de minimis (i.e., insignificant) does not need to be included in the GHG emissions accounting. The significance of leakage may also be determined using the CDM A/R methodological tool <i>Tool for testing significance of GHG Emissions in A/R CDM Project Activities</i>.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C IFM Methodology DRAFT Dec2013.docx, section 8.3 RIL-C Performance Method Module DRAFT Dec_2013.docx</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>This may need to be addressed in the meth. Depending on the application of an activity shifting leakage determination requested in the NCR in line 50, this determination would then follow.</p>

<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: To build upon the request to create a calculation or other determination of leakage at the onset of use of the methodology, please add a means to the methodology that would apply a de minimus finding or minimum value for leakage that would determine the applicability of use of the methodology dependent upon the leakage value finding.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	As for our response to finding row 53, we have expanded on the applicability condition to require a comparison (and calculation of the difference in projected harvest volumes) of pre-existing and current (as of the project start date) authorized management plans for the project area. This comparison includes a threshold 20% difference in harvest volumes not to be exceeded to exclude potential of both activity and market shifting leakage.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, response sufficient. A new applicability condition has been added that will assure leakage does not occur (i.e. = 0). This now incorporates a clear criteria and procedure for excluding potential of both activity and market shifting leakage.

<b>Item Number</b>	47
<b>VCS AFOLU Requirements Version 3.4</b>	4.6.3 GHG emissions from leakage may be determined either directly from monitoring, or indirectly when leakage is difficult to monitor directly but where scientific knowledge provides credible estimates of likely impacts. The GHG credit calculation table provided below in Section 4.7 includes an example of indirect leakage accounting.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx, section 8.3 RIL-C Performance Method Module DRAFT Dec_2013.docx
<b>ESI Findings - Round 1 (01-17-2014)</b>	The methodology does not include a means for monitoring or determining Leakage. This aspect builds upon the other leakage questions raised here.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please add a means for monitoring leakage on each project area. This needs to be better explained and added to the methodology.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	As explained above, potential of both activity shifting and market leakage are excluded via applicability condition and by definition of the project activity. Consequently leakage will not be monitored. We have revised equation 10 in the framework document to avoid confusion (i.e. instead of including leakage = 0 in net ER calculations).
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, response sufficient. A new applicability condition has been added that will assure leakage does not occur (i.e. = 0). This now incorporates a clear criteria and procedure for excluding potential of both activity and market shifting leakage.

<b>Item Number</b>	48
<b>VCS AFOLU Requirements Version 3.4</b>	4.7.2 The number of GHG credits issued to projects is determined by subtracting out the buffer credits from the net GHG emission reductions or removals (including leakage) associated with the project. The buffer credits are calculated by multiplying the non-permanence risk rating (as determined by the AFOLU Non-Permanence Risk Tool) times the change in carbon stocks only. The full rules and procedures with respect to assignment of buffer credits are set out in VCS document Registration and Issuance Process. This calculation process is illustrated in the example below-see page 59.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx
<b>ESI Findings - Round 1 (01-17-2014)</b>	The methodology does not specify the use of the Non-Permanence Risk tool.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please specify the use of the Non-Permanence Risk tool in the methodology.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	No Response from Methodology Developer
<b>ESI Findings - Round 2 (04-11-2014)</b>	No Response from Methodology Developer
<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	NCR: Please specify the use of the Non-Permanence Risk tool in the methodology.
<b>Round 2 Response from Methodology Developer (09-09-2014)</b>	Text added in Section 8.4 of the methodology framework document: "Verified Carbon Units eligible for issuance are calculated by subtracting the VCS AFOLU pooled buffer account contribution from ERT, referencing the project's risk rating at time t using the most recent version of the VCS AFOLU Non-permanence Risk Tool."
<b>Final ESI Findings (09-12-2014)</b>	Finding Closed: Text added in Section 8.4 of the methodology framework document specifying the use of the Non-Permanence Risk tool in the methodology.

<b>Item Number</b>	49
<b>VCS AFOLU Requirements Version 3.4</b>	4.8.1 The methodology shall establish criteria and procedures for monitoring, and specify the data and parameters to be monitored, as set out in the <i>VCS Standard</i> .
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, section 5.2

**ESI Findings - Round 1  
(01-17-2014)**

1. Fell2- this parameter is monitored by averaging the log length left in the forest on each harvest block through random or systematic sampling of felling gaps. Within each sampled felling gap, a visual assessment of the percent of the felled tree bole (distance from ground level to point of emergence of lowest large lateral branch from trunk) extracted is made, in increments of 10%. A minimum of 30 felling gaps must be sampled from within each annual harvest block. It is not clear what defines a felling gap, nor what one sampling effort includes. If the module is establishing a minimum amount of felling gaps to be monitored, then it also needs to establish what a minimum effort for one felling gap sampling effort would include.
2. Fell1-Parameter FELL1t, average percent felled trees abandoned in annual harvest block from year t, is monitored via the same sampling of felling gaps as for FELL2t above; note that limiting the sample to felling gaps visible from the skid trail is expected to yield conservative results – there is a greater likelihood that felled trees further from skid trails are abandoned. A tally is kept throughout the sample, from which FELL1t at time t is calculated. It is not clear if it is required for projects to know the total number of trees marked for felling in a felling gap so that one can determine the percent of trees felled and abandoned. It is also not clear what constitutes 'visible from skid trails'. This aspect needs to possibly have a numeric distance associated with it since the use of 'visible from' does not confine the sampling area enough for replicable and repeatable sampling efforts. The minimum effort for this parameter needs to be reiterated for clarity.
3. FTBt- The module allows for calculations of independent values for this metric and offers an equation for this purpose. The equation for FTBt combines the Chave equation for aboveground biomass and the Mokany equation for belowground biomass with assumptions for wood density, as reported in Griscom et. al. (2013).
4. FLBt- It is not clear in the module if this parameter is only applicable for the region where these parameters were derived.
5. Skid trail mapping- SKID dens,t is shown as having two possible means of calculation. It is not clear if both of these options arrive at the same exact total, nor if they are meant to. It is not clear why there are two possible ways of calculating this parameter. Further, an example of each would facilitate a better understanding of each. Finally, the parameter names appear to be incomplete in the description of the metrics in equation 2.1.
6. Parameter SKIDdam,t is monitored by sampling along skid trail sections measured above. On the sampled skid trail network or skid trail network sections, systematically sample damaged trees using fixed area rectangular plots oriented along the skid trail axis with width equal to observed skid trail width. A minimum of 20 plots will be sampled from skid trails in each annual harvest block. Within sample plots, count all damaged trees greater than or equal to 20 cm DBH to produce parameter Treedam,t,i,j. Damaged trees are trees that have fallen to the ground, been uprooted or with trunk snapped below the first branch. Note that any felled harvest trees encountered in the immediate skid trail are not included in the counts.

	<p>7. The two component parameters are combined in the equation 2.5 to produce parameter SKIDSKIDt. This equation needs to be corrected for typos in the metric identifiers.</p> <p>8. Haul- Using GIS maps and/or remote imagery with which road centerlines can be delineated and measured, map haul road network accessing the annual harvest block from year t. Via systematic or random sampling, measure width of cleared haul road corridor and calculate average width, Haul,t. A minimum of 25 haul road widths will be measured in each annual harvest block. Width measurements may be taken via field surveys or by consulting high resolution remote imagery. Note that the road corridor includes log landings, which are treated as extensions of the haul road network. This description does not define the minimum resolution used for the measurement of the haul road networks. Also, there is not definition of the minimum distance between sample measurements of widths. No mention of ground based sampling is offered.</p>
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please define what a felling gap is and please define what the sampling effort would include, at minimum, for one felling gap sampling effort.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We have added the following definition: "Felling gaps are defined as discrete areas of disrupted forest structure (not necessarily involving canopy gaps) created by recent intentional felling of one or more trees." We have also expanded and clarified guidance for assessing parameters FELL1 and FELL2 - both assessed in the same sampled gaps.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, Felling gaps are adequately defined and the sampling technique is defined as measuring every intentionally felled tree within the gaps. Issue is addressed.

<b>Item Number</b>	50
<b>VCS AFOLU Requirements Version 3.4</b>	4.8.1 The methodology shall establish criteria and procedures for monitoring, and specify the data and parameters to be monitored, as set out in the <i>VCS Standard</i> .
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, section 5.2

**ESI Findings - Round 1  
(01-17-2014)**

1. Fell2- this parameter is monitored by averaging the log length left in the forest on each harvest block through random or systematic sampling of felling gaps. Within each sampled felling gap, a visual assessment of the percent of the felled tree bole (distance from ground level to point of emergence of lowest large lateral branch from trunk) extracted is made, in increments of 10%. A minimum of 30 felling gaps must be sampled from within each annual harvest block. It is not clear what defines a felling gap, nor what one sampling effort includes. If the module is establishing a minimum amount of felling gaps to be monitored, then it also needs to establish what a minimum effort for one felling gap sampling effort would include.

2. Fell1-Parameter FELL1t, average percent felled trees abandoned in annual harvest block from year t, is monitored via the same sampling of felling gaps as for FELL2t above; note that limiting the sample to felling gaps visible from the skid trail is expected to yield conservative results – there is a greater likelihood that felled trees further from skid trails are abandoned. A tally is kept throughout the sample, from which FELL1t at time t is calculated. It is not clear if it is required for projects to know the total number of trees marked for felling in a felling gap so that one can determine the percent of trees felled and abandoned. It is also not clear what constitutes 'visible from skid trails'. This aspect needs to possibly have a numeric distance associated with it since the use of 'visible from' does not confine the sampling area enough for replicable and repeatable sampling efforts. The minimum effort for this parameter needs to be reiterated for clarity.

3. FTBt- The module allows for calculations of independent values for this metric and offers an equation for this purpose. The equation for FTBt combines the Chave equation for aboveground biomass and the Mokany equation for belowground biomass with assumptions for wood density, as reported in Griscom et. al. (2013).

4. FLBt- It is not clear in the module if this parameter is only applicable for the region where these parameters were derived.

5. Skid trail mapping- SKID dens,t is shown as having two possible means of calculation. It is not clear if both of these options arrive at the same exact total, nor if they are meant to. It is not clear why there are two possible ways of calculating this parameter. Further, an example of each would facilitate a better understanding of each. Finally, the parameter names appear to be incomplete in the description of the metrics in equation 2.1.

6. Parameter SKIDdam,t is monitored by sampling along skid trail sections measured above. On the sampled skid trail network or skid trail network sections, systematically sample damaged trees using fixed area rectangular plots oriented along the skid trail axis with width equal to observed skid trail width. A minimum of 20 plots will be sampled from skid trails in each annual harvest block. Within sample plots, count all damaged trees greater than or equal to 20 cm DBH to produce parameter Treedam,t,i,j. Damaged trees are trees that have fallen to the ground, been uprooted or with trunk snapped below the first branch. Note that any felled harvest trees encountered in the immediate skid trail are not

	<p>included in the counts.</p> <p>7. The two component parameters are combined in the equation 2.5 to produce parameter SKIDSKIDt. This equation needs to be corrected for typos in the metric identifiers.</p> <p>8. Haul- Using GIS maps and/or remote imagery with which road centerlines can be delineated and measured, map haul road network accessing the annual harvest block from year t. Via systematic or random sampling, measure width of cleared haul road corridor and calculate average width, Haul,t. A minimum of 25 haul road widths will be measured in each annual harvest block. Width measurements may be taken via field surveys or by consulting high resolution remote imagery. Note that the road corridor includes log landings, which are treated as extensions of the haul road network. This description does not define the minimum resolution used for the measurement of the haul road networks. Also, there is not definition of the minimum distance between sample measurements of widths. No mention of ground based sampling is offered.</p>
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please define in the module that projects will have to know the exact number of trees marked for removal in order to be able to have a comparative figure against which a percent of felled and abandoned trees can be compared, resulting in a final averaged percent across the felling gaps.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Within the sampled felling gaps, the number of trees marked for removal does not need to be known. Both the FELL1 and FELL2 impact parameters relate to felled trees, and we have added a definition of felled trees to make their identification within the sampled gaps clear - "Intentionally felled trees are defined as trees specifically cut for harvest (not cut or damaged due to skidding operations or collaterally damaged from felling nearby harvest trees), recently cut (within the past year)." We have further defined felling gaps - "as discrete areas of disrupted forest structure (not necessarily involving canopy gaps) created by recent (within the past year) intentional felling of one or more trees." A full tally of intentionally felled trees in an annual cutting block is not necessary, as both impact parameters are derived from a representative sample (felling gaps are systematically or randomly sampled along skid trails that are sampled randomly or systematically from a census of skid trail starts accessing the cutting block), and both parameters are in units that do not require knowing the full tally of intentionally felled trees (FELL1 is in % and FELL2 is in average %).
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, Verifiers now better understand the monitoring parameter now that the additional language and description was been added to the Performance Method Module. Verifiers agree with this approach. Issue is addressed.
<b>Item Number</b>	51
<b>VCS AFOLU Requirements Version 3.4</b>	4.8.1 The methodology shall establish criteria and procedures for monitoring, and specify the data and parameters to be monitored, as set out in the <i>VCS Standard</i> .

