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Validation Assessment
Report for:

CIKEL BRAZILIAN AMAZON REDD APD PROJECT – AVOIDING PLANNED DEFORESTATION
in
Brazil

Report Finalized:	17 May 2012
Draft Report Date:	24 February 2012
Field Audit Dates:	November 21 - 23, 2011 and February 9 -10, 2012.
Lead Auditor:	Talía Bonfante
Audit Team Member(s):	Thales West, Guilherme Stucchi
Senior Internal Reviewer	Jared Nunery
Audit Standard:	*VCS Version 3*
Validation Code(s):	RA-VAL-VCS-016077
Project Latitude/Longitude:	Lat – 3.684566° Lon – 48º81265º
PD Version:	v. 01 (February 2012)
Project Proponent Contact:	Aparecida Denadai – cida@cikel.com.br
Project Proponent Address:	Estrada do 40 horas, 17, km 04, Ananindeua, PA, Brazil. Zip Code: 67.120-000

CKBV PLANNED VCS VAL 12

Document Prepared By Rainforest Alliance

Project Title	*Cikel Brazilian Amazon REDD APD Project – GHG Emission Reductions From Avoiding Planned Deforestation*
Version	*PD v.01 (February 2012)*
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Summary:

The CIKEL Brazilian Amazon REDD APD Project aims to avoid emissions from planned deforestation on a property in Para state, Brazil. Due to difficulties in its commercial wood business in 2005 and 2006, this had a negative financial impact on the company, in 2006 CKBV decided to diversify its business beyond wood products. The diversification alternative chosen was livestock, and to pursue this new business activity CKBV had initiated plans to legally convert (suppress) 20% of its forest property in the Rio Capim Complex to pasture. The main activity of the CIKEL Brazilian Amazon REDD APD Project is the cancelation of the planned deforestation activities and decision to instead conserve the forest area and continue limited forest management activities in the area under Forest Stewardship Council® Certification (FSC®) with Low Impact Logging (SFMLIL) practices. Also, the company is intensifying and improving its practices to support the sustainable social development, maintaining and improving the biodiversity monitoring at the RCC in the framework of FSC certification and REDD activities. The project area is a subset of the RCC property and covers an area of 27,434.9 ha of native forest. From the implementation of this REDD Project, it is estimated that 9,432,299 tonnes of carbon dioxide emissions will be avoided which would have been emitted into the atmosphere in a period of 10 years in the absence of the project, not including the project's non-permanence risk buffer contribution.

The audit of the PD, supporting documentation review, field visit, and interviews with stakeholders were conducted by the audit team in order to collect evidence to determine conformance with the VCS Version 3 standard with a reasonable level of assurance. The audit team identified 1 non-conformance which was addressed by the Project Proponent. Additional evidences were submitted to the audit team, and were reviewed to close the non-conformity prior to the finalization of this report. Following the closure of identified non-

conformity, the project was found to be in conformance with the requirements of the VCS standard.

Table of Contents

1 Introduction

Rainforest Alliance certification and auditing services are managed and implemented within its RA-Cert Division. All related personnel responsible for audit design, evaluation, and certification/verification/validation decisions are under the purview of the RA-Cert Division, hereafter referred to as Rainforest Alliance or RA. Rainforest Alliance is an ANSI ISO 14065:2007 accredited validation and verification body; additionally, Rainforest Alliance is a member of the Climate, Community, and Biodiversity Alliance (CCBA) standards, and an approved verification body with a number of other forest carbon project standards. For a complete list of the services provided by the Rainforest Alliance, see http://www.rainforest-alliance.org/climate.cfm?id=international_standards.

Dispute resolution: If Rainforest Alliance clients encounter organizations or individuals having concerns or comments about Rainforest Alliance and our services, these parties are strongly encouraged to contact the local Rainforest Alliance regional office or the RA-Cert Division headquarters directly. Formal complaints or concerns should be sent in writing.

1.1 Objective

The purpose of this report is to document the conformance of the Cikel Brazilian Amazon REDD APD Project – GHG Emission Reductions From Avoiding Planned Deforestation with the requirements of the Verified Carbon Standard (VCS). The project was developed by CKBV Florestal Ltda (Project Proponent) and 33 Forest Capital and TerraCarbon LLC O (Consultants) , hereafter referred to as "Project Proponent". The report presents the findings of qualified Rainforest Alliance auditors who have evaluated the Project Proponent's systems and performance against the applicable standard(s).

1.2 Scope and Criteria

Scope: The scope of the audit is to assess the conformance of the Cikel Brazilian Amazon REDD APD Project – GHG Emission Reductions From Avoiding Planned Deforestation REDD project in Brazil (Pará State) against the Verified Carbon Standard. The objectives of this audit included an assessment of the project's conformance with the standard criteria. In addition, the audit assessed the project with respect to the baseline scenarios presented in the project design document. The project covers an area of 27,434.9 ha.. The land is privately owned. The project has a lifetime of 20 years, and estimates it will remove and/or reduce 9,432.299,41 tCO_2e over the course of the project lifetime, not including the project's non-permanence risk buffer contribution*'*.

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Standard criteria: Criteria from the following documents were used to assess this project:

- Verified Carbon Standard Program Guide Version 3;
- Verified Carbon Standard Version 3;
- Verified Carbon Standard Agriculture, Forestry and Other Land Use (AFOLU) Requirements Version 3;
- Verified Carbon Standard AFOLU Non-Permanence Risk Tool Version 3;
- Verified Carbon Standard Program Updates (please see VCS website for the latest updates); and as applicable,
- The VCS approved methodology/modules used by the project.

Materiality: All GHG sinks, sources and/or reservoirs (SSRs) and GHG emissions equal to or greater than 5% of the total GHG assertion unless otherwise defined by the standard criteria.

1.3 Level of assurance

The assessment was conducted to provide a reasonable level of assurance of conformance against the defined audit criteria and materiality thresholds within the audit scope. Based on the audit findings, a positive evaluation statement reasonably assures that the project GHG assertion is materially correct and is a fair representation of the GHG data and information.

1.4 Project Description

The following is taken from section 1.1 of the PD v. 01 (February 2012):

'The objective of the project, referred to as the CIKEL Brazilian Amazon REDD APD Project, is avoid emissions from planned deforestation on a property in Para state, Brazil. The project proponent is CKBV Florestal Ltda (CKBV or "the company"), a

Brazilian private and family company whose main business is the management and commercialization of native wood. CKBV is part of CIKEL group, which has been working in forest management in the Brazilian Amazon since 1977.
Due to difficulties in its commercial wood business in 2005 and 2006, which had a negative financial impact on the company, in 2006 CKBV decided to diversify its business beyond wood products. The diversification alternative chosen was livestock, and to pursue this new business activity CKBV had initiated plans to legally convert (suppress) 20% of its forest property in the Rio Capim Complex to pasture.
The main activity of the CIKEL Brazilian Amazon REDD APD Project is the cancelation of the planned deforestation activities and decision to instead conserve the forest area and continue limited forest management activities in the area under Forest Stewardship Council® Certification (FSC®) with Low Impact Logging (SFMLIL) practices. Also, the company is intensifying and improving its practices to support the sustainable social development, maintaining and improving the biodiversity monitoring at the RCC in the framework of FCS certification and REDD activities.
The financial incentives from the sale of VCUs permit the project activity to be competitive with alternative business scenarios like livestock and allow CKBV to cancel its legal forest conversion plans and maintain its forest management activities.
The project is located at the Rio Capim Complex (RCC), Paragominas municipality, in Para State, in the Eastern Amazon. The RCC property includes five forest areas: Rio Capim, Poty, Cauaxi, Sumal and Caculé, totaling 209,130.54 ha. The project area is a subset of the RCC property and covers an area of 27,434.9 ha of native forest.
From the implementation of this REDD Project, it is estimated that 9,432,299 tonnes of carbon dioxide emissions will be avoided which would have been emitted into the atmosphere in a period of 10 years in the absence of the project, not including the project's non-permanence risk buffer contribution'.

2 Audit Overview

Based on Project's conformance with audit criteria, the auditor makes the following recommendation:		
Final Report Conclusions		
☒	Validation approved: *No NCRs issued*	
☐	Validation not approved: *Conformance with NCR(s) required*	
Draft Final Report Conclusions		
☒	Validation approved: *No NCRs issued*	The Project Proponent has 7 days from the date of this report to submit any comments related to the factual accuracy of the report or the correctness of decisions reached. The auditors will not review any new material submitted at this time.
☐	Validation not approved: *Conformance with NCR(s) required*	
Draft Report Conclusions		
☒	Validation approved: *No NCRs issued*	The Project Proponent has 30 days from the date of this report to revise documentation and provide any additional evidence necessary to close the open non-conformances (NCRs). If new material is submitted the auditor will review the material and add updated findings to this report and close NCRs appropriately. If no new material is received before the 30 day deadline, or the new material was insufficient to close all open NCRs the report will be finalised with the NCRs open, and validation and/or verification will not be achieved. If all NCRs are successfully addressed, the report will be finalised and proceed towards issuance of a assessment statement.
☐	Validation not approved: *Conformance with NCR(s) required*	

2.1 Audit Conclusions

The audit team has reviewed all the exhibits submitted by the Project Proponent (see sections 2.4 and 3.3 of this report) and considers that the proposed project is in conformance with VCS 3.2 standard.

Rainforest Alliance Report Criterion	Draft Report Project Conformance	Final Report Project Conformance
1 Project Design	☒ Yes ☐ No	☒ Yes ☐ No
2 Application of Methodology	☒ Yes ☐ No	☒ Yes ☐ No
3 Additionality and baseline selection	☒ Yes ☐ No	☒ Yes ☐ No
4 Quantification of GHG emissions	☒ Yes ☐ No	☒ Yes ☐ No
5 Leakage	☒ Yes ☐ No	☒ Yes ☐ No
6 Net emission reductions and removals	☒ Yes ☐ No	☒ Yes ☐ No
7 Monitoring plan	☒ Yes ☐ No	☒ Yes ☐ No
8 Environmental Impact	☒ Yes ☐ No	☒ Yes ☐ No
9 Comments by stakeholders	☒ Yes ☐ No	☒ Yes ☐ No
10 Non-permanence Risk Assessment	☒ Yes ☐ No	☒ Yes ☐ No

2.2 Nonconformance evaluation

Note: A non-conformance is defined in this report as a deficiency, discrepancy or misrepresentation that in all probability materially affects carbon credit claims. Each NCR is brief and refers to a more detailed finding in the appendices.

NCRs identified in the Draft Report must be closed through submission of additional evidence by the Project Proponents before Rainforest Alliance can submit an unqualified statement of conformance to the GHG program. Findings from additional evidence reviewed after the issuance of the draft report are presented in the NCR tables below.

NCR#:	01/12
Standard & Requirement:	VCS AFOLU Requirements Section 3.1.1
Report Section:	APPENDIX A – Section 4.2
Description of Non-conformance and Related Evidence:	
During the field audit in November 2011, the inventory plot maps presented to audit team (Ref. 3, 6) did not represented fairly the permanent sample plot (PSP) used for the biomass estimation in Rio Capim Complex area. These maps (Ref. 3, 6) had more sampling plots than were used for biomass estimates, as the maps also included PSP used for harvest monitoring. In this way, it was not clear to the audit team and project proponent witch PSP were part of the project biomass estimation. As a result of that, some plots that were not part of the REDD project were re-measured by the audit team (P12 REDD/P14 CIKEL and P11/REDD13, at UPA 9). Furthermore, PSPs were not fully georeferenced and the traceability of inventory date was compromised. The dates from PSP in the maps (Ref, 3, 6); biomass inventory field sheets (Ref. 2) and Forest Biomass Inventory Results for Rio Capim property (Ref. 5) did not match. The data in the field sheets were not standardized, since some of them were in CAP and others in DAP, further were not clear whether they were in cm or mm. Finally, part of the inventory data was systematized and stored in excel files, witch does not ensure suitably quality control of data transfer from field sheets to excel files.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to Validation
Evidence Provided by Organization:	- Updated Forest Biomass Inventory Results for Rio Capim property, Cikel, REDD project areas, Paragominas, Para, Brazil. David Shoch, Lucas J.M. Freitas, Evandro Ferreira. November, 2011 (Ref. 24); - Relatório de Ações do Inventário de Biomassa Florestal para a Propriedade Rio Capim, CIKEL, Áreas do projeto REDD, Paragominas,Pará, Brasil (Forest Biomass Inventory Action Report to Rio Capim Proprietary, Cikel, REDD Project Area, Paragominas, Pará, Brazil). Evandro Ferreira, Lucas José Mazzei de Freitas, Fernanda Bortolotto. February 2012 (Ref. 33); and the follow report annex: - Annex 1_Field Sheet Photos (Ref. 34); - Annex 2_Inventory Plot Relation (Ref. 35); - Annex 3_ Rio Capim Inventory Analysis (Ref. 36); - Annex 4_Inventory Plots Map (Ref. 38); - Annex 5_ Monitoring Plots (Ref. 37).
Findings for Evaluation of Evidence:	In response to this NCR, the Project Proponent took the following corrective action in order to adequately address inaccuracies raised by audit team in November, 2011. All corrective actions are reported in the documents pointed bellow. - Organization of Biomass inventory field sheets: All the sheets from 152 PSP were revised and properly identified (Ref.33). This identification was replicated in the maps (Ref. 38) and inventory spreadsheets (Ref. 36). In addition, was specified in the filed sheets the measurement of PSP was take in CAP or DAP and also if these dates are in cm or mm;

	- Field verification of all PSP to check their accurately location: The project proponent inventory crew re-visited all the PSP to update their GPS location and also collect geographic points to draw the access map for each PSP (Ref. 38). An Excel spreadsheet was elaborated to point the follow dates from each PSP: geographic coordinates, Annual Production Unit and its respectively exploration year, farm location (Rio Capim, Poty, Cauaxi, Sumal and Caculé) and identification name (Ref, 35); - ID establishment for each tree measured in the biomass inventory (Ref. 36 – see column J); - Unification of all the information of permanent plots in the software MFT used to store the inventory dates (Ref. 01). - Voluntarily monitoring of 71 PSP a long of the project life cycle. The monitoring schedule is described in the document Ref. 33. Note that this monitoring is a voluntary project proponent action, since it is not requested by the methodology VM 0007 v.01 applied by the project. Review of all this documents confirmed that the project proponent addressed adequately the issues identified during the field audit in November 2011. As such this nonconformance is closed.
NCR Status:	**CLOSED**
Comments (optional):	N/A

2.3 Observations

Note: Observations are issued for areas that the auditor sees the potential for improvement in implementing standard requirements or in the quality system; observations may lead to direct non-conformances if not addressed. Unlike NCRs, observations are not formally closed. Findings from the field audit related to observations are discussed in Appendix A below.