<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, section 5.2</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<ol style="list-style-type: none"> <li>1. Fell2- this parameter is monitored by averaging the log length left in the forest on each harvest block through random or systematic sampling of felling gaps. Within each sampled felling gap, a visual assessment of the percent of the felled tree bole (distance from ground level to point of emergence of lowest large lateral branch from trunk) extracted is made, in increments of 10%. A minimum of 30 felling gaps must be sampled from within each annual harvest block. It is not clear what defines a felling gap, nor what one sampling effort includes. If the module is establishing a minimum amount of felling gaps to be monitored, then it also needs to establish what a minimum effort for one felling gap sampling effort would include.</li> <li>2. Fell1-Parameter FELL1t, average percent felled trees abandoned in annual harvest block from year t, is monitored via the same sampling of felling gaps as for FELL2t above; note that limiting the sample to felling gaps visible from the skid trail is expected to yield conservative results – there is a greater likelihood that felled trees further from skid trails are abandoned. A tally is kept throughout the sample, from which FELL1t at time t is calculated. It is not clear if it is required for projects to know the total number of trees marked for felling in a felling gap so that one can determine the percent of trees felled and abandoned. It is also not clear what constitutes 'visible from skid trails'. This aspect needs to possibly have a numeric distance associated with it since the use of 'visible from' does not confine the sampling area enough for replicable and repeatable sampling efforts. The minimum effort for this parameter needs to be reiterated for clarity.</li> <li>3. FTBt- The module allows for calculations of independent values for this metric and offers an equation for this purpose. The equation for FTBt combines the Chave equation for aboveground biomass and the Mokany equation for belowground biomass with assumptions for wood density, as reported in Griscom et. al. (2013).</li> <li>4. FLBt- It is not clear in the module if this parameter is only applicable for the region where these parameters were derived.</li> <li>5. Skid trail mapping- SKID dens,t is shown as having two possible means of calculation. It is not clear if both of these options arrive at the same exact total, nor if they are meant to. It is not clear why there are two possible ways of calculating this parameter. Further, an example of each would facilitate a better understanding of each. Finally, the parameter names appear to be incomplete in the description of the metrics in equation 2.1.</li> <li>6. Parameter SKIDdam,t is monitored by sampling along skid trail sections measured above. On the sampled skid trail network or skid trail network sections, systematically sample damaged trees using fixed area rectangular plots oriented along the skid trail axis with width equal to observed skid trail width. A minimum of 20 plots will be sampled from skid trails in each annual harvest block. Within sample plots, count all damaged trees greater than or equal to 20 cm DBH to produce parameter</li> </ol>

	<p>Treedam,t,i,j. Damaged trees are trees that have fallen to the ground, been uprooted or with trunk snapped below the first branch. Note that any felled harvest trees encountered in the immediate skid trail are not included in the counts.</p> <p>7. The two component parameters are combined in the equation 2.5 to produce parameter SKIDSKIDt. This equation needs to be corrected for typos in the metric identifiers.</p> <p>8. Haul- Using GIS maps and/or remote imagery with which road centerlines can be delineated and measured, map haul road network accessing the annual harvest block from year t. Via systematic or random sampling, measure width of cleared haul road corridor and calculate average width, Haul,t. A minimum of 25 haul road widths will be measured in each annual harvest block. Width measurements may be taken via field surveys or by consulting high resolution remote imagery. Note that the road corridor includes log landings, which are treated as extensions of the haul road network. This description does not define the minimum resolution used for the measurement of the haul road networks. Also, there is not definition of the minimum distance between sample measurements of widths. No mention of ground based sampling is offered.</p>
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please reiterate in the monitoring description for FELL1 the minimum sampling effort and the method for determining the average percent of felled and abandoned trees across the sampled felling gaps.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We have added the following text to the guidance on monitoring parameter FELL1: "As for FELL2t above, a minimum of 30 felling gaps must be sampled from within each annual harvest block." We have also expanded guidance to explain how the calculation is made : "A tally of all intentionally felled trees in the sampled felling gaps is kept throughout the sample, from which FELL1 at time t is calculated (i.e. as the number of intentionally felled trees in sampled felling gaps from which no discernible volume has been extracted divided by the total tally of intentionally felled trees in the sampled felling gaps)." We clarify that FELL1 is not an average - it is an estimate (from a representative sample of n=1). To provide further guidance (and avoid confusion), we have defined "intentionally felled" trees and distinguished between those accounted by the FELL1 and FELL2 parameters.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, Verifiers now better understand the monitoring parameter now that the additional language and description was been added to the Performance Method Module. Verifiers agree with this approach. Issue is addressed.

<b>Item Number</b>	52
<b>VCS AFOLU Requirements Version 3.4</b>	4.8.1 The methodology shall establish criteria and procedures for monitoring, and specify the data and parameters to be monitored, as set out in the <i>VCS Standard</i> .

<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>Winrock_FINAL_logging_report_TNC_04-13-2011.pd, RIL-C IFM Methodology DRAFT Dec2013.docx  RIL-C Performance Method Module DRAFT Dec_2013.docx, section 5.2</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<ol style="list-style-type: none"> <li>1. Fell2- this parameter is monitored by averaging the log length left in the forest on each harvest block through random or systematic sampling of felling gaps. Within each sampled felling gap, a visual assessment of the percent of the felled tree bole (distance from ground level to point of emergence of lowest large lateral branch from trunk) extracted is made, in increments of 10%. A minimum of 30 felling gaps must be sampled from within each annual harvest block. It is not clear what defines a felling gap, nor what one sampling effort includes. If the module is establishing a minimum amount of felling gaps to be monitored, then it also needs to establish what a minimum effort for one felling gap sampling effort would include.</li> <li>2. Fell1-Parameter FELL1t, average percent felled trees abandoned in annual harvest block from year t, is monitored via the same sampling of felling gaps as for FELL2t above; note that limiting the sample to felling gaps visible from the skid trail is expected to yield conservative results – there is a greater likelihood that felled trees further from skid trails are abandoned. A tally is kept throughout the sample, from which FELL1t at time t is calculated. It is not clear if it is required for projects to know the total number of trees marked for felling in a felling gap so that one can determine the percent of trees felled and abandoned. It is also not clear what constitutes 'visible from skid trails'. This aspect needs to possibly have a numeric distance associated with it since the use of 'visible from' does not confine the sampling area enough for replicable and repeatable sampling efforts. The minimum effort for this parameter needs to be reiterated for clarity.</li> <li>3. FTBt- The module allows for calculations of independent values for this metric and offers an equation for this purpose. The equation for FTBt combines the Chave equation for aboveground biomass and the Mokany equation for belowground biomass with assumptions for wood density, as reported in Griscom et. al. (2013).</li> <li>4. FLBt- It is not clear in the module if this parameter is only applicable for the region where these parameters were derived.</li> <li>5. Skid trail mapping- SKID dens,t is shown as having two possible means of calculation. It is not clear if both of these options arrive at the same exact total, nor if they are meant to. It is not clear why there are two possible ways of calculating this parameter. Further, an example of each would facilitate a better understanding of each. Finally, the parameter names appear to be incomplete in the description of the metrics in equation 2.1.</li> <li>6. Parameter SKIDdam,t is monitored by sampling along skid trail sections measured above. On the sampled skid trail network or skid trail network sections, systematically sample damaged trees using fixed area rectangular plots oriented along the skid trail axis with width equal to observed skid trail width. A minimum of 20 plots will be sampled from skid trails in each annual harvest block. Within sample plots, count all</li> </ol>

	<p>damaged trees greater than or equal to 20 cm DBH to produce parameter Treedam,t,i,j. Damaged trees are trees that have fallen to the ground, been uprooted or with trunk snapped below the first branch. Note that any felled harvest trees encountered in the immediate skid trail are not included in the counts.</p> <p>7. The two component parameters are combined in the equation 2.5 to produce parameter SKIDSKIDt. This equation needs to be corrected for typos in the metric identifiers.</p> <p>8. Haul- Using GIS maps and/or remote imagery with which road centerlines can be delineated and measured, map haul road network accessing the annual harvest block from year t. Via systematic or random sampling, measure width of cleared haul road corridor and calculate average width, Haul,t. A minimum of 25 haul road widths will be measured in each annual harvest block. Width measurements may be taken via field surveys or by consulting high resolution remote imagery. Note that the road corridor includes log landings, which are treated as extensions of the haul road network. This description does not define the minimum resolution used for the measurement of the haul road networks. Also, there is not definition of the minimum distance between sample measurements of widths. No mention of ground based sampling is offered.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>NCR: Please confirm the use of the Chave equation for the specific forest and region that this module is being applied. Confirmation should include evidence that the equation is most applicable to the forest type.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We selected Chave's allometric equation (as detailed in Griscom et. al. 2014) for two reasons: (1) An analysis we commissioned by Winrock (attached, see page 9-10) conducted a comparison of various allometric equations for application to East Kalimantan and concluded that Chave was best, (2) Chave's equations are based on the largest number of destructive samples for the tropics of any equations available (as described in Baccini et. al. 2012, Nature Climate Change), and was recommended for use in East Kalimantan by Baccini (personal communication). We selected the dbh-based Chave allometric equation after comparison with the dbh and height Chave equation based on a sub-sample of trees for which we measured both height and diameter in East Kalimantan. We found the dbh-based equation to produce lower estimates, as described in Griscom et. al. 2014. This finding indicates that our use of the Chave dbh-based equation is conservative.</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed, response sufficient. Chaves equation was tested in Winrock_FINAL_logging_report_TNC_04-13-2011.pdf and the analysis found, "<i>The Brown and Chave et al. equations performed about the same. However, we decided that the Chave et al. is the most appropriate to use in this study because it is a more recently developed equation, uses a larger dataset (about 1,500 individuals and a r2 of 0.99), contains a high number of large diameter trees (68 trees &gt; 70 cm diameter of which 8 are &gt; 120cm, and largest is 156 m DBH), and it takes into consideration wood density in addition to DBH</i>".</p>

<b>Item Number</b>	53
<b>VCS AFOLU Requirements Version 3.4</b>	4.8.1 The methodology shall establish criteria and procedures for monitoring, and specify the data and parameters to be monitored, as set out in the <i>VCS Standard</i> .
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx  RIL-C Performance Method Module DRAFT Dec_2013.docx, section 5.2
<b>ESI Findings - Round 1 (01-17-2014)</b>	<p>1. Fell2- this parameter is monitored by averaging the log length left in the forest on each harvest block through random or systematic sampling of felling gaps. Within each sampled felling gap, a visual assessment of the percent of the felled tree bole (distance from ground level to point of emergence of lowest large lateral branch from trunk) extracted is made, in increments of 10%. A minimum of 30 felling gaps must be sampled from within each annual harvest block. It is not clear what defines a felling gap, nor what one sampling effort includes. If the module is establishing a minimum amount of felling gaps to be monitored, then it also needs to establish what a minimum effort for one felling gap sampling effort would include.</p> <p>2. Fell1-Parameter FELL1t, average percent felled trees abandoned in annual harvest block from year t, is monitored via the same sampling of felling gaps as for FELL2t above; note that limiting the sample to felling gaps visible from the skid trail is expected to yield conservative results – there is a greater likelihood that felled trees further from skid trails are abandoned. A tally is kept throughout the sample, from which FELL1t at time t is calculated. It is not clear if it is required for projects to know the total number of trees marked for felling in a felling gap so that one can determine the percent of trees felled and abandoned. It is also not clear what constitutes 'visible from skid trails'. This aspect needs to possibly have a numeric distance associated with it since the use of 'visible from' does not confine the sampling area enough for replicable and repeatable sampling efforts. The minimum effort for this parameter needs to be reiterated for clarity.</p> <p>3. FTBt- The module allows for calculations of independent values for this metric and offers an equation for this purpose. The equation for FTBt combines the Chave equation for aboveground biomass and the Mokany equation for belowground biomass with assumptions for wood density, as reported in Griscom et. al. (2013).</p> <p>4. FLBt- It is not clear in the module if this parameter is only applicable for the region where these parameters were derived.</p> <p>5. Skid trail mapping- SKID dens,t is shown as having two possible means of calculation. It is not clear if both of these options arrive at the same exact total, nor if they are meant to. It is not clear why there are two possible ways of calculating this parameter. Further, an example of each would facilitate a better understanding of each. Finally, the parameter names appear to be incomplete in the description of the metrics in equation 2.1.</p>