OBS 01/12	Reference Standard & Requirement: VCS AFOLU Requirements Section 3.1.2
In section 1.11 of the PD v.01, the project lists (table 1.9) applicable laws to forest management activities and describes their compliance. However this list does not mention any labor regulations or laws. The audit team reviewed the last FSC audit report issued in August 26, 2011 and found some non-conformances connected with labor law and NR-31. The audit team checked this information with FSC auditors and confirmed that the non- conformances raised in the FSC report are not critical and that CKBV is committed to resolve these issues before the next FSC Monitoring Assessment schedule from October 01 to 05, 2012, which the FSC audit team will evaluate if CKBV took adequate corrective action to address the findings raised in the FSC report. Considering that the non-conformances connected with labor law and NR-31 were considered minor by the FSC audit team and for this reason they FSC certification status is active, CKBV is committed to resolve these issue and all these points will be evaluated continually by FSC certification, the verification audit team finds that these issue at this moment are not impeditive to project verification. However, if CKBV does not take effective action to address this and consequently in the next FSC report the non-conformances connected with labor law and NR-31 become major and compromise FSC certification or new critical points appear along of the project life time, it may become relevant for the further verifications. At this moment in the validation process, there is not a REDD+ regulatory regime applicable to the proposed project in the Brazilian or International political context.	
Observation: The project proponent should ensure that all relevant laws are complied with during project implementation, including if Brazilian and/or Para state REDD+ regulatory regime become formally regulated during subsequent monitoring periods.	

OBS 02/12	Reference Standard & Requirement: VCS AFOLU Requirements Section 3.1.1
As the audit team re-measured inventory plots (GEO_5_2011; PARA_5_11; PARA_3_2011; 2002_13_2003; 2003_3_2004; 2003_23_2004; 2008_13_2008; 2008_1_2008; 2008_7_2008; PARA_14_2011 and PARA_2_2011) some of the parcels were found not to follow the orientation described in the 'Forest Biomass Inventory Results for CIKEL' (Ref. 5 and 24) presented to the audit team. Additionally, the field procedures used to measure the inclined trees was found to be inaccurate, as diameters measurements were not parallel to the trunk of the tree. As such the procedures defined by the Project Proponent were not fully implemented. However, as the measure procedure used does not overestimate the biomass stock, but underestimate, the audit team has found these findings do not represent a material nonconformance for the validation audit, but should be addressed prior furthers inventories.	
Observation: The Project Proponent should be sure to follow defined SOPs when measuring tree CAP/DAP to ensure accurate carbon stocks estimation as well as ensure that all project inventories are conducted in conformance with the validated monitoring plan.	

2.4 Actions taken by the Project Proponent address NCRs (including any resolution of material discrepancy)

During the validation process, just one NCR was found in the field audit carried on in November 2011. Prior to the elaboration of this report, the project proponent took correction actions to close it (See Section 2.2 of this report, NCR 01/12). Bellow are the documents delivered to audit team to address it.

Action Taken by Project Proponent following the issuance of the Draft Report		**Date**
Additional documents submitted to audit team (additional documents listed below)	☒ Yes ☐ No ☐ N/A	29 FEB. 2012
Additional stakeholder consultation conducted (evidence described below)	☐ Yes ☐ No ☒ N/A	
Additional clarification provided	☐ Yes ☐ No ☒ N/A	
Documents revised (document revision description noted below)	☒ Yes ☐ No ☐ N/A	29 FEB. 2012
GHG calculation revised (evidence described below)	☐ Yes ☐ No ☒ N/A	

Included in the actions taken by the Project Proponent to address NCRs was the submission of the following revised files:

Ref	**Title, Author(s), Version, Date**	**Electronic Filename**
1a.	Updated Forest Biomass Inventory Results for Rio Capim property, Cikel, REDD project areas, Paragominas, Para, Brazil. David Shoch, Lucas J.M. Freitas, Evandro Ferreira. November, 2011.	Annex 13 - Forest Biomass Inventory Results for CIKEL.pdf
2a.	Relatório de Ações do Inventário de Biomassa Florestal para a Propriedade Rio Capim, CIKEL, Áreas do projeto REDD, Paragominas,Pará, Brasil (Forest Biomass Inventory Action Report to Rio Capim Proprietary, Cikel, REDD Project Area, Paragominas, Pará, Brazil). Evandro Ferreira, Lucas José Mazzei de Freitas, Fernanda Bortolotto. February 2012; and the follow report annex:	Relatório ações do Inventário de biomassa florestal no CRC_15-fev-2012.pdf
3a.	Annex 1_Field Sheet Photos	Geoflor.JPG Paragogeo.JPG UPA 4.JPG UPA 5.JPG UPA 6.JPG UPA 7.JPG UPA 11.JPG UPA 13.JPG
4a.	Annex 2_Inventory Plot Relation	Anexo 2_Relação parcelas.xls
5a.	Annex 3_ Rio Capim Inventory Analysis	Anexo 3_Rio Capim inventory analysis_i_arbre.xls
6a.	Annex 4_Inventory Plots Map	Anexo 4 _Mapa 04 Ambientes - 152 Parcelas_A0_NOVO_sem_HA.jpg

7a.	Annex 5_ Monitoring Plots	Anexo 5_Parcelas para monitoramento (2).xls

3 Audit Methodology

3.1 Audit Team

Overview of roles and responsibilities:

Auditor(s)	Responsibilities							
	Lead	Desk Review	On-site visit	Climate Specialist	Biodiversity Specialist	Social Specialist	Report	Senior Internal Review
Talia Manceira Bonfante	☒	☒	☒	☒	☐	☒	☒	☐
Thales West	☐	☒	☒	☒	☒	☐	☒	☐
Guilherme Stucchi	☐	☒	☒	☒	☒	☐	☐	☐
Jared Nunery	☐	☐	☐	☐	☐	☐	☐	☒

Auditor qualifications:

Auditor(s)	Qualifications
Talía Manceira Bonfante (TB)	Biologist and expert in Integrated Management Systems - Health, Environment and Security. Talia received her master's degree in the program of Management of Organizations FEA - USP, where she studied the economic viability of small scale projects included in the CDM. She has experience in social and environmental audits (FSC, CCB, VCS standards) as well in research related to the carbon market and socio-environmental responsibility. She has strong project expertise in biodiversity assessment, forest management, and nuanced local context issues.
Thales A. P. West (TW)	Forest Engineer and M.Sc. in Forest Resources, both from the University of São Paulo, studying forest management and carbon project activities. Thales holds a specialization in Business Management from Fundação Getúlio Vargas and has worked for several companies as a consultant in forest carbon projects, under the CDM and voluntary carbon market schemes.
Guilherme Stucchi (GS)	Forest Engineer. Auditor in FSC certification processes for Amazon natural forest management. He has more than 3 years of experience in reduced impact forest management and worked for FSC certified companies in the Brazilian Amazon. In addition he is a certified lead auditor by – Lead Advisor to ISO 14001: 2004.
Jared Nunery	Jared has participated in over 30 forest carbon project and methodology assessments, spanning four continents. In addition he has led the technical review and approval of the first IFM LtPF Methodology under the VCS, and participate in the evaluation of over a half dozen other AFOLU methodologies against the VCS. Before joining the Rainforest Alliance, Jared worked as a member of the Carbon Dynamics Lab at the University of Vermont, where he conducted research on the effects of forest management on carbon sequestration. Jared has published multiple scientific articles on forest carbon dynamics as well as general forest ecological processes. Jared has presented research and guest lectured on the topic of forest management and forest carbon dynamics at over a dozen scientific conferences and universities both within the USA and abroad. Jared has a B.S. in Environmental Sciences from the University of Vermont and earned his M.Sc. in Forestry from the University of Vermont. Jared has extensive experience in forest stand dynamics, forest carbon dynamics, forest mensuration, GHG quantification, forest growth and yield modeling, and wildlife habitat conservation. In addition Jared is a certified lead auditor with the Climate Action Reserve for Forest and Urban Forest projects, and ISO 14001. Jared is also an approved AFOLU IFM Expert with the VCSA.

3.2 Description of the Audit Process

The audit was conducted in a two-step process. The first step included the field audit of the project area carried out in November, 20 – 23, 2011. During the field audit, the audit team conducted an evaluation of the field inventory completed by the project proponent. This evaluation included verifying permanent sample plot (PSP) locations with handheld GPS units, re-measurement of permanent sample plots, verification of implementation of inventory SOPs, and interviews with field inventory crews responsible for the completion of carbon stock inventories. The audit team visited a sample of the PSPs used to quantify biomass within the project area. The implementation of inventory SOPs was evaluated by witnessing the inventory crew re-measure 11 PSPs (see table bellow). Simultaneously to the re-measurement of this PSP, some plots were also measured by the audit team. Diameters measured by the audit team and the inventory crew were compared and the results were not found to be statistically different. However, at this moment, the audit team checked that even the inventory data has a good quality, their traceability was compromised (See Section 2.2 of this report, NCR 01/12 for details). This issue was discussed with the project proponent and they committed themselves to take the necessary actions to address this issue as soon as possible and demonstrate to the audit team that corrective actions were implemented prior to the finalization of the validation process.

The second step in the audit process included a document review held in the project proponent's office located in Belém on February 9-10, 2012. At this time, the PD v 01 (January 2011) and all supporting documents related to the project were analysed, and further interviews with the persons involved in the project were conducted by the audit team. The project proponent also had a chance to proof to the audit team the corrective actions taken to address the inventory data traceability issue and presented new documents (Ref. 24, 34, 35, 36, 37, 38, 39). Based on auditor review of these materials, they found the project proponent's corrective action sufficient. After the audit conducted in Belém, the project proponent sent to the audit team an updated version of the PD (v.01 – February 2012), which was considered by the auditors in Draft Report preparation. Additionally, in order to demonstrate conformance with the monitoring module applicability condition (M-MON v. 2.0) of the methodology VM 0007 which states *'If emissions from logging are not omitted as de minimis, logging may only take place within forest management areas that possess and maintain a Forest Stewardship Council (FSC) certificate for the years when the selective logging occurs'* the project decided to exclude 377,4 ha (from Poty Farm) of the project area. This area is included in the Suppression Plan (the plan to clear the forest in the baseline activity as allowed by Brazilian law), however, as harvest activity took place during the project crediting period and prior to secure FSC certification it was decided to remove this area from the project area (and GHG calculations) in order to conform to M-MON v2.0 applicability conditions. Below is a description of the field audit process and list of documents reviewed during the audit process.

Location/Facility	Date(s)	Length of Audit	Auditor(s)
CKBV – Rio Capim Complex Office	20 Nov 11	3 hours	TB, TW, GS
CKBV - Rio Capim Farm – Inventory Plots GEO_5_2011; PARA_5_11; PARA_3_2011;	21 Nov 11	8 hours	TB, TW, GS
CKBV - Rio Capim Farm – Inventory Plots 2002_13_2003; 2003_3_2004	22 Nov 11	3 hours	TB, TW
CKBV - Rio Capim Farm – Inventory Plots 2003_23_2004; 2008_13_2008; 2008_1_2008; 2008_7_2008	22 Nov 11	5 hours	TW
CKBV – Caculé Farm PARA_14_2011; Cikel Rio Capim Farm PARA_2_2011	22 Nov 11	8 hours	GS
CKBV – Rio Capim Complex Office	22 Nov 11	5 hours	TB
CKBV – Rio Capim Complex Office	23 Nov 11	2 hours	TW; GS
CKBV – Rio Capim Complex Office	23 Nov 11	2,5 hours	TB
CKBV – Rio Capim Complex Office	23 Nov 11	1,5 hours	TB, TW,GS
CKBV Belém Office	09 Feb 12	9 hours	TB, TW
CKBV Belém Office	10 Feb 12	6 hours	TB, TW

3.3 Review of Documents

The following documents were viewed as a part of the field audit:

Ref	Title, Author(s), Version, Date	Electronic Filename
1	Monitoramento Floresta Tropical – Programa Livre. Embrapa.	Free Software used to systematic and store the inventory data. This program was assessments by the audit team in November, 2011.
2	Biomass inventory field sheets	Printed Material
3	Biomass Inventory Map. November, 2011.	Printed Material
4	Remedição de Parcelas Permanentes. ITOSMS 19. Revisão 01. Julho/2010.	Printed Material
5	Forest Biomass Inventory Results for Rio Capim property, Cikel, REDD project areas, Paragominas, Para, Brazil. David Shoch, Lucas J.M. Freitas, Evandro Ferreira. November, 2011.	Forest Biomass Inventory Results for CIKEL.doc
6	Mapa Geral Complexo Rio Capim. Localização Parcelas Permanentes. Nov.11	MAPA C - Mapa Geral_PARCELAS_RED_A0.jpg
7	PD v 01 – January 2012	PDD APD CIKEL 31Jan2012 (2).pdf
8	NON-PERMANENCE RISK REPORT FOR THE CIKEL BRAZILIAN AMAZON REDD APD PROJECT. January 2012.	NON-PERMANENCE RISK REPORT 12Jan2011.pdf
9	Land Legal Title and Rights of Use Documents	Annex 7 - Result of geo-referencing in 2008 and Property Legal Title
10	VCU's Legal Title	1º_ADITIVO_CONTRATO_ARRENDAMENTO_MATRÍCULA_2.501..pdf 1º_ADITIVO_CONTRATO_ARRENDAMENTO_MATRÍCULA_4.594_4.828_4.595..pdf 1º_ADITIVO_CONTRATO_ARRENDAMENTO_MATRÍCULA_8.823..pdf 1º_ADITIVO_CONTRATO_ARRENDAMENTO_MATRÍCULA_8.824..pdf 1º_ADITIVO_CONTRATO_ARRENDAMENTO_MATRÍCULA_8.988..pdf 1º_ADITIVO_CONTRATO_ARRENDAMENTO_MATRÍCULA_306..pdf
11	Suppression Plan.pdf	Annex 10 - Suppression Plan.pdf
12	AUTEF Nº 96/2007	Annex 1 - AUTEF_2007_Poty.pdf
13	Financial Statements	CKBV 2002.pdf CKBV 2003.pdf CKBV 2005.pdf CKBV 2006.pdf
14	PROTOCOLO PMFS: 02018.001939/00-29 Correção de área referente a reformulação da PMFS _ AMF rio capim, S. Romualdo, Cauaxi, sumal e Poty. 07 Jul 2006.	Annex 3 - IBAMA Protocol (request to exclude area).pdf
15	Protocolo Complemento do POA Rio Capim. 29 Jun 2007	Annex 4 - 29-6-2007 amendment to 2007 AOP.pdf
16	PLANO DE PREVENÇÃO DE COMBATE A INCÊNDIOS FLORESTAIS. Leonardo Pedrosa.	Annex 5 - Fire Fighting Plan.doc
17	Resumo Plano de Negócios	Annex 11 - Business Plan.pdf