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<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>NCR: Please clarify in the module that the provided equations for parameters FLBt, FTBt and CDBt are only available to use for derivation of these parameters for those projects who elect to estimate their own values in the region and forest type where those equations were developed. (East Kalimantan).</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We have further specified in the narrative that "the equations below for parameters FLB, FTB and CDB are only valid for use within the logging landscape specified under the applicability conditions in Section 4 of this module [i.e. East Kalimantan]."</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed, clarification included and appropriate. Issue is addressed.</p>

<p><b>Item Number</b></p>	<p>54</p>
<p><b>VCS AFOLU Requirements Version 3.4</b></p>	<p>4.8.1 The methodology shall establish criteria and procedures for monitoring, and specify the data and parameters to be monitored, as set out in the <i>VCS Standard</i>.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, section 5.2</p>

**ESI Findings - Round 1  
(01-17-2014)**

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4. FLBt- It is not clear in the module if this parameter is only applicable for the region where these parameters were derived.
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<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please explain the difference between the two possible means of calculating SKIDdens,t. It is not clear why there are two possible ways of calculating this parameter and it is not clear if the two would render the same value, or if they are intended to.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	This is a relic from a previous version, and mention of two options has been eliminated. There is a single option for estimating the skidding impact parameter (which is estimated from two sub-parameters - skid trail density and skid trail damage per unit length).
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: This extra calculation means have been stricken from the document. Issue is addressed.

<b>Item Number</b>	55
<b>VCS AFOLU Requirements Version 3.4</b>	4.8.1 The methodology shall establish criteria and procedures for monitoring, and specify the data and parameters to be monitored, as set out in the <i>VCS Standard</i> .
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, section 5.2

**ESI Findings - Round 1  
(01-17-2014)**

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<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please correct the names of the metrics used in the calculation of SKIDdens,t in equation 2.1. They appear to be typos.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Typos are now corrected and parameter name is used consistently.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, corrected in equation 2.1 Issue addressed.

<b>Item Number</b>	56
<b>VCS AFOLU Requirements Version 3.4</b>	4.8.1 The methodology shall establish criteria and procedures for monitoring, and specify the data and parameters to be monitored, as set out in the <i>VCS Standard</i> .
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**ESI Findings - Round 1  
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	<p>7. The two component parameters are combined in the equation 2.5 to produce parameter SKIDSKIDt. This equation needs to be corrected for typos in the metric identifiers.</p> <p>8. Haul- Using GIS maps and/or remote imagery with which road centerlines can be delineated and measured, map haul road network accessing the annual harvest block from year t. Via systematic or random sampling, measure width of cleared haul road corridor and calculate average width, Haul,t. A minimum of 25 haul road widths will be measured in each annual harvest block. Width measurements may be taken via field surveys or by consulting high resolution remote imagery. Note that the road corridor includes log landings, which are treated as extensions of the haul road network. This description does not define the minimum resolution used for the measurement of the haul road networks. Also, there is not definition of the minimum distance between sample measurements of widths. No mention of ground based sampling is offered.</p>
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please define the minimum distance between sampling plots used for SKID dam,t. Please better define the location of the sampling plots relative to the skid trails. Should the plots include the skid trail? The description indicates oriented along the axis of the skid trail. Please better explain this aspect. It is suggested that a simple definition of the plot length be included so that there is no question of this metric.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	All of these sampling details used for sampling SKID impact parameter (minimum distance between plots, location w/respect to skid trail, plot dimensions, etc.) for the purposes of generating baseline and additionality benchmark values are described in detail in Griscom et. al. 2014 methods section (attached). We would prefer to reference this paper for methods details. If preferred, we could paste the methods section from Griscom et. al. 2014 into the East Kalimantan module, but will await response on this.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Remains Open, For clarity these methods should be described in the performance module
<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	NCR: Please insert the relevant sections of the methods from Griscom et al. into the performance module to clearly describe the location of the sampling plots relative to the skid trails.
<b>Round 2 Response from Methodology Developer (09-09-2014)</b>	We have added text to section 5.2.2 of the East Kalimantan module document to clarify these methods. Note that since we have increased the sample size to a full tally of trees >= 20 cm DBH damaged by skidding within all skid trail networks mapped, the methods and equation are simpler than that described in Griscom et al. (2014). This is logical because our SKID parameter is a more efficient (more quickly measured) variable than the full inventory of skidding damage conducted within skid trail plots by Griscom et al. (2014).
<b>Final ESI Findings (09-12-2014)</b>	Finding Closed: Information in Section 5.2.2 of the East Kalimantan module document has been added to clarify the location of the sampling plots relative to the skid trails.

<b>Item Number</b>	57
<b>VCS AFOLU Requirements Version 3.4</b>	4.8.1 The methodology shall establish criteria and procedures for monitoring, and specify the data and parameters to be monitored, as set out in the <i>VCS Standard</i> .
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, section 5.2
<b>ESI Findings - Round 1 (01-17-2014)</b>	<p>1. Fell2- this parameter is monitored by averaging the log length left in the forest on each harvest block through random or systematic sampling of felling gaps. Within each sampled felling gap, a visual assessment of the percent of the felled tree bole (distance from ground level to point of emergence of lowest large lateral branch from trunk) extracted is made, in increments of 10%. A minimum of 30 felling gaps must be sampled from within each annual harvest block. It is not clear what defines a felling gap, nor what one sampling effort includes. If the module is establishing a minimum amount of felling gaps to be monitored, then it also needs to establish what a minimum effort for one felling gap sampling effort would include.</p> <p>2. Fell1-Parameter FELL1t, average percent felled trees abandoned in annual harvest block from year t, is monitored via the same sampling of felling gaps as for FELL2t above; note that limiting the sample to felling gaps visible from the skid trail is expected to yield conservative results – there is a greater likelihood that felled trees further from skid trails are abandoned. A tally is kept throughout the sample, from which FELL1t at time t is calculated. It is not clear if it is required for projects to know the total number of trees marked for felling in a felling gap so that one can determine the percent of trees felled and abandoned. It is also not clear what constitutes 'visible from skid trails'. This aspect needs to possibly have a numeric distance associated with it since the use of 'visible from' does not confine the sampling area enough for replicable and repeatable sampling efforts. The minimum effort for this parameter needs to be reiterated for clarity.</p> <p>3. FTBt- The module allows for calculations of independent values for this metric and offers an equation for this purpose. The equation for FTBt combines the Chave equation for aboveground biomass and the Mokany equation for belowground biomass with assumptions for wood density, as reported in Griscom et. al. (2013).</p> <p>4. FLBt- It is not clear in the module if this parameter is only applicable for the region where these parameters were derived.</p> <p>5. Skid trail mapping- SKID dens,t is shown as having two possible means of calculation. It is not clear if both of these options arrive at the same exact total, nor if they are meant to. It is not clear why there are two possible ways of calculating this parameter. Further, an example of each would facilitate a better understanding of each. Finally, the parameter names appear to be incomplete in the description of the metrics in equation 2.1.</p>

	<p>6. Parameter SKIDdam,t is monitored by sampling along skid trail sections measured above. On the sampled skid trail network or skid trail network sections, systematically sample damaged trees using fixed area rectangular plots oriented along the skid trail axis with width equal to observed skid trail width. A minimum of 20 plots will be sampled from skid trails in each annual harvest block. Within sample plots, count all damaged trees greater than or equal to 20 cm DBH to produce parameter Treedam,t,i,j. Damaged trees are trees that have fallen to the ground, been uprooted or with trunk snapped below the first branch. Note that any felled harvest trees encountered in the immediate skid trail are not included in the counts.</p> <p>7. The two component parameters are combined in the equation 2.5 to produce parameter SKIDSKIDt. This equation needs to be corrected for typos in the metric identifiers.</p> <p>8. Haul- Using GIS maps and/or remote imagery with which road centerlines can be delineated and measured, map haul road network accessing the annual harvest block from year t. Via systematic or random sampling, measure width of cleared haul road corridor and calculate average width, Haul,t. A minimum of 25 haul road widths will be measured in each annual harvest block. Width measurements may be taken via field surveys or by consulting high resolution remote imagery. Note that the road corridor includes log landings, which are treated as extensions of the haul road network. This description does not define the minimum resolution used for the measurement of the haul road networks. Also, there is not definition of the minimum distance between sample measurements of widths. No mention of ground based sampling is offered.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>NCR: Please correct the metric identifiers in equation 2.5. They are incorrectly named or are incomplete.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>Parameter names have been corrected and are now used consistently (without previous EK subscript)</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed, corrected in equation 2.5 Issue addressed.</p>

<p><b>Item Number</b></p>	<p>58</p>
<p><b>VCS AFOLU Requirements Version 3.4</b></p>	<p>4.8.1 The methodology shall establish criteria and procedures for monitoring, and specify the data and parameters to be monitored, as set out in the <i>VCS Standard</i>.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, section 5.2</p>

**ESI Findings - Round 1  
(01-17-2014)**

1. Fell2- this parameter is monitored by averaging the log length left in the forest on each harvest block through random or systematic sampling of felling gaps. Within each sampled felling gap, a visual assessment of the percent of the felled tree bole (distance from ground level to point of emergence of lowest large lateral branch from trunk) extracted is made, in increments of 10%. A minimum of 30 felling gaps must be sampled from within each annual harvest block. It is not clear what defines a felling gap, nor what one sampling effort includes. If the module is establishing a minimum amount of felling gaps to be monitored, then it also needs to establish what a minimum effort for one felling gap sampling effort would include.
2. Fell1-Parameter FELL1t, average percent felled trees abandoned in annual harvest block from year t, is monitored via the same sampling of felling gaps as for FELL2t above; note that limiting the sample to felling gaps visible from the skid trail is expected to yield conservative results – there is a greater likelihood that felled trees further from skid trails are abandoned. A tally is kept throughout the sample, from which FELL1t at time t is calculated. It is not clear if it is required for projects to know the total number of trees marked for felling in a felling gap so that one can determine the percent of trees felled and abandoned. It is also not clear what constitutes 'visible from skid trails'. This aspect needs to possibly have a numeric distance associated with it since the use of 'visible from' does not confine the sampling area enough for replicable and repeatable sampling efforts. The minimum effort for this parameter needs to be reiterated for clarity.
3. FTBt- The module allows for calculations of independent values for this metric and offers an equation for this purpose. The equation for FTBt combines the Chave equation for aboveground biomass and the Mokany equation for belowground biomass with assumptions for wood density, as reported in Griscom et. al. (2013).
4. FLBt- It is not clear in the module if this parameter is only applicable for the region where these parameters were derived.
5. Skid trail mapping- SKID dens,t is shown as having two possible means of calculation. It is not clear if both of these options arrive at the same exact total, nor if they are meant to. It is not clear why there are two possible ways of calculating this parameter. Further, an example of each would facilitate a better understanding of each. Finally, the parameter names appear to be incomplete in the description of the metrics in equation 2.1.
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	<p>included in the counts.</p> <p>7. The two component parameters are combined in the equation 2.5 to produce parameter SKIDSKIDt. This equation needs to be corrected for typos in the metric identifiers.</p> <p>8. Haul- Using GIS maps and/or remote imagery with which road centerlines can be delineated and measured, map haul road network accessing the annual harvest block from year t. Via systematic or random sampling, measure width of cleared haul road corridor and calculate average width, Haul,t. A minimum of 25 haul road widths will be measured in each annual harvest block. Width measurements may be taken via field surveys or by consulting high resolution remote imagery. Note that the road corridor includes log landings, which are treated as extensions of the haul road network. This description does not define the minimum resolution used for the measurement of the haul road networks. Also, there is not definition of the minimum distance between sample measurements of widths. No mention of ground based sampling is offered.</p>
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please define a minimum distance between sample points for measuring haul road widths. Please define the minimum resolution for using remote sensing for the sampling of haul road widths.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	No minimum distance between sample points need be established to ensure representative sampling (guidance clearly specifies systematic or random sampling may be used, and random sampling could potentially allocate sample points very close to each other, yet still be valid and representative). We have further specified that systematic sampling must have a random start. We have added the requirement that remote imagery for use in establishing haul road centerlines must have minimum resolution of 30 m (Landsat in our experience is often sufficient to identify the location of haul roads), and that remote imagery for use in estimating road widths at sample points must have a minimum resolution of 2 m.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, verifiers understand the sampling description to include random or systematic sampling allows for greater freedom in sampling distances between sampling points. This point is addressed. The project also included minimum resolutions for remote sensory imagery. It is agreed that 30 m resolution and 2m is sufficient respective to their uses in the module. Issue is addressed.