18	QUANTIFICAÇÃO DE RESÍDUOS DE EXPLORAÇÃO E DE ÁRVORES DE QUEDA NATURAL EM FLORESTAS MANEJADAS NA AMAZÔNIA: O caso Cikel Brasil Verde Madeiras Ltda. Paulo Luiz Contente de Barros Sueo Numazawa,Denes de Souza Barros, Josué Evandro Ribeiro Ferreira. 2007.	Annex 15 - Residue Study.doc
19	Stakeholder Comment	Annex 20 - Stakeholder Comments
20	Photos from Public Consult hold on Communities and municipality	Project Proponent Archive
21	Public Consult Questionnaire and Assessment Report Karen Anjos.	Printed Materials
22	FSC Certification	Annex 6 - FSC Certifications.pdf
23	FSC Reportes Certification	Printed Materials
24	Updated Forest Biomass Inventory Results for Rio Capim property, Cikel, REDD project areas, Paragominas, Para, Brazil. David Shoch, Lucas J.M. Freitas, Evandro Ferreira. November, 2011.	Annex 13 - Forest Biomass Inventory Results for CIKEL.pdf
25	PD v 01 – February 2012	PDD APD CIKEL 27Feb2012 version post-visit.pd
26	Investment Analysis - January 2012	FINAL investment analysis CIKEL APD 12Jan2012.xlsx
27	Investment Analysis - February 2012	FINAL investment analysis CIKEL APD Feb2012 post-visit.xlsx
28	CIKEL APD analysis – January 2012	CIKEL APD analysis 12Jan2012.xlsx
29	CIKEL APD analysis - February 2012	CIKEL APD analysis Feb2012 post-visit.xlsx
30	NON-PERMANENCE RISK REPORT - February 2012	NON-PERMANENCE RISK REPORT - version post-visit.pdf
31	CIKEL APD Non-permanent Risk Analysis – January 2012	FINAL CIKEL APD Non-permanent Risk Analysis 12Jan2012.xlsx
32	CIKEL APD Non-permanence Risk Analysis - February 2012	FINAL CIKEL APD Non-permanence Risk Analysis Feb2012.xlsx
33	Relatório de Ações do Inventário de Biomassa Florestal para a propriedade Rio Capim, CIKEL, áreas do projetoREDD, Paragominas,Pará, Brasil. Evandro Ferreira, Lucas José Mazzei de Freitas, Fernanda Bortolotto. February 2012.	Relatório ações do Inventário de biomassa florestal no CRC_15-fev-2012.pdf
34	Annex 1_Field sheet Photos of Relatório de Ações do	Geoflor.JPG Paragogeo.JPG

	Inventário de Biomassa Florestal para a propriedade Rio Capim, CIKEL, áreas do projetoREDD, Paragominas,Pará, Brasil. Evandro Ferreira, Lucas José Mazzei de Freitas, Fernanda Bortolotto. February 2012.	UPA 4.JPG UPA 5.JPG UPA 6.JPG UPA 7.JPG UPA 11.JPG UPA 13.JPG
35	Annex 2_Inventory Plot Relation of Relatório de Ações do Inventário de Biomassa Florestal para a propriedade Rio Capim, CIKEL, áreas do projetoREDD, Paragominas,Pará, Brasil. Evandro Ferreira, Lucas José Mazzei de Freitas, Fernanda Bortolotto. February 2012.	Anexo 2_Relação parcelas.xls
36	Annex 3_ Rio Capim Inventory Analysis of Relatório de Ações do Inventário de Biomassa Florestal para a propriedade Rio Capim, CIKEL, áreas do projetoREDD, Paragominas,Pará, Brasil. Evandro Ferreira, Lucas José Mazzei de Freitas, Fernanda Bortolotto. February 2012.	Anexo 3_Rio Capim inventory analysis_i_arbre.xls
37	Annex 5_ Monitoring Plots of Relatório de Ações do Inventário de Biomassa Florestal para a propriedade Rio Capim, CIKEL, áreas do projetoREDD, Paragominas,Pará, Brasil. Evandro Ferreira, Lucas José Mazzei de Freitas, Fernanda Bortolotto. February 2012.	Anexo 5_Parcelas para monitoramento (2).xls
38	Annex 4_Inventory Plots Map of Relatório de Ações do Inventário de Biomassa Florestal para a propriedade Rio Capim, CIKEL, áreas do projetoREDD, Paragominas,Pará, Brasil. Evandro Ferreira, Lucas José Mazzei de Freitas, Fernanda Bortolotto. February 2012.	Anexo 4 _Mapa 04 Ambientes - 152 Parcelas_A0_NOVO_sem_HA.jpg
39	Neighboring Communities Survey. Elaborated by Cikel,	Neighboring Communities Survey.pdf
40	Sustainable Forest Management Plan. February 2011	PMFS.pdf Annex 17 - Copy of 2011 forest management plan
41	Relatório de caracterização das propriedades localizadas no entorno do Complexo Rio	Printed Material

	Capim. CKBV Florestal Ltda – Responsabilidade Socioambiental. 28/11/2011.	
42	Relatório de caracterização das famílias residents na fazenda Jaguará. CKBV Florestal Ltda – Responsabilidade Socioambiental. 02/12/2011.	Printed Material
43	KML maps of the project area	Area_Projeto_RED_gcs.kml RC_complex_gcs.kml
44	Official Letter to SEMA with 100 year longevity commitment	Printed Material
45	Report sent to SEMA about extreme weather events in 2011	Relatório de Validação FAVC - Tempestades verticais.pdf
46	Mapa 152 parcelas permanentes ambientes complexo Rio Capim	Mapa 04 Ambientes - 152 Parcelas_VERSÃO02.jpg
47	Area_aberta_2006 (10,091.80 ha)	Layer map
48	Exclusão_2006_efetivo_supres. (27,934.48 ha)	Layer map
49	"RELATORIOS DE ATIVIDADES DO POA" 2000 to 2006	22 ITOSMA_ExploraçãoResíduos.pdf; 23 ITOSMA_AvaliaçãoMonitoramentoDanosFlora_RC.pdf; Arraste_dig.xls
50	Monitoramente POA 2010	Printed Material
51	Wood exportation 2002-2006	CKBV 2002.pdf CKBV 2003.pdf CKBV 2004.pdf CKBV 2005.pdf CKBV 2006.pdf
52	Production information from 2001-2006	Finantial Statements CKBV 2001 2006.xls
53	Historical operation cost	Custos de Produção 2003.xls

3.4 Interviews

The following is a list of the people interviewed as part of the audit. The interviewees included those people directly, and in some cases indirectly, involved and/or affected by the project activities.

Audit Date	Name	Title
19 – 23 Nov 11/ 09-10 Feb 12	Fernanda Bortolotto	Technical support of field and PDD development - 33 Forest Capital Team
19 – 23 Nov 11	Fernando Augusto Pinto	Field activities planning - 33 Forest Capital Team
19 – 23 Nov 11/ 09-10 Feb 12	Josué Evandro Ribeiro Ferreira	Forest Area Responsible - CKVB Florestal Team
19 – 23 Nov 11/ 10 Feb 12	Lucas Mazzei	Selection of strata, selection of the allometric equation and inventory quality control - Embrapa Amazônia Oriental
20-23 Nov 11/ 09-10 Feb 12	Ivana Cepon	General Manager of the REDD-VCS Project - 33 Forest Capital Team
20-23 Nov 11/ 09-10 Feb 12	Francy Rosy Nava de Oliveira Souza	Coordinator of the REDD/VCS Project - CKVB Florestal Team
20-23 Nov 11/ 09-10 Feb 12	Karen Juliana dos Anjos	Responsible by the social responsibility – coordination of the public consult and divulgation of

		the REDD project - CKVB Florestal Team
20-23 Nov 11/ 09-10 Feb 12	Aparecida Calixto Pereira Denadai (Cida)	General Director of the REDD Project - project - CKVB Florestal Team
20-23 Nov 11	Raimundo Nonato Jesus dos Santos	Responsible by the implementation and monitoring of the permanent plots, monitoring of the SMFLIL and fauna - CKVB Florestal Team
20-23 Nov 11	Joaquim Gomes da Silva Neto	Main Permanent Plots Team - CKVB Florestal Team
20-23 Nov 11	João Batista Rodrigues	Main Permanent Plots Team - CKVB Florestal Team
09-10 Feb 12	Eliane Assunção	Responsible by Geoprocessing - CKVB Florestal Team
09-10 Feb 12	Manoel Pereira Dias	Responsible by the business of the group - CKVB Florestal Team
09-10 Feb 12	Damião Pereira Dias	Responsible by the business of the group - CKVB Florestal Team
09-10 Feb 12	Flávio de Souza Batistel	Participation in the financial analysis of the additionality of the REDD Project - CKVB Florestal Team
09-10 Feb 12	Rodrigo Augusto Sousa	Responsible by the legal analysis of the REDD Project - CKVB Florestal Team
09 Feb 12	Jenny Sayaka Komatsu	Technical coordination of the development of baseline and additionality sections - 33 Forest Capital Team
09 Feb 12	David Shoch	Technical Director of the PDD - Terra Carbon LLC Team
09-10 Feb 12	Leonardo Nobrega Pedrosa	Responsible by the Work Safety in the Project area - CKVB Florestal Team

APPENDIX A: Field Audit Findings

Note: Findings presented in this section are specific to the findings resulting from the field audit as presented in the Draft Audit Report. Any non-conformances or observations identified during the field audit are noted in this section, and specific NCR and OBS tables are included in section 2 of this report for each identified non-conformance and observations. All findings related to audit team review of additional evidence submitted by the Project Proponent following the issuance of the Draft Audit Report by Rainforest Alliance, is included within section 2 of this report.

1 Project Design

1.1 VCS Standard Section 3.19.1: Project description

The project shall include at a minimum all requirements outlined in section 3.19.2 of the VCS Standard. Additionally, section 3.19 of the VCS Standard notes that project and its context shall be described in the project description using the VCS Project Description template (or approved GHG program description template where the project is requesting registration under an approved GHG program).

Findings from Field Audit			
The project uses the updated version of the VCS Project Description template (VCS Version 3) and includes requirements outlined in section 3.19.2 of the VCS Standard.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

1.2 VCS AFOLU Requirements Section 4.2: Eligible AFOLU project type

The project is an eligible AFOLU project type, as per the guidance set out in the VCS AFOLU Requirements Section 4.2. Note project types can be combined as outlined in the AFOLU Requirements.

Findings from Field Audit			
The proposed project is classified under the VCS program as a Reducing Emissions from Deforestation and Degradation (REDD) project, and the activity type is Avoiding Planned Deforestation (APD). Document review and interviews with CKBV staff with high leadership positions were conducted by the audit team. The follow documents were analysed: Suppression Plan, Financial Statement from 2002 to 2006, Authorization of Forest Exploitation (AUTFE) Nº 96/2007, Business Plan, Brazilian Institute of Environment and Renewable Resources – IBAMA Protocol that request the exclusion of 48.811.814 ha from their Sustainable Forest Management Plan - PMFS (Ref. 11,13,12,33,14 respectively). Based on documents reviewed, interviews and observations during the field visit, the audit team has found that the project meets the requisites set by AFOLU Requirement 4.2.9 specific for REDD Project – APD.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

1.3 VCS AFOLU Requirements Section 3.1.3: Identification of Project Proponent

Where an implementation partner is acting in partnership with the project proponent, the implementation partner shall be identified in the project description. The implementation partner shall identify its roles and responsibilities with respect to the project, including but not limited to, implementation, management and monitoring of the project, over the project crediting period.

Findings from Field Audit			
In Sections 1.3, 1.4, Appendix I and II of the PD v. 01 it is clearly identified that CKVB Florestal Ltda is the project proponent and which other organizations are involved in the project, included their roles and responsibilities. During the audit, the audit team was able to confirm the information described in the PD by interviewing representatives of the project proponent and the 33 Forest Capital partner organization.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

1.4 VCS Standard Section 3.8.3 - 3.8.5 and VCS AFOLU Requirements Section 3.2.1: Project start date

Project shall include a project start date in conformance with section 3.8.3 – 3.8.5 of the VCS Standard, where specific requirements for AFOLU projects are outlined. As set out in the *VCS Standard*, the project start date of an AFOLU project shall be the date on which activities that lead to the generation of GHG emission reductions or removals are implemented. Such activities may include preparing land for seeding, planting, changing agricultural or forestry practices, or implementing management or protection plans.

Findings from Field Audit
In section 1.5 of the PD v. 01 it is stated; 'The project start date is July 19, 2007, which is the date of issuance of the Authorization of Forest Exploitation – AUTFE (Ref. 12) in the project area'. Throughout this section the project justifies this date

and points to documents that support the project start date selected. During the audit these documents were reviewed and the auditors interviewed persons involved in the project to confirm the accuracy of the information in the revised documents. The audit team found that information gathered is sufficient to demonstrate the start of project activities, and appropriateness of the project start date.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

1.5 VCS Standard Section 3.9 and VCS AFOLU Requirements Section 3.3: Project crediting period

Project shall include a project crediting period in conformance with section 3.9 of the VCS Standard. In general, for all AFOLU projects (ALM projects are an exception to this requirement) a crediting period of 20-100 years shall be used. The earliest project crediting period start date for AFOLU projects shall be 1 January 2002. Renewal of project crediting period shall follow requirements outlined in section 3.9.5 of the VCS Standard.

The project crediting period rules are set out in the *VCS Standard*. Projects shall have a credible and robust plan for managing and implementing the project over the project crediting period. For ARR or IFM extension of rotation age or low-productive to high-productive projects with harvesting, the length of the project crediting period shall be set to include at least one complete harvest/cutting cycle. In the case of selectively cut IFM projects, where trees are individually selected for harvest, the harvest/cutting cycle is the allowable re-entry period into the harvest area as determined by legal and regulatory requirements, and common practice.

Findings from Field Audit			
In section 1.6 of the PD v. 01 it states that the project has a crediting period of 20 years and the start date of the crediting period is July 19 2007 which is in accordance with VCS Standard Requirement.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

1.6 VCS Standard Section 3.11 and VCS AFOLU Requirements Section 3.4: Project location

Project location shall follow requirements outlined in section 3.11 of the VCS Standard and 3.4 of the VCS AFOLU Requirements. Project location for AFOLU projects shall be specified using geodetic polygons to delineate the geographic area of each AFOLU project activity and provided in a KML file.

Findings from Field Audit			
Section 1.9 of the PD v.01 shows a map of the project area (Figure 1.5); presents GPS coordinates of the project area (table 1.7); includes a map with the polygons of the project area with their respectively size (Figure 1.6) and the GPS coordinates of the polygons of the project area (Table 1.8). During the audit the project proponent provided to the audit team the required KML files. In addition the CKBV staff responsible for the geoprocessing were interviewed and retraced parts of the maps in the presence of the audit team.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

1.7 VCS AFOLU Requirements Section 3.1.2: Compliance with applicable laws and regulations

Implementation of the project activities shall not lead to the violation of any applicable law, regardless of whether or not the law is enforced.

Findings from Field Audit
At the time of validation, the total project area is certified by Forest Stewardship Council - FSC (see FSC certification framework on PD v. 01 – Section 1.9 pg. 11-12). During the audit it was checked that their FSC certification status is active. According to the FSC Standard CKBV at RCC must follow national and state regulations and laws related to forest management. In section 1.11 of the PD v.01, the project lists (table 1.9) applicable laws to forest management activities and describes their compliance. However this list does not mention any labor regulations or laws. The audit team reviewed the last FSC audit report issued in August 26, 2011 and found some non-conformances connected with labor law and NR-31. The audit team checked this information with FSC auditors and confirmed that the non- conformances raised in the FSC report are not critical and that CKBV is committed to resolve these issues before the next FSC Monitoring Assessment schedule from October 01 to 05, 2012, which the FSC audit team will evaluate if CKBV took adequate corrective action to address the findings raised in the FSC report. Considering that the non -conformances connected with labor law and NR-31 were considered minor by the FSC audit team and for this reason they FSC certification status is active, CKBV is committed to resolve these issue and all these points will be evaluated continually by FSC certification, the verification audit team confirmed that this issue is not relevant to project validation. However, whether CKBV does not take effective action to address this and consequently in the next FSC report. Non-conformances connected with labor law and NR-31 become major and compromise FSC certification or new critical points appear along of the project life time, it may become relevant for the further verifications.