<b>Item Number</b>	59
<b>VCS AFOLU Requirements Version 3.4</b>	4.8.1 The methodology shall establish criteria and procedures for monitoring, and specify the data and parameters to be monitored, as set out in the <i>VCS Standard</i> .
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, section 5.2

**ESI Findings - Round 1  
(01-17-2014)**

1. Fell2- this parameter is monitored by averaging the log length left in the forest on each harvest block through random or systematic sampling of felling gaps. Within each sampled felling gap, a visual assessment of the percent of the felled tree bole (distance from ground level to point of emergence of lowest large lateral branch from trunk) extracted is made, in increments of 10%. A minimum of 30 felling gaps must be sampled from within each annual harvest block. It is not clear what defines a felling gap, nor what one sampling effort includes. If the module is establishing a minimum amount of felling gaps to be monitored, then it also needs to establish what a minimum effort for one felling gap sampling effort would include.
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	<p>included in the counts.</p> <p>7. The two component parameters are combined in the equation 2.5 to produce parameter SKIDSKIDt. This equation needs to be corrected for typos in the metric identifiers.</p> <p>8. Haul- Using GIS maps and/or remote imagery with which road centerlines can be delineated and measured, map haul road network accessing the annual harvest block from year t. Via systematic or random sampling, measure width of cleared haul road corridor and calculate average width, Haul,t. A minimum of 25 haul road widths will be measured in each annual harvest block. Width measurements may be taken via field surveys or by consulting high resolution remote imagery. Note that the road corridor includes log landings, which are treated as extensions of the haul road network. This description does not define the minimum resolution used for the measurement of the haul road networks. Also, there is not definition of the minimum distance between sample measurements of widths. No mention of ground based sampling is offered.</p>
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please indicate or include an option for ground based measurement of haul road widths as this may be a better and more accurate option for some project proponents, as well as being a more accurate means of verification.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	The methodology clearly states that " Width measurements may be taken via field surveys."
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, verifiers confirm the statement previously provided in the project document. NCR retracted. Issue addressed.

<b>Item Number</b>	60
<b>VCS AFOLU Requirements Version 3.4</b>	4.8.2 Leakage shall be monitored as set out in Section 4.6.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx RIL-C Performance Method Module DRAFT Dec_2013.docx, section 5.2
<b>ESI Findings - Round 1 (01-17-2014)</b>	The methodology does not have a means for monitoring leakage. While the methodology applies a default value of 0 for leakage as a means for applicability, this aspect is required under the AFOLU requirements.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please add a means for monitoring leakage through the life of a project that uses this methodology. Given that leakage is assumed to be 0 as an applicability criteria, and AFOLU Requires monitoring of leakage, this needs to be added.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	As explained above, potential of both activity shifting and market leakage are excluded via applicability condition and by definition of the project activity. Consequently leakage will not be monitored. We have revised equation 10 in the framework document to avoid confusion (i.e. instead of including leakage = 0 in net ER calculations).

<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed, verifiers agree that the applicability of the methodology precludes the use of the methodology, which defeats the purpose. Verifiers understand that project eligibility requirements have changed as a result of the review. This item is closed as verifiers agree that use of the very module precludes leakage.</p>
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<p><b>Item Number</b></p>	<p>61</p>
<p><b>VCS AFOLU Requirements Version 3.4 (IFM) (08 October 2013)</b></p>	<p>4.2.3 Eligible IFM activities are those that increase carbon sequestration and/or reduce GHG emissions on forest lands managed for wood products such as sawtimber, pulpwood and fuelwood by increasing biomass carbon stocks through improving forest management practices. The baseline and project scenarios for the project area shall qualify as forests remaining as forests, such as set out in the IPCC 2006 Guidelines on National GHG Inventories, and the project area shall be designated, sanctioned or approved for wood product management by a national or local regulatory body (e.g., as logging concessions or plantations).</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C IFM Methodology DRAFT Dec2013.docx Sections 2, 3, 4, and 5</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>The methodology meets some of these requirements in sections 2,3,4, and 5, but could use further clarification. In section 2 the methodology states, "The project activity constitutes the implementation of one or more Reduced Impact Logging practices to reduce carbon emissions (hereafter termed RIL-C practices) in one or more of three emission source categories: timber felling, skidding and hauling. RIL-C practices may entail a range of improved logging and harvest planning practices, including, but not limited to, directional felling, improved log bucking (to permit greater recovery), improved harvest planning via pre-harvest inventory, skid trail planning and/or monocable winching, and reduction in width of haul roads and size of log landings". The baseline and project scenarios qualify as forest, under applicability conditions set out in section 4 where the methodology states, "This methodology applies to project activities that implement Reduced Impact Logging (RIL) practices in forests. ". However, this definition of forests is not supported in section 3 of the methodology and this applicability condition is not formally required. And finally, the project area is required to be sanctioned for wood product management in section 2, where the applicability conditions state, "2. Project proponent must hold legal authorization, for all logging activities referenced in the project, from the relevant government authority through the crediting period. ".</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please expand applicability conditions to explicitly require that baseline and project scenarios for the project area shall qualify as forests remaining as forests, such as set out in the IPCC 2006 Guidelines on National GHG Inventories. The definition, or a reference to the definition of forest should also be added to section 3 for clarity.</p>

<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We have added the following applicability condition "Both the project activity (involving authorized logging using RIL-C practices) and the baseline scenario (which is represented by the average-performing logging operation in aggregate from the applicable logging landscape; see below) do not involve conversion of forest to a non-forest land use/land cover (i.e. both represent forests remaining as forests, sensu IPCC GL 2006 ).", as well as incorporated a definition of forest into Section 4 (applicability condition #6) of the framework document.</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: response sufficient, applicability conditions have been expanded to explicitly require that baseline and project scenarios for the project area shall qualify as forests remaining as forests, such as set out in the IPCC 2006 Guidelines on National GHG Inventories. The following has been added, "<i>Both the project activity (involving authorized logging using RIL-C practices) and the baseline scenario (which is represented by the average-performing logging operation in aggregate from the applicable logging landscape; see below) do not involve conversion of forest to a non-forest land use/land cover (i.e. both represent forests remaining as forests, sensu IPCC GL 2006 ).</i>"</p>

<p><b>Item Number</b></p>	<p>62</p>
<p><b>VCS AFOLU Requirements Version 3.4 (IFM) (08 October 2013)</b></p>	<p>4.3.13 For IFM activities, changes in soil carbon are likely to be de minimis for forests on mineral upland soils, though they could be considerably above de minimis for forests growing in wetland areas such as peatland forests or mangroves. Although it may be conservative to omit the soil carbon pool for such projects, additional GHG credits may be available if the soil carbon pool is included. Therefore, the pool may be included in the project boundary.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>Section 4</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>Please clarify how wetland areas will be defined, and as such avoided during harvesting.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please clarify how wetland areas will be defined, and as such avoided during harvesting.</p>

<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We have deleted the applicability condition that the project does not occur on wetlands. Per VCS AFOLU 3.1.11 "Where ARR, ALM, IFM or REDD project activities occur on wetlands, the project shall adhere to both the respective project category requirements and the WRC requirements, **unless the expected emissions from the soil organic carbon pool or change in the soil organic carbon pool in the project scenario ... can be conservatively excluded ... in which case the project shall not be subject to the WRC requirements.**" VCS AFOLU 4.3.13 then states that "For IFM activities, changes in soil carbon ... could be considerably above de minimis for forests growing in wetland areas such as peatland forests or mangroves. Although it may be **conservative** to omit the soil carbon pool for **such projects**, additional GHG credits may be available if the soil carbon pool is included." Thus, the methodology should be applicable on wetlands without adherence to WRC requirements, and is conservative on wetlands because the soil carbon pool is excluded. It should also be noted that because the project area must qualify as forest (per applicability condition), the only wetlands it could be applied to would be forested wetlands.</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Methodology has been revised to eliminate the applicability condition that projects not occur on wetlands (revised Meth, Section 4-pg 7). Finding Closed.</p>

<p><b>Item Number</b></p>	<p>63</p>
<p><b>VCS AFOLU Requirements Version 3.4 (IFM) (08 October 2013)</b></p>	<p>4.3.14 RIL and LtPF methodologies shall include the dead wood carbon pool in the project and baseline scenario. Both of these activities reduce the amount of timber extracted per unit area, which, in turn, may reduce the dead wood pool in the project scenario.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>Section 5</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>Deadwood is not included in carbon accounting.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>NCR: Please include the dead wood carbon pool in the project and baseline scenario. Both of these activities reduce the amount of timber extracted per unit area, which, in turn, may reduce the dead wood pool in the project scenario.</p>

<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>While dead wood is not explicitly included as a separate accounting element, it is implicitly included in emission reductions estimated for the live aboveground biomass pool. Firstly, the project activity (RIL) does not impact pre-existing dead wood stocks, and the applicability conditions have been updated to require that RIL practices implemented as part of the project activity do not include slash management, salvage harvesting or other planned removal of dead wood. The difference expected from RIL is a reduction of (slash) inputs to the dead wood pool, and consequently smaller dead wood pool. This difference in inputs to the dead wood pool is exactly equal to the difference in aboveground live retained, and the emission reduction estimates from aboveground live derived in the East Kalimantan Performance Method Module are progressively accounted according to the dead wood decay rate (thus they implicitly account a reduction from aboveground live, input to dead wood, followed by steady decay of dead wood). We have incorporated this change in equation 9 in the framework document and revised the table in Section 5 of the framework document to further clarify this (that dead wood IS an included pool, though embedded within aboveground live). We also remind that the RIL-C project activity as defined, does not involve a reduction in amount of timber extracted, and the definition in Section 3 of the framework document has been expanded to make this clear.</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Methodology has been revised to include specific mention of deadwood inclusion. While deadwood is not explicitly included, the proposed methodology implicitly assesses deadwood. This is described in detail in the revised methodology (revised Meth, Section 5-pg 9).</p>
<p><b>Round 2 NCR/CL/OFI (04-11-2014)</b></p>	<p>Finding remains open.</p>
<p><b>Round 2 Response from Methodology Developer (09-09-2014)</b></p>	<p>Finding remains open.</p>
<p><b>Final ESI Findings (09-12-2014)</b></p>	<p>Finding Closed: The methodology now includes dead wood in the accounting structure of the framework document and supporting module ass recommended by Andrew Beauchamp, VCS, on Jul 25 2014.</p>

<p><b>Item Number</b></p>	<p>64</p>
<p><b>VCS AFOLU Requirements Version 3.4 (IFM) (08 October 2013)</b></p>	<p>a) For RIL and LtPF projects, where the project proponent takes over ownership or management of a property specifically to implement the project, the baseline scenario shall represent the most likely management plan of the most likely owner or operator (i.e., be based on the projected management plans of the previous property owners and/or operators or the management plans of the most likely operator)</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C Performance Method Module DRAFT Dec_2013.docx section 5.1</p>

<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>The performance module takes this requirement into account for East Kalimantan in the calculation of impact parameters and crediting benchmarks. The module states, "We present in this section the impact parameters for East Kalimantan used for setting crediting benchmarks and additionality benchmarks for each of four impact parameters (summarized in Table 1). We also present equations used to calculate emissions reductions attributed to a given level of each quantitative impact parameter. Sampled permit holders represented "forest areas legally logged within Hak Pengusahaan Hutan (HPH) concessions, excluding areas deforested within HPH prior to year 2010." However, general criteria should be added to the methodology to ensure that this analysis can be replicated in other regions.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please add general criteria to the methodology to ensure that this analysis can be replicated in other regions. For RIL and LtPF projects, where the project proponent takes over ownership or management of a property specifically to implement the project, the baseline scenario shall represent the most likely management plan of the most likely owner or operator (i.e., be based on the projected management plans of the previous property owners and/or operators or the management plans of the most likely operator).</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We have added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies is not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: Response sufficient, VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing project-specific default factors. Further this criteria does not apply as the methodology uses a performance method to determine the baseline.</p>