Furthermore, CKBV juridical staff was interviewed and the audit team gathered enough information to check that CKBV has a robust system to monitor the laws and regulations applicable to their activities. Note that at the time of the validation process, there was not in the Brazilian or International political context, a REDD+ regulatory regime applicable to the proposed project. **OBS 01/12**.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	**OBS 01/12**		

1.8 VCS Standard Section 3.12.1: Right of use

Project description shall be accompanied by right of use as outlined in section 3.12.1 of the VCS Standard.

Findings from Field Audit			
Section 1.12 of the PD v.01 states that ownership of the project area is composed by the five proprietary (Rio Capim, Sumal, Poty, Cauaxi, São Romoaldo/Caculé) companies belonging to CKBV group. The legal title of each property is presented in table 1.10. During the field audit, all the documents requested were made available to the audit team. For all the areas that are not belong to project proponent, CKBV has the legal right to forest management (since May 2000) and the corresponding title of the carbon credits generating from the project activity. These documents (Ref. 09, 10) were analyzed by the audit team, who has found that they conform to VCS AFOLU Requirements 3.1.2.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

1.9 VCS Standard Sections 3.12.2 – 3.12.10 and VCS AFOLU Requirements Section 3.5: Linkage to other GHG programs and trading schemes

For those projects previously or currently involved in other GHG program or emission trading schemes, the project shall document how it meets the requirements of the VCS Standard Sections 3.12.2 thru 3.12.10 and VCS AFOLU Requirements Section 3.5.

Findings from Field Audit			
Section 1.12.2 of the PD v. 01 states 'Brazil is a non-Annex I country under Kyoto Protocol and does not have any GHG reduction commitments under the Convention. Moreover, CKBV does not have any project related to carbon credit generation under the CDM or other regulatory scheme within the project area .As for REDD project, just VCS and CCB are applicable to Brazil at the validation time, the audit team confirmed accessing CCB website that CKBV is not previously or currently involved in other GHG program. Furthermore, the audit team confirmed by interview this information during the audit with the project proponent.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

1.10 VCS AFOLU Requirements Sections 3.1.6 and 3.1.10: Project activities on peatlands

Where ARR, ALM, IFM or REDD project activities take place on peatland, the project shall adhere to both the respective project category requirements and the PRC requirements, unless the expected emissions from the soil organic carbon pool or change in the soil organic carbon pool in the project scenario is deemed below *de minimis* as set out in Section 4.3.3, in which case the project shall not be subject to the PRC requirements.

Findings from Field Audit			
During the field audit the project area was visited by the audit team and confirmed that the project activity is not taking place on peatlands			
Conformance	Yes ☐	No ☐	N/A ☒ .
NCR/OBS	Not applicable.		

1.11 VCS Standard Section 3.2 and VCS AFOLU Requirements Section 3.1.7: Multiple project activities

Projects may include multiple project activities where the methodology applied to the project allows more than one project activity and/or where projects apply more than one methodology. Such projects shall comply with the respective project requirements of each included AFOLU category. For example, projects that combine agroforestry or enrichment planting with community forestry in a single project where farmers integrate these activities within a single landscape shall follow an ARR methodology for planting activities and an IFM methodology for community forestry activities (except where the activities have been combined in a single methodology). For each activity covered by a different methodology, the geographic extent of the area to which the methodology is applied shall be clearly delineated. Where more than one methodology has been applied to a project with multiple project activities, the requirements outlined in Section 3.2 of the VCS Standard must be met.

Findings from Field Audit			
The project includes a single project activity and applies one methodology (VM0007 v.1.0).			
Conformance	Yes ☐	No ☐	N/A ☒

NCR/OBS	Not applicable.

1.12 VCS Standard Section 3.4 and VCS AFOLU Requirements Section 3.8: Grouped projects

Grouped projects are projects structured to allow the expansion of a project activity subsequent to project validation. Validation is based upon the initial project activity instances identified in the project description. The project description sets out the geographic areas within which new project activity instances may be developed and the eligibility criteria for their inclusion. New instances meeting these pre-established criteria may then be added to the project subsequent to project validation, as set out in the sections below. Section 3.4 of the VCS standard provides the requirements for all grouped projects, which are further expanded upon in VCS document AFOLU Requirements Section 3.8.

Findings from Field Audit			
The proposed project is not a grouped project.			
Conformance	Yes ☐	No ☐	N/A ☒
NCR/OBS	Not applicable.		

1.13 VCS Standard Section 3.19.3: Commercially sensitive information

All information in the project documents shall be presumed to be available for public review, though commercially sensitive information may be protected, as set out in VCS document *Registration and Issuance Process*, where it can be demonstrated that such information is commercially sensitive. The validation/verification body shall check that any information designated by the project proponent as commercially sensitive meets the VCS Program definition of commercially sensitive information. Information in the project documents related to the determination of the baseline scenario, demonstration of additionality, and estimation and monitoring of GHG emission reductions and removals shall not be considered to be commercially sensitive and shall be provided in the public versions of the project documents.

Findings from Field Audit			
In section 1.13 (Commercially Sensitive Information) of the PD v. 01 it states 'The following information was available for the validation process: Wood exportation 2002-2006, Suppression Plan and Livestock business plan; CKBV Business Goals Plan CKBV's Financial Statements and Historical operation cost and production information from 2001-2006'. These documents were identified as confidential, and are related to the project baseline and additionality they were used as supporting evidence. During the audit, all of these documents were available to audit team for verifying data used in the project design. Considering it, the audit team has found that the project attends VCS Standard requirement 3.19.3.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

2 Application of Methodology

2.1 VCS Standard Section 3.1: Use of approved methodology

Projects shall apply methodologies eligible under the VCS Program. Methodologies shall be applied in full, including the full application of any tools or modules referred to by a methodology.

Findings from Field Audit			
Section 2.1 of the PD v.01 states the project has implemented the approved VCS Methodology REDD Methodology framework: VM0007 REDD Methodology Module, REDD Methodology Framework (REDD-MF), version 1.0. The following modules of VM0007 and tools were used: CP-AB "VMD0001 Estimation of carbon stocks in the above- and belowground biomass in live tree and non-tree pools", version 1.0; CP-W "VMD0005 Estimation of carbon stocks in the long-term wood products pool", version 1.0; BL-PL "VMD0006 Estimation of baseline carbon stock changes and greenhouse gas emissions from planned deforestation", version 1.0; LK-ASP "VMD0009 Estimation of emissions from activity shifting for avoided planned deforestation", version 1.0; LK-ME "VMD0011 Estimation of emissions from market-effects", version 1.0.; M-MON "VMD0015 Methods for monitoring of greenhouse gas emissions and removals", version 2, from November 23, 2011 X -STR "VMD0016 Methods for stratification of the project area", version 1.0.; X-UNC "VMD0017 Estimation of uncertainty for REDD project activities", version 1.0. During the audit, the audit team reviewed the implementation of each step in the methodology with the project technical support staff and verified that the methodology and its corresponding tools and modules were full applied in properly manner.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

2.2 VCS Standard Section 3.5: Methodology deviations

Deviations from the methodology applied to the project are permitted where they represent a deviation from the criteria and procedures relating to monitoring or measurement (but not quantification) of GHG emission reductions or removals set out in the methodology. Deviations relating to any other part of the methodology shall not be permitted. Methodology deviations shall not negatively impact the conservativeness of the quantification of GHG emissions reductions or removals.