<p><b>Item Number</b></p>	<p>65</p>
<p><b>VCS AFOLU Requirements Version 3.4 (IFM) (08 October 2013)</b></p>	<p>3) Baseline environmental management practices shall not be set below (i.e., be less environmentally robust than) those commonly considered a minimum standard among similar landowners in the area. For example, where common practice exceeds minimum legal practice, the baseline cannot be the minimum legal requirement and the baseline scenario shall, at a minimum, be based on common practice.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C Performance Method Module DRAFT Dec_2013.doc</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>Local environmental management practices are not apparent, and are also specific to East Kalimantan.</p>

<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please provide documentation of local environmental management practices, or demonstrate how the methodology meets this requirement. Further, please add general criteria to the methodology to ensure that this analysis can be replicated in other regions.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>This VCS AFOLU requirement only refers to non-performance method baselines for IFM (VCS AFOLU 4.4.4). Nonetheless, legal restrictions regarding forest management and other relevant regulated environmental management practices should be incorporated into the authorized management plan required for the project area (specified in the applicability conditions). We have added an applicability condition in Section 4 of the framework document: ". We have also added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies is not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules."</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: Response sufficient, Applicability conditions have been added to address the original comment. However, upon further review it appears this criteria does not apply as the methodology uses a performance method to determine the baseline.</p>

<p><b>Item Number</b></p>	<p>66</p>
<p><b>VCS AFOLU Requirements Version 3.4 (IFM) (08 October 2013)</b></p>	<p>4.5.13 Where biomass is burned as part of the slash removal after harvesting, or nitrogen fertilizer is used, methodologies may reference IPCC 2006 Guidelines for National GHG Inventories for the quantification of such GHG emissions.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C IFM Methodology DRAFT Dec2013.docx, eligibility criteria</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>Biomass burning and nitrogen fertilization are not included in this methodology due to the fact that the harvest activities remain constant, between baseline and project , however due to the fact that this element is not addressed in the methodology, it is felt by validators that this needs to be clarified in the eligibility criteria.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please include language in the eligibility criteria that confirms the lack of, lessening of or equivalence in volume or activities between the baseline and project scenarios as a requirement for use of the methodology.</p>

<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>The project activity (RIL-C) as defined does not include reducing harvest volumes as a RIL-C practice, therefore any change in harvest volumes cannot be attributed to the project activity. Nonetheless, we have included an applicability condition requiring that there are no substantial (&gt;20%) changes in harvest volumes from without-project (or prior) practice. In response to this finding we have further elaborated this applicability condition to specify how this must be demonstrated : "The project area must have .a pre-existing (i.e. before project start date) management plan with a projection of harvest volumes extending to a minimum of 10 years after the project start date. The plan must be authorized by the relevant government oversight agency. It must be demonstrated at project start that either (a) the pre-existing plan is still in effect, or, if a new, similarly authorized plan has replaced the former that (b) the difference in total projected volumes for the period through 10 years after the project start date does not exceed 20% of the pre-existing total planned harvest volume for that period."</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: Response has added language to the applicability conditions to specify how (&gt;20%) changes in harvest volumes from without-project (or prior) practice must be demonstrated : "The project area must have .a pre-existing (i.e. before project start date) management plan with a projection of harvest volumes extending to a minimum of 10 years after the project start date. The plan must be authorized by the relevant government oversight agency. It must be demonstrated at project start that either (a) the pre-existing plan is still in effect, or, if a new, similarly authorized plan has replaced the former that (b) the difference in total projected volumes for the period through 10 years after the project start date does not exceed 20% of the pre-existing total planned harvest volume for that period."</p>

<p><b>Item number</b></p>	<p>67</p>
<p><b>General Technical Expert Comments</b></p>	<p>General Technical Expert Finding # 1</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>PMM-pg. 4, 3rd paragraph</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>Typo "...and representative of NGO's and..."</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>OFI : Please revise typos in PMM-pg. 4, 3rd paragraph.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>Typo corrected</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Typo corrected in revised PMM (revised PMM, pg. 5).Finding Closed.</p>

<p><b>Item number</b></p>	<p>68</p>
<p><b>General Technical Expert Comments</b></p>	<p>General Technical Expert Finding # 2</p>

<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	PMM-pg. 5, table
<b>ESI Findings - Round 1 (01-17-2014)</b>	"skidding" and "hauling" rows provide baseline and threshold values without units... assuming percentage?
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please clarify units for skidding and hauling baseline threshold values in PMM-pg. 5, table.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	For more comprehensive reporting of data, values and units are now listed in Table 5.1b. For skidding units are "No. Trees > 20 cm dbh destroyed per ha". For Hauling, units are "m width of haul road corridor."
<b>ESI Findings - Round 2 (04-11-2014)</b>	Table 5.1b in revised PMM specifies units (revised PMM, table 5.1b). Finding Closed.

<b>Item number</b>	69
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 3
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	PMM-pg. 9, section 5.1.3, first paragraph
<b>ESI Findings - Round 1 (01-17-2014)</b>	Need to specify units for "... 20.0 diameter at breast height..." (cm?)
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	OFI: Please specify units.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Units now specified
<b>ESI Findings - Round 2 (04-11-2014)</b>	Units now specified in revised PMM (revised PMM, pg. 13). Finding Closed.

<b>Item number</b>	70
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 4
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	PMM-pg. 10, first paragraph (and throughout)
<b>ESI Findings - Round 1 (01-17-2014)</b>	References to "number of trees >20 cm dbh destroyed" and "destruction of trees >10cm dbh"... likely 20cm is accurate?
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please clarify.

<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>For emissions estimates measured in Griscom et. al. 2014, as basis of emissions estimates associated with FELL, SKID, and HAUL impact parameters, we measured trees &gt;10 cm dbh (note the dual plot system described in Griscom et. al. for how we did this for SKID). Based on the tight correlation (R=0.89) we found between the much more rapidly measurable variable "no. trees &gt; 20 cm dbh destroyed" and emissions from all trees &gt; 10 cm dbh (as indicated in Figure 5.1.3a) , we selected "no. trees &gt; 20 cm dbh destroyed" for our SKID impact parameter. This is the fundamental intent of the identification of impact parameters: to use an initial set of more detailed measurements for a given geography to select more efficient yet robust metrics (= impact parameters) to use for monitoring in concessions.</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Justification of the relationship between resulting measurements of &gt;20cm and &gt;10cm provided and reviewed. This clarifies the perceived "conflict" between different sections of the PMM. No conflict - issue resolved (revised PMM, throughout). Finding Closed.</p>

<p><b>Item number</b></p>	<p>71</p>
<p><b>General Technical Expert Comments</b></p>	<p>General Technical Expert Finding # 5</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>PMM-pg. 10, equations 2.1.3a and 2.1.3b</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>Values of 2.81 and 0.86 for ER-SKID are unclear.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Please clarify values of 2.81 and 0.86 for ER-SKID.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>These values combined conversions from C to CO2, and fractions of Aboveground Biomass vs. Belowground Biomass. This equation (and all others in section 5.1) has been re-structured to unpackage each input variable and improve clarity. Thus, these two numbers are no longer in equation, but are represented by variables R (ratio of C to CO2), FAGB, and FBGB, and values for each of these variables are listed below equation. Also, for clarity, the overall structure of equations is described in the introduction of section 5.1.</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>PMM revised to include more specificity/background information regarding equation components (revised PMM, pgs. 14 and 15). Finding Closed.</p>

<p><b>Item number</b></p>	<p>72</p>
<p><b>General Technical Expert Comments</b></p>	<p>General Technical Expert Finding # 6</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>PMM-pg. 11, equations 2.1.4a and 2.1.4b</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>Equations 2.1.4a and 2.4.1b are identical (mis-labeled?).</p>

<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please clarify Equations 2.1.4a and 2.4.1b.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	This equation (and all others in section 5.1) has been re-structured to unpack each input variable and improve clarity. Thus, these numbers are no longer in equation, but are represented by specified variables which are described in text, along with the value assigned to each variable (except of course for Impact Parameters themselves which are to be determined). Also, for clarity, the overall structure of equations is described in the introduction of section 5.1.
<b>ESI Findings - Round 2 (04-11-2014)</b>	PMM revised to include more specificity/background information regarding equation components (revised PMM, pg. 16). Finding Closed.

<b>Item number</b>	73
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 7
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	PMM-pg. 11, equations 2.1.4a and 2.1.4b
<b>ESI Findings - Round 1 (01-17-2014)</b>	Explain values of 10.73, 0.0836, and 0.765 for ER-HAUL.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please clarify values of 10.73, 0.0836, and 0.765 for ER-HAUL.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	This equation (and all others in section 5.1) has been re-structured to unpack each input variable and improve clarity. Thus, these numbers are no longer in equation, but are represented by specified variables which are described in text, along with the value assigned to each variable (except of course for Impact Parameters themselves which are to be determined). Also, for clarity, the overall structure of equations is described in the introduction of section 5.1.
<b>ESI Findings - Round 2 (04-11-2014)</b>	PMM revised to include more specificity/background information regarding equation components (revised PMM, pg. 16). Finding Closed.

<b>Item number</b>	74
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 8
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	PMM-pg. 13, first paragraph
<b>ESI Findings - Round 1 (01-17-2014)</b>	Clarify sampling methodology for identifying felling gaps for assessment of FELL1 and FELL2. Specifically, how will random sampling be confirmed?
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please clarify sampling methodology for identifying felling gaps for assessment of FELL1 and FELL2. Specifically, how will random sampling be confirmed?

<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Please see added and revised text in section 6 (Parameters) to clarify sampling methodology; however, we propose to not fully specify sampling methodology, but allow some flexibility. As long as critical principles of proper sampling are observed (as approved by project validators), various sampling options exist. Project proponents and validators can also reference Griscom et. al. 2014 for our own specific sampling approach.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Revised PMM references allowing flexibility in field measurements based on site-specific conditions, and relying on verifiers to assess appropriateness. This resolves this issue; however, please address concerns about minimum levels of statistical validity addressed in General Technical Expert Comment in row 22 (NCR) (revised PMM, sections 5.2 and 6). Finding Closed.

<b>Item number</b>	75
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 9
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	PMM-throughout
<b>ESI Findings - Round 1 (01-17-2014)</b>	Explain why DBH $\geq$ 20cm was chosen as the appropriate lower-limit for impacts to carbon accounting.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please explain why DBH $\geq$ 20cm was chosen as the appropriate lower-limit for impacts to carbon accounting.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	DBH 20 cm is not the lower limit for accounting emissions. The impact parameter (proxy) is the # of trees > 20 cm dbh per ha, which is used to estimate emissions from trees > 10 cm dbh resulting from skidding (thus 10 cm is the lower limit for accounting emissions). Please see Figure 5.1.3a to see the basis for selection of this impact parameter - due to its strong correlation (R <sup>2</sup> =0.89) with more detailed measurements of emissions (skid trail damage sampling system which included measurements of trees >10 cm dbh).
<b>ESI Findings - Round 2 (04-11-2014)</b>	Clarification of measurement of >20cm as proxy for >10cm provided (revised PMM-pg13). Finding Closed.

<b>Item number</b>	76
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 10
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	PMM-pg. 14, section 5.2.2, "Skid Trail Mapping"
<b>ESI Findings - Round 1 (01-17-2014)</b>	Sampling methodology for identifying skid trails to assess when calculating SKID-dens is unclear. References are made to "random" or "systematically", but the methodology should provide details on how randomness will be confirmed.

<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please clarify sampling methodology for identifying skid trails to assess when calculating SKID-dens. References to "random" or "systematically", but need to provide details on how randomness will be confirmed.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Please see revised text in section 6 (Parameters).
<b>ESI Findings - Round 2 (04-11-2014)</b>	Revised PMM references allowing flexibility in field measurements based on site-specific conditions, and relying on verifiers to assess appropriateness. This resolves this issue; however, please address concerns about minimum levels of statistical validity addressed in General Technical Expert Comment in row 22 (NCR) (revised PMM, sections 5.2 and 6). Finding Closed.

<b>Item number</b>	77
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 11
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	PMM-pg. 14, last paragraph
<b>ESI Findings - Round 1 (01-17-2014)</b>	How the calculation of L-SKID would be modified by a network which borders, or crosses out of, an annual harvest block is unclear.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please explain how the calculation of L-SKID would be modified by a network which borders, or crosses out of, an annual harvest block.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Please see section six description for variable ASKID <sub>i,t</sub> where we describe how areas outside of annual harvest block must be excluded.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Issue not addressed. Please see clarification of issue in Round 2 comments (revised PMM-pg. 26).
<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	CL: Skid trails which do not occur in the block are not included in the net emissions reduction. An unintended consequence of this could be the location of skid trails immediately outside of the harvest block; as such, these emissions would not be accounted for.
<b>Round 2 Response from Methodology Developer (09-09-2014)</b>	Some small portions of skid trail networks accessing the current annual harvest area may extend outside of that area. We have added the following text to section 5.2.2 of the EK performance method module to specifically exclude these: "Sampled skid trail networks are restricted to the annual harvest area (A <sub>t</sub> ), thus any areas of sampled skid trails that extend outside the annual harvest area must be excluded referencing annual harvest area boundaries with GPS during field work." This treatment is conservative, as it ignores net emission reductions (baseline minus RIL-C skid trail emissions) that may occur outside of the annual harvest area (which could be considered as positive leakage, which is not accounted per VCS AFOLU requirements).
<b>Final ESI Findings (09-12-2014)</b>	Finding Closed: Text has been added to section 5.2.2 of the EK performance method module to specifically exclude skid trails located outside the annual harvest area.

<b>Item number</b>	78
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 12
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	PMM-pg. 15, last paragraph
<b>ESI Findings - Round 1 (01-17-2014)</b>	Sampling methodology for establishing plots to determine SKID-dam is unclear. Describe how randomness will be confirmed.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Clarify sampling methodology for establishing plots to determine SKID-dam. Describe how randomness will be confirmed.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Please see section six description for that variable.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Revised PMM references allowing flexibility in field measurements based on site-specific conditions, and relying on verifiers to assess appropriateness. This resolves this issue; however, please address concerns about minimum levels of statistical validity addressed in General Technical Expert Comment in row 22 (NCR) (revised PMM, sections 5.2 and 6). Finding Closed.

<b>Item number</b>	79
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 13
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	PMM-pg. 16, description of SKID-t ("SKIDSKID-t")
<b>ESI Findings - Round 1 (01-17-2014)</b>	Likely typo in equation for SKID-t.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please review equation for SKID-t and update if incorrect.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Typo in parameter name has been corrected
<b>ESI Findings - Round 2 (04-11-2014)</b>	Typo has been addressed (revised PMM, section 5.2.2). Finding Closed.

<b>Item number</b>	80
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 14
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	PMM-pg. 5, and throughout
<b>ESI Findings - Round 1 (01-17-2014)</b>	Reducing the felling of defective trees appears to be a form of high-grading.

<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please explain how reducing the felling of defective trees is not a form of high-grading.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We are not aware of a VCS requirement that IFM RIL practices must demonstrate that they do not involve high grading, nor of any relevant VCS definition of high grading. Nonetheless, all local legal restrictions on forest management practices should be incorporated into the authorized management plans required for project areas (as specified in the applicability conditions).
<b>ESI Findings - Round 2 (04-11-2014)</b>	Issue not specifically addressed (revised PMM).
<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	CL: High grading is universally considered poor forest management. While no formal prohibition exists in VCS documents, it would still be expected that an approved project not violate this basic precept.
<b>Round 2 Response from Methodology Developer (09-09-2014)</b>	We contend that the only manageable way to address this is through the added applicability condition that all local legal restrictions on forest management practices should be incorporated into the authorized management plans required for project areas. Beyond this would require developing a global definition of high-grading, which is generally understood as a net reduction in stand value, but in terms of what value or values? within what timeframe and at what scale? While an important consideration in forest management practice, this issue does not have a bearing on carbon accounting methodologies and the VCS does not require that methodologies address this issue.
<b>Final ESI Findings (09-12-2014)</b>	Finding Closed: Response sufficient, and verifiers agree that VCS does not directly require methodologies address this issue. The addition of applicability condition that all local legal restrictions on forest management practices should be incorporated into the authorized management plans required for project areas is a reasonable method of ensuring high grading does not occur.

<b>Item number</b>	81
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 15
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	Meth-pg. 6, Section 4, #1
<b>ESI Findings - Round 1 (01-17-2014)</b>	typo... "...involves no change in in harvest levels..."
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	OFI: Please fix typo.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Typo corrected
<b>ESI Findings - Round 2 (04-11-2014)</b>	Typo addressed (revised Meth, pg. 6). Finding Closed.

<b>Item number</b>	82
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 16
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	Meth-pg. 6, section 4, #4
<b>ESI Findings - Round 1 (01-17-2014)</b>	Provide a verifiable definition of "wetlands".
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please clarify definition of "wetlands".
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We have deleted the applicability condition that the project does not occur on wetlands. Per VCS AFOLU 3.1.11 "Where ARR, ALM, IFM or REDD project activities occur on wetlands, the project shall adhere to both the respective project category requirements and the WRC requirements, **unless the expected emissions from the soil organic carbon pool or change in the soil organic carbon pool in the project scenario ... can be conservatively excluded ... in which case the project shall not be subject to the WRC requirements.**" VCS AFOLU 4.3.13 then states that "For IFM activities, changes in soil carbon ... could be considerably above de minimis for forests growing in wetland areas such as peatland forests or mangroves. Although it may be **conservative** to omit the soil carbon pool for **such projects**, additional GHG credits may be available if the soil carbon pool is included." Thus, the methodology should be applicable on wetlands without adherence to WRC requirements, and is conservative on wetlands because the soil carbon pool is excluded. It should also be noted that because the project area must qualify as forest (per applicability condition), the only wetlands it could be applied to would be forested wetlands.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Applicability condition has been removed (revised Meth, pg. 7). Finding Closed.

<b>Item number</b>	83
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 17
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	Meth-pg. 7, source table
<b>ESI Findings - Round 1 (01-17-2014)</b>	It is not clear that methodology implementation will produce more efficient use of skidders.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please provide documentation, or further explanation, justifying that methodology implementation will produce more efficient use of skidders
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Implementation of the methodology will not produce more efficient use of skidders, implementation of the methodology will instead track performance of skidding, via impact parameter. The RIL-C definition, Section 3 of the framework document, explains that skidding efficiency can be achieved through better skid trail mapping, planning and oversight.

<b>ESI Findings - Round 2 (04-11-2014)</b>	Clarification provided in responses. Finding Closed.
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<b>Item number</b>	84
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 18
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	Meth-pg. 8, Section 6 (and throughout)
<b>ESI Findings - Round 1 (01-17-2014)</b>	It is not clear how the impact parameter can be expected to remain constant for all future conditions. Explain how changes in timber markets, harvesting technology, or similar won't change the without-project impact parameter.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please justify how the impact parameter can be expected to remain constant for all future conditions. Explain how changes in timber markets, harvesting technology, or similar won't change the without-project impact parameter.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	In the East Kalimantan Performance Method Module, under applicability conditions, we have now specified that all of the proxy relationships between impact parameters and emission reduction, and crediting and additionality benchmarks, are valid through 5 years following approval (final methodology validation), per VCS Methodology Approval 10.1.1 and 10.3.1, after which they will be re-assessed.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Time limit associated with benchmarks provided (revised Meth, Section 6; revised PMM, section 4). Finding Closed.

<b>Item number</b>	85
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 19
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	Meth-pg. 6
<b>ESI Findings - Round 1 (01-17-2014)</b>	The requirement that the project have a 10-year management plan has been dropped in the May revision; however, the requirement that a project activity will not change planned harvest levels >20%. Please clarify how a verifier will be able to confirm that harvest levels have not changed, when no pre-project harvest levels are provided.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please clarify how a verifier can confirm that harvest levels have not changed when a 10-year management plan is not provided.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	No Response from Methodology Developer
<b>ESI Findings - Round 2 (04-11-2014)</b>	No response, finding remains open
<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	CL: Please clarify how a verifier can confirm that harvest levels have not changed when a 10-year management plan is not provided.

<p><b>Round 2 Response from Methodology Developer (09-09-2014)</b></p>	<p>We removed the references (in both framework doc and East Kalimantan module) to "substantial departures (&gt;20%) from planned harvest volumes." In the framework document we replaced this language, in the Applicability Conditions section, with the following text: "The project activity does not involve a deliberate reduction in harvest levels. The criteria to demonstrate this applicability condition are provided in the applicable performance method module." In the East Kalimantan module we replaced references to departures from planned harvest volumes with specified bounds for "normal" harvest intensity that must be maintained. We made these changes, to avoid a requirement to follow management plan, because our recent analysis of the history of logging levels in East Kalimantan (see "vol calcs by year" worksheet in 'RKT data vol calcs' workbook) shows that BAU harvest levels are extremely variable, despite the fact that all concessionaires must submit long-term management plans that specify consistent harvest levels over 30 year rotation system for entire concession. In other words, actual bau harvest levels are extremely unpredictable, and rarely follow (i.e. often fall below) what is planned out in management plans. We believe these have to do with vaguaries in both the market for timber and the process for acquiring logging permits - which are inherently unpredictable and we do not think it is reasonable to think that project developers can escape these uncertainties. Thus, the only practical way we see to enforce the intent that RIL-C must not involve a "deliberate reduction in harvest levels" is require that project developers maintain a "normal" range of harvest intensity based on actual historical logging intensity data (rather than management plans). We attach an excel workbook (RKT data vol calcs) showing the calculation of this lower threshold for harvest intensity as bottom end of one standard deviation on historic mean volume across 15 logging concessions in East Kalimatan. We also include an upper harvest intensity boundary in the form of a lower tree diameter limit (50 cm dbh- the current legal limit). We note that we are not aware of a scenario in which implementing RIL-C would cause a change in harvest levels, since RIL-C practices are by definition those that do not change harvest volumes/intensity.</p>
<p><b>Final ESI Findings (09-12-2014)</b></p>	<p>Finding Closed: The methodology framework document and module now provide a "historic range" to verify a deliberate reduction in harvest levels. Under the current regional circumstances, with logging permits being inherently unpredictable, the proposed method seems reasonable from both an application, and verification standpoint.</p>

<p><b>Item number</b></p>	<p>86</p>
<p><b>General Technical Expert Comments</b></p>	<p>General Technical Expert Finding # 20</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>PMM-pg. 3</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>In the May revision to the PMM, the definition of "logging landscape" is not provided on page 3.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>CL: Is definition of "logging landscape" the same as is provided in the Methodology?</p>

<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	No Response from Methodology Developer
<b>ESI Findings - Round 2 (04-11-2014)</b>	No response, finding remains open
<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	CL: Is definition of "logging landscape" the same as is provided in the Methodology?
<b>Round 2 Response from Methodology Developer (09-09-2014)</b>	<p>The logging landscape in the EK performance method module is now defined as: "The valid logging landscape (see definition in VCS RIL-C IFM Methodology framework module) within which parameters derived in this module are applicable, is defined as:</p> <ul style="list-style-type: none"> <li>• commercial logging concessions in East Kalimantan, Indonesia, of Bornean Dipterocarp forest on latosols, within the geographic boundary defined in the map below (and also in the KML file accompanying this module)</li> <li>• class of actors/sector = commercial concession holders</li> <li>• major logging system =diameter limit selective harvest</li> </ul> <p>All parameters derived in this module are subject to periodic re-assessment. The parameters below are valid for five years following VCS approval of this module, after which they will be re-assessed and this module updated. Note though that projects may use the same crediting/additionality benchmarks from the time of validation through the project crediting period."</p>
<b>Final ESI Findings (09-12-2014)</b>	Finding Closed: definition of "logging landscape" in the EK performance method module is now in agreement with that provided in the Methodology.

<b>Item number</b>	87
<b>General Technical Expert Comments</b>	General Technical Expert Finding # 21
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	PMM-pg. 17
<b>ESI Findings - Round 1 (01-17-2014)</b>	In the May revision to the PMM the monitoring process requirements have been re-written to allow greater flexibility to the project developer to determine appropriate methodologies based on direct knowledge of the on-the-ground situation. While this is acceptable, it is necessary to provide some basic framework for acceptable levels of statistical confidence, to guide project developers, and to guide verifiers.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please provide minimum levels of statistical confidence for monitoring.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	No Response from Methodology Developer
<b>ESI Findings - Round 2 (04-11-2014)</b>	No response, finding remains open

<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	NCR: Please provide minimum levels of statistical confidence for monitoring.
<b>Round 2 Response from Methodology Developer (09-09-2014)</b>	We have done this by adding, to section 5.2 of East Kalimantan methodology, Table 5.2 and associated text (under sections for each impact parameter). These provide minimum sample sizes for monitoring which achieve less than + or - 15% from mean (95% CI) - see attached "sample size calcs" workbook for basis for these calculations. Note that the sample size requirements we have specified sometimes exceed those required (based on our calcs) for pragmatic reasons. For example, based on our recent testing of these sample requirements in the field in Borneo we determined that it is more time efficient (and of course more robust) to conduct full tally of all trees >=20 cm dbh along 5km of skid trail than it is to implement sub-sampling of the same length of skid trail network.
<b>Final ESI Findings (09-12-2014)</b>	Finding Closed: Minimum levels of statistical confidence for monitoring have been added to section 5.2 of East Kalimantan methodology, which provide minimum sample sizes for monitoring which achieve less than + or - 15% from mean (95% CI).

<b>Item Number</b>	88
<b>VCS Methodology Approval Process V3.4</b>	3.3.1 The developer shall submit to the VCSA a signed methodology approval process submission form (available on the VCS website) and the methodology element documentation.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	TNC-TFF RIL MAPS Form.pdf
<b>ESI Findings - Round 1 (01-17-2014)</b>	No evidence could be found on the VCS website of a signed methodology approval process submission form, nor was a copy provided to ESI.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please provide evidence of a signed methodology approval process submission form.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	No Response from Methodology Developer
<b>ESI Findings - Round 2 (04-11-2014)</b>	No response, finding remains open
<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	NCR: Please provide evidence of a signed methodology approval process submission form.
<b>Round 2 Response from Methodology Developer (09-09-2014)</b>	Signed methodology approval process submission form was submitted to VCS. I have asked VCS to send ESI an email confirming this.
<b>Final ESI Findings (09-12-2014)</b>	A copy of the methodology approval process submission form was submitted to VCS, and was provided to the verification team TNC-TFF RIL MAPS Form.pdf. Finding Closed.

<b>Item Number</b>	89
<b>VCS Methodology Template v3.2</b>	1-SOURCES Indicate key documents, methodologies and/or projects upon which the proposed methodology /revision is based. Also identify any modules or tools to which the methodology/revision refers. Include information on author of methodology/revision, if desired.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx Section 1
<b>ESI Findings - Round 1 (01-17-2014)</b>	Section 1, page 4 of the methodology lists clearly indicates key documents, methodologies and/or projects upon which the proposed methodology /revision is based. However the methodology fails to also identify any modules or tools to which the methodology/revision refers.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please identify any modules or tools to which the methodology/revision refers.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	This is explained under Section 2 of the framework document "methodology structure", which references the RIL-C Performance Method Modules (currently only East Kalimantan) where key parameters and monitoring procedures are included. Together they fully "contain" (provide all accounting criteria and procedures) the methodology.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, response sufficient: Section 2 of the methodology states, " <i>Methodology structure: The current document is the framework for the methodology and outlines core accounting procedures. Key parameters (additionality benchmarks, crediting benchmarks, impact parameters and emission reduction equations) and monitoring procedures are provided in the RIL-C Performance Method Modules</i> ".

<b>Item Number</b>	90
<b>VCS Methodology Template v3.2</b>	3-DEFINITIONS Provide definitions of key terms and acronyms that are used in the methodology/revision.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx Section 3
<b>ESI Findings - Round 1 (01-17-2014)</b>	Section 3 of the methodology provides definitions of some key terms and acronyms that are used, but could stand to be more thorough. Please see this section in other methodologies such as VM0009 or VM0007
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please add definitions of key terms included in the methodology such as baseline, proxy etc.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Definitions have been expanded in Section 3 of the framework document, as well as in the East Kalimantan Performance Method Module.

<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, Response sufficient.
<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	OFI: The list could have additional terms such as references to appropriate definitions of "forest" as this is key in terms of meeting applicability conditions. References to VCS definitions are also generally relevant. Please see this section in other methodologies such as VM0009 or VM0007.
<b>Round 2 Response from Methodology Developer (09-09-2014)</b>	No response from Methodology Developer
<b>Final ESI Findings (09-12-2014)</b>	OFI: The list could have additional terms such as references to appropriate definitions of "forest" as this is key in terms of meeting applicability conditions. References to VCS definitions are also generally relevant. Please see this section in other methodologies such as VM0009 or VM0007.

<b>Item Number</b>	91
<b>VCS Methodology Template v3.2</b>	6-PROCEDURE FOR DETERMINING THE BASELINE SCENARIO Describe the criteria and procedures for identifying alternative baseline scenarios and determining the most plausible scenario.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx Section 6
<b>ESI Findings - Round 1 (01-17-2014)</b>	Section 6 of the methodology describes in a very general way the criteria and procedures for identifying "a" baseline scenario, but does not provide adequate criteria and procedures to identify alternative baseline scenarios and determining the most plausible scenario. The methodology provides a case study of this is for East Kalimantan, Indonesia, within the RIL-C Performance Method Module, however the methods used to establish these proxy factors are not discussed or no reference is given to where a reader can determine how to calculate such proxies.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please establish criteria and procedures for identifying alternative baseline scenarios and determining the most plausible scenario. Please describe the methods used to establish these proxy factors or provide references where a reader can determine how to calculate such proxies.

<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>We have added an explanation in the framework document under Section 6 that "The baseline scenario is established by the applicable RIL-C Performance Method Module, and represents the average-performing logging operation in aggregate from the referenced logging landscape. The baseline scenario is quantified in terms of region-specific crediting benchmarks set for each impact parameter (i.e. proxy factor) by the applicable RIL-C Performance Method Module." We have also added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies is not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: Response sufficient, Description has been added to Section 6 of the methodology, and general criteria do not need to be established per letter from VCS, VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific factors.</p>

<p><b>Item Number</b></p>	<p>92</p>
<p><b>VCS Methodology Template v3.2</b></p>	<p>8.1 Baseline Emissions Describe the criteria and procedures, including relevant equations, for the quantification of GHG emissions and/or removals for the selected GHG sources, sinks and/or reservoirs for the baseline scenario.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>RIL-C IFM Methodology DRAFT Dec2013.docx Section 8.1</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>Section 8.1 of the methodology is blank. Section 6 of the methodology states "The baseline scenario is a region-specific crediting benchmark set for each impact parameter (i.e. proxy factor). A case study of this is for East Kalimantan, Indonesia, is given in the RIL-C Performance Method Module." The previous comment for section 6 could be applied here as well. There is no description of the criteria and procedures, including relevant equations, for the quantification of GHG emissions and/or removals for the selected GHG sources, sinks and/or reservoirs for the baseline scenario. This is however a special case as the methodology uses a region-specific crediting benchmark. References or information should be included in the methodology to describe how this benchmark could be calculated and used in projects located in other regions.</p>

<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: There is no description of the criteria and procedures, including relevant equations, for the quantification of GHG emissions and/or removals for the selected GHG sources, sinks and/or reservoirs for the baseline scenario. This is however a special case as the methodology uses a region-specific crediting benchmark but references or more information should be included to describe how this benchmark could be calculated and used in projects located in other regions.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We have added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies is not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: Response sufficient, general criteria do not need to be established per letter from VCS, VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific factors.

<b>Item Number</b>	93
<b>VCS Methodology Template v3.2</b>	8.2-Project Emissions Describe the criteria and procedures, including relevant equations, for the quantification of GHG emissions and/or removals for the selected GHG sources, sinks and/or reservoirs for the project.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx Section 8.2
<b>ESI Findings - Round 1 (01-17-2014)</b>	Section 8.2 of the methodology describes the criteria and procedures, including relevant equations, for the quantification of GHG emissions and/or removals for the selected GHG sources, sinks and/or reservoirs for the project. However equations 1 - 6 could be slightly clearer.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please clarify equations 1-6 with extra text, variable descriptions, or different notation. It is not clear if these equations are describing functions of variables (e.g. if fAGB is a function of FELLt, or if fAGB simply multiplied by FELLt).
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	Step 2 of Section 8.2 of the framework document has been further elaborated to explain equations 1-6, and that they reference functions of variables (impact parameters) provided in the applicable RIL-C Performance Method Module.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: Response sufficient, Step 2 of Section 8.2 of the methodology has been clarified.

<b>Item Number</b>	94
<b>VCS Methodology Template v3.2</b>	8.3-Leakage Describe the criteria and procedures, including relevant equations, for the quantification of GHG emissions and/or removals for the selected GHG sources, sinks and/or reservoirs for leakage.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx Section 8.3
<b>ESI Findings - Round 1 (01-17-2014)</b>	Section 8.3 of the methodology does describe in a general way the criteria and procedures for the quantification of GHG emissions and/or removals for the selected GHG sources, sinks and/or reservoirs for leakage. It says that the applicability conditions are such that leakage is assumed to be zero, "The applicability condition "The project activity involves no change in in harvest levels from the baseline practice" allows for incorporating the assumption that leakage equals zero because there is no difference in harvest levels between baseline and project scenarios - adoption of RIL-C practices (which constitutes the VCS project activity) does not entail a reduction in harvest levels. Thus, parameter $LE_t$ , leakage in year $t$ , is always equal to zero". However it is not clear how a project proponent can prove there is no change in harvest levels.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	CL: Please add a clear description for the criteria of proving there is no difference in harvest levels or provide a reference where that can be found in the methodology or supporting documentation.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	The project activity (RIL-C) as defined does not include reducing harvest volumes as a RIL-C practice, therefor any change in harvest volumes cannot be attributed to the project activity. Nonetheless, we have included an applicability condition requiring that there are no substantial (>20%) changes in harvest volumes from without-project (or prior) practice. In response to this finding we have further elaborated this applicability condition to specify how this must be demonstrated : "The project area must have .a pre-existing (i.e. before project start date) management plan with a projection of harvest volumes extending to a minimum of 10 years after the project start date. The plan must be authorized by the relevant government oversight agency. It must be demonstrated at project start that either (a) the pre-existing plan is still in effect, or, if a new, similarly authorized plan has replaced the former that (b) the difference in total projected volumes for the period through 10 years after the project start date does not exceed 20% of the pre-existing total planned harvest volume for that period."
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed: Response sufficient, an applicability condition has been added requiring that there are no substantial (>20%) changes in harvest volumes from without-project (or prior) practice.

<b>Item Number</b>	95
<b>VCS Methodology Template v3.2</b>	9.1-Data and Parameters Available at Validation Provide specification for data and parameters not monitored (i.e., that will be available at validation). Copy the table for each data unit/parameter.

<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx Section 9.1
<b>ESI Findings - Round 1 (01-17-2014)</b>	Section 9.1 of the methodology provides specification for data and parameters not monitored (i.e., that will be available at validation). However there is no justification of choice of data or description of measurement methods and procedures applied. .
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	OFI: Please consider adding a justification for choice of data or description of measurement methods and procedures applied as is done in other methodologies.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	No Response from Methodology Developer
<b>ESI Findings - Round 2 (04-11-2014)</b>	OFI open
<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	OFI: Please consider adding a justification for choice of data or description of measurement methods and procedures applied as is done in other methodologies. .
<b>Round 2 Response from Methodology Developer (09-09-2014)</b>	No response from Methodology Developer
<b>Final ESI Findings (09-12-2014)</b>	OFI: Please consider adding a justification for choice of data or description of measurement methods and procedures applied as is done in other methodologies. GP_09/15/13.

<b>Item Number</b>	96
<b>VCS Methodology Template v3.2</b>	9.2-Data and Parameters Monitored Provide specification for data and parameters monitored. Copy the table for each data unit/parameter.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx Section 9.2
<b>ESI Findings - Round 1 (01-17-2014)</b>	Section 9.2 of the methodology provides specifications for data and parameters monitored, however could be improved with more specific information as to the sources of these data and parameters.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	OFI: Please add references to source of data for variables that are listed as "calculated". (i.e. please reference equation or module that these variables are calculated in)
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	No Response from Methodology Developer
<b>ESI Findings - Round 2 (04-11-2014)</b>	OFI open
<b>Round 2 NCR/CL/OFI (04-11-2014)</b>	OFI: Please add references to source of data for variables that are listed as "calculated". (i.e. please reference equation or module that these variables are calculated in) .

<b>Round 2 Response from Methodology Developer (09-09-2014)</b>	No response from Methodology Developer
<b>Final ESI Findings (09-12-2014)</b>	OFI: Please add references to source of data for variables that are listed as "calculated". (i.e. please reference equation or module that these variables are calculated in)

<b>Item Number</b>	97
<b>VCS Methodology Template v3.2</b>	10-REFERENCES AND OTHER INFORMATION Include any relevant references and any other information relevant to the methodology/revision.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx Section 10
<b>ESI Findings - Round 1 (01-17-2014)</b>	The methodology includes no references or other information.
<b>Round 1 NCR/CL/OFI (01-17-2014)</b>	NCR: Please include relevant references or other information relevant to the development and use of the methodology. Please see other accepted methodologies for examples.
<b>Round 1 Response from Methodology Developer (04-09-2014)</b>	We have added Griscom et al 2014 as a reference to the East Kalimantan Performance Method Module. No further resources are required to apply the methodology.
<b>ESI Findings - Round 2 (04-11-2014)</b>	Finding Closed, Response sufficient. A sources section with references to Griscom et al 2014 has been added to the East Kalimantan Performance Method Module.

<b>Item Number</b>	98
<b>VCS Methodology Template v3.2</b>	APPENDIX 1: SIMILAR PROJECT METHODS Where the methodology uses a performance method for determining both additionality and the crediting baseline, list all methodologies that use a project method for determining the crediting baseline that are applicable to similar project activities and are approved under the VCS Program or an approved GHG program. See the VCS Standard and Guidance on Standardized Methods for more information. For all other methodologies, this appendix should be deleted.
<b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b>	RIL-C IFM Methodology DRAFT Dec2013.docx Appendix X

<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>The methodology includes no Appendix of similar project methods. The purpose of this appendix is to provide background information on the performance method, to provide transparency with respect to the rigor and appropriateness of the performance method. The main body of the methodology should be kept clear of such background information. The sections below (in the template document) provide instructions on the information required, though the instructions are not exhaustive. Additional information must be added where required by the VCS rules, and should be added where this would help to establish the rigor and appropriateness of the performance method.</p>
<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>NCR: Please add an Appendix of similar project methods following the instructions in the methodology template.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>The East Kalimantan Performance Method Module, which establishes the performance method for East Kalimantan, does not include an appendix of similar project methods, because to our knowledge there are no project methods for IFM RIL activities, whether VCS-validated or under another GHG program. A statement to this effect has been added to the East Kalimantan Performance Method Module (Section 2).</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed, Response sufficient. There are no project methods for IFM RIL activities, whether VCS-validated or under another GHG program. A statement to this effect has been added to the East Kalimantan Performance Method Module (Section 2).</p>

<p><b>Item Number</b></p>	<p>99</p>
<p><b>VCS VV Guidance Document Manual v3.1</b></p>	<p>KEEP IN MIND - Methodologies must not restate VCS requirements. For example, VCS requirements on project crediting period should not be included in the methodology. Where necessary, methodologies may make reference to the VCS rules directly to prevent methodologies from becoming outdated, should it be necessary to update a specific VCS requirement. References to specific tools or VCS Program documents must not state specific versions but rather refer to the most recent version of the tool or document.</p> <p>Where methodologies include definitions, VVBs must ensure that the definitions are consistent with VCS definitions. If methodologies contain definitions not included in the Program Definitions, or the methodology contains more narrowly defined terms than in the Program Definitions, such methodology definitions need to be noted within the methodology element. In addition, VVBs must ensure that terms are used consistently across the methodology.</p>
<p><b>Evidence Used to Assess (Location in PD/MR or Supporting Documents)</b></p>	<p>The VCS AFOLU Additionality Tool , RIL-C Performance Method Module DRAFT Dec_2013.docx, and RIL-C IFM Methodology DRAFT Dec2013.docx</p>
<p><b>ESI Findings - Round 1 (01-17-2014)</b></p>	<p>All CL's issued for the generalization of the methodology to other regions beyond East Kalimantan should consider this requirement. I also suggest a follow up meeting with VCS to see what the best method for meeting this requirement will be in such a situation.</p>

<p><b>Round 1 NCR/CL/OFI (01-17-2014)</b></p>	<p>NCR: No specific instance of failing to meet this requirement could be found in the current methodology. If the geographic scope is expanded, this will be difficult to comply with. I suggest a follow up meeting with VCS to see what the best method for meeting this requirement will be in such a situation.</p>
<p><b>Round 1 Response from Methodology Developer (04-09-2014)</b></p>	<p>The geographic scope of the methodology can only be expanded by developing and validating (against this and other requirements) new performance benchmarks, via incorporation of new RIL-C Performance Method Modules. We have added an explanation in the framework document under Section 6 that "The baseline scenario is established by the applicable RIL-C Performance Method Module, and represents the average-performing logging operation in aggregate from the referenced logging landscape. The baseline scenario is quantified in terms of region-specific crediting benchmarks set for each impact parameter (i.e. proxy factor) by the applicable RIL-C Performance Method Module." We have also added general guidance, and reference to VCS requirements, to the framework module (under applicability conditions) related to development of standardized baselines and proxy emission relationships for new geographies. Per communication from VCS relayed via Andrew Beauchamp to ESI on 2/3/2014, more detailed procedures on development of new baselines and proxies is not required - "[the methodology] does not need to state the requirements that other benchmarks would need to be validated against. Language somewhere along the lines of "Other geographic regions may develop similar benchmarks and additional performance method modules in accordance with VCS rules.""</p>
<p><b>ESI Findings - Round 2 (04-11-2014)</b></p>	<p>Finding Closed: Response sufficient, The geographic scope of the methodology can only be expanded by developing and validating (against this and other requirements) new performance benchmarks, via incorporation of new RIL-C Performance Method Modules. Description has been added to Section 6 of the methodology, and general criteria do not need to be established per letter from VCS, VCS_Andrew Beauchamp letter to ESI 2_3_2014.pdf provides guidance that the methodology does not need to provide a procedure for establishing regionally-specific factors.</p>

## Appendix B – Documents Received from client

### Documents Received 03 December 2013

- RIL-C Performance Method Module DRAFT Dec\_2013.docx
- RIL-C IFM Methodology DRAFT Dec2013.docx

### Documents Received 06 December 2013

- Signed Assessment Plan.pdf
- gcb\_12386\_proof\_corrected v1.pdf
- RIL-C IFM Methodology DRAFT Dec2013.docx
- RIL-C Performance Method Module DRAFT Dec\_2013.docx

### Documents Received 20 December 2013

- RIL-C Performance Method Module DRAFT Dec\_2013.docx
- RIL-C IFM Methodology DRAFT Dec2013.docx

### Documents Received 24 January 2014

- Griscom Ellis Putz 2014\_logging emissions performance Ekali\_GCB\_SupplInfo.docx
- Griscom Ellis Putz 2014\_logging emissions performance Ekali\_GCB.pdf

### Documents Received 09 April 2014

- RIL-C Performance Method Module DRAFT Dec\_2013\_rev1.docx
- Griscom Ellis Putz 2014\_logging emissions performance Ekali\_GCB.pdf
- RIL-C IFM\_VCS\_3 4\_Methodology\_Validation\_Checklist\_Round1 DTS.xlsx
- RIL-C IFM Methodology DRAFT Dec2013\_rev1.docx

### Documents Received 28 April 2014

- Winrock\_FINAL\_logging\_report\_TNC\_04-13-2011.pdf
- RIL\_CstudySampleConcessionClusters.cpg
- RIL\_CstudySampleConcessionClusters.dbf
- RIL\_CstudySampleConcessionClusters.kml
- RIL\_CstudySampleConcessionClusters.prj
- RIL\_CstudySampleConcessionClusters.sbn
- RIL\_CstudySampleConcessionClusters.sbx
- RIL\_CstudySampleConcessionClusters.shp
- RIL\_CstudySampleConcessionClusters.shp.xml
- RIL\_CstudySampleConcessionClusters.shx
- RIL-C IFM\_VCS\_3 4\_Methodology\_Validation\_Checklist\_Round1\_Findings and Responses.xlsx
- RIL-C IFM Methodology DRAFT\_rev1.docx
- RIL-C Performance Method Module DRAFT\_rev1.docx
- Summary Source Data\_Impact Parameters and ERs\_April 25\_2014.xlsx
- VCS RIL-C methodology\_submission form\_tnc tff signature page.pdf

### Documents Received 01 May 2014

- Copy of RIL-C IFM\_VCS\_3 4\_Methodology\_Validation\_Checklist\_Round1\_Findings and Responses.xlsx

### Documents Received 09 September 2014

- Sample size calcs.xlsx
- Checklist Addendum - list of additional edits.docx
- collateral damage.xlsx
- normal harvest area calcs.xlsx

- RIL-C IFM \_VCS\_3 4\_Meth\_Val\_Checklist\_R2  
Final\_20140605\_Response\_201408\_bg.xlsx
- RIL-C IFM Methodology DRAFT\_rev2\_Aug 21.docx
- RIL-C Performance Method Module DRAFT\_rev2\_Sept 9.docx

#### Documents Received 15 September 2014

- RIL-C Performance Method Module DRAFT\_rev2\_Sept 15.docx
- RIL-C IFM \_VCS\_3 4\_Meth\_Val\_Checklist\_R2  
Final\_20140605\_Response\_201408\_bg.xlsx
- RIL-C IFM Methodology DRAFT\_rev2\_Sept 15.docx

#### Documents Received 07 October 2014

- RIL-C IFM Methodology DRAFT\_rev2\_Sept 15.docx

#### Documents Received 07 December 2015 (am)

- RIL-C Performance Method Module DRAFT 8Dec2015.docx
- RIL-C IFM Methodology DRAFT 8Dec2015.docx

#### Documents Received 07 December 2015 (pm)

- RIL-C Performance Method Module DRAFT 7Dec2015.docx
- RIL-C IFM Methodology DRAFT 7Dec2015.docx

**Appendix C – VVB AFOLU Project Validation Evidence**

<b>Name of Project</b>	<b>Validation Report – Date Issued</b>	<b>Date Project Registered</b>	<b>GHG Program Registered With</b>
Kariba REDD+ Project	29 September 2012	15 October 2012	VCS
Lower Mississippi Valley Grouped Afforestation Project	11 October 2012	12 November 2012	VCS
Restoration of degraded areas and reforestation in Cáceres and Cravo Norte, Colombia	24 February 2011	14 March 2011	VCS
TIST Program in Kenya VCS-001	2 March 2011	15 April 2011	VCS
TIST Program in Kenya VCS-002	2 March 2011	15 April 2011	VCS
TIST Program in Kenya VCS-003	2 March 2011	15 April 2011	VCS
TIST Program in Kenya VCS-004	2 March 2011	17 April 2011	VCS
TIST Program in Kenya VCS-005	16 December 2011	22 December 2011	VCS
Bull Run Overseas Forest Carbon Project: Phase 1	15 March 2012	13 April 2012	VCS
Redd Forests Grouped Project: Protection of Tasmanian Forest	13 December 2012	pending	VCS
TIST Program in Uganda VCS-001	20 March 2012	25 May 2012	VCS
TIST Program in Uganda VCS-002	20 March 2012	25 May 2012	VCS
TIST Program in Uganda VCS-003	20 March 2012	25 May 2012	VCS
TIST Program in Uganda VCS-004	20 March 2012	25 May 2012	VCS
Protection of the Bolivian Amazon Forest	26 March 2012	25 May 2013	VCS
Reforestation of Degraded Lands in the Valle California of Patagonia, Chile	18 June 2012	29 August 2012	VCS
April Salumei Sustainable Forest Management Project	08 October 2013	Pending	VCS
TIST Program in Kenya – VCS-006	27 September 2012	01 October 2012	VCS
TIST Program in Uganda – VCS-005	7 March 2013	13 March 2013	VCS
TIST Program in Uganda – VCS-006	7 March 2013	13 March 2013	VCS
TIST Program in India VCS-001	7 March 2013	13 March 2013	VCS
Avoiding Planned Deforestation and Degradation in the Valdivian Coastal Reserve, Chile	12 November 2013	pending	VCS
TIST Program in Kenya – VCS-009	7 March 2013	13 March 2013	VCS
Reforesting Degraded Lands in Chile Through the use of	23 April 2013	02 May 2013	VCS

Mycorrhizal Inoculation			
Tasmanian Land Conservancy– New Leaf Project	29 October 2013	pending	VCS/CCB
Grouped Project – Protection of a Tasmanian Native Forest	03 December 2013	pending	VCS
Kuzuko Lodge Private Game Reserve Thicket Restoration Project	30 January 2014	pending	VCS
Purus Project – A Tropical Forest Conservation Project in Acre, Brazil	10 December 2013	pending	VCS
Russas Project – A Tropical Forest Conservation Project in Acre, Brazil	26 March 2014	pending	VCS
Valparaiso Project - A Tropical Forest Conservation Project in Acre, Brazil	11 July 2014	pending	VCS