Methodology deviations shall be permitted at validation or verification and their consequences shall be reported in the validation or verification report, as applicable and all subsequent verification reports. Methodology deviations are not considered to be precedent setting.

Findings from Field Audit			
Section 2.1 of the PD states that no methodology deviations were made. During the field audit, the audit team reviewed the implementation of the methodology in full with project technical staff. During review of methodology implementation, the project was found to be in conformance with all the requirements of the methodology, and no deviations were identified.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

2.3 Conformance with methodology applicability conditions

The project shall demonstrate conformance with all methodology applicability conditions. A project cannot use a methodology unless it meets all applicability conditions. Any change in applicability conditions is considered a Methodology Revision and must be submitted for double approval under the VCS Methodology Approval Process.

Findings from Field Audit	
Applicability Condition	**Finding**
General conditions	
Land in the project area has qualified as forest at least 10 years before the project start date.	The project area complies with this condition as mentioned in Sections 1.9 and 1.10 of the PD v.01, with complete forest cover demonstrated through Landast images from 1997 and 2007 (see Figures 1.7 and 1.8).
The project area can include forested wetlands as long as they do not grow on peat. Peat shall be defined as organic soils with at least 65% organic matter and a minimum thickness of 50 cm^3. If the project area includes a forested wetlands growing on peat, the methodology is not applicable.	As set in Section 1.9 of the PD, the project area is classified as “terra firme” rainforest with limited areas of riparian/floodplain forest. None of these areas have a peat substrate, and instead are all growing on yellow latisol clay soils, "Latossolo Amarelo (Yellow Latossolo)." (see Figure 1.3 of the PD). Furthermore, the project area was visited by the audit team which confirmed that the project activity is not on peatlands.
Project proponents must be able to show control over the project area and ownership of carbon rights for the project area at the time of verification.	As shown in section 1.12, project proponent has the control of the project area and the ownership of the carbon credits. The original legal documents used as proof of titles and the right of use were reviewed by the audit team (Ref. 9 and 10).
Baseline deforestation and baseline forest degradation in the project area fall within one or more of the following categories: • Unplanned deforestation (VCS category AUDD); • Planned deforestation (VCS category APD); • Degradation through extraction of wood for fuel (fuelwood and charcoal production) (VCS category AUDD).	The project falls within the Planned Deforestation category (APD), as it is legally allowed according to the Brazilian Forest Law/Legislation, no 4771 of 1997, in its article 16, which allows the owner to suppress up to 20% of the total area for its economic use such as livestock or agricultural activities. The Suppression Plan and the Livestock Business Plan developed for the area were presented to the audit team, as well as other documents used to support the development of such plans (Ref. 11, 17 ,12, 13, 10, 9,15, 51, 52 and 53).
Baselines shall be renewed every 10 years after the start of the project except where triggers lead to a more frequent renewal.	As stated in Section 4.3 of the PD, the baseline will be renewed in July 2017.
All land areas registered under the CDM or under any other carbon trading scheme must be transparently reported and excluded from the project area. The exclusion of land in the project area from any other carbon trading scheme shall be monitored over time and reported in the monitoring reports.	According to Section 1.12.1 of the PD, project proponent does not have any project related to carbon credit generation under the CDM or other regulatory scheme within the project area.
If land is not being converted to an alternative use but will be	Forest clearing in the baseline is followed by establishment of

allowed to naturally regrowth, the methodology framework shall not be used.	pasture and initiation of livestock raising activities. Section 2.4 of the PD v.01 presents the Suppression Plan chronogram and the establishment of alternative land uses within the project area (see Table 2.4 and Figure 2.1 of the PD and Ref. 11).
Where post-deforestation land use constitutes reforestation the methodology framework shall not be used.	As stated above, post-deforestation land use in the project area is pasture for livestock grazing, not reforestation (see Table 2.4 and Figure 2.1 of the PD and Ref. 11).
Leakage avoidance activities shall not include: • Agricultural lands that are flooded to increase production (e.g. paddy rice); • Intensifying livestock production through use of "feed-lots" and/or manure lagoons.	The entire project area is covered by forest, with no other activity taking place other than reduced impact logging (FSC certified); hence leakage avoidance activities do not include flooding agricultural land or creating feed-lots or manure lagoons. This was confirmed by the audit team during the field visit and through interviews with project staff.
CP-AB	
Inclusion of the aboveground tree biomass pool as part of the project boundary is mandatory as per the framework module REDD-MF. Non-tree aboveground biomass must be included as part of the project boundary if the following applicability criteria are met (per framework module REDD-MF): • Stocks of non-tree aboveground biomass are greater in the baseline than in the project scenario, and; • Non-tree aboveground biomass is determined to be significant (using the T-SIG module).	The aboveground tree biomass pool was included in project (see Table 2.3 of the PD and Ref. 2). As state above, non-tree aboveground biomass are not greater in the baseline than in the project scenario, however was conservatively excluded.
CP-W	
This module is applicable to all cases where wood is harvested for conversion to wood products for commercial markets, for all forest types and age classes. This module is applicable in the baseline if the wood products pool is included as part of the project boundary as per applicability criteria in the framework module REDD-MF, specifically: • Timber harvest occurs prior to or in the process of deforestation, and where timber is destined for commercial markets; • The wood products pool is determined to be significant (using T-SIG).	As stated in the PD v.01, Table 2.3, the wood product carbon pool is included because wood harvest, and transfer of a portion of forest carbon to storage in long-lived wood products, takes place in the baseline (to a greater extent than via limited harvests in the with project case) (Ref. 11).
BL-PL	
The module is applicable for estimating the baseline emissions on forest lands that are legally authorized and documented to be converted to non-forest land.	According to Table 2.1 and Annex 3 of the PD v.01, the Brazilian Forest Law/Legislation, no 4771 of 1997, in its article 16, allows the owner to suppress up to 20% of the total area for its economic use such as livestock or agricultural activities. Rio Capim Complex had 197,811.95 ha in 2006 (prior to geo-referencing in 2008, which established legal recognition of an even larger property area of 209,130.54 ha), allowing legal deforestation of up to 39,562.39 ha. As 10,091.80 ha were already without forest at the time of acquisition of the property by Cikel Group, this left an area of 29,470.59 ha in 2006, which after excluding designated areas of permanent protection, results in an area of 27,934.48 ha that could be legally deforested (of which 27,434.9 ha, the project area, meet VCS REDD project eligibility criteria).

Where, pre-project, unsustainable fuelwood collection is occurring within the project boundaries modules BL-DFW and LK-DFW shall be used to determine potential leakage.	Table 2.1 of the PD states that no illegal fuelwood collection is expected to occur in the project area in the baseline or with-project case.
Where post-deforestation land use constitutes reforestation this module shall not be used.	As mentioned above, in accordance with the Suppression Plan, the Livestock Business Plan and their support documents revised by the audit team, the post-deforestation land use is not reforestation (Ref. 11, 17,13,51, 52 and 53
LK-ASP	
The module is applicable for estimating the leakage emissions due to activity shifting from forest lands that are legally authorized and documented to be converted to non-forest land. The module is mandatory if BL-PL has been used to define the baseline and the applicability criteria in BL-PL must be complied with in full. Under this situation, displacement of baseline activities can be controlled and measured directly by monitoring the baseline deforestation agents or class of agents. In countries with peatland and where the planned deforestation baseline land use is for a commodity that can be produced on drained peatland, the specific agent shall be identified.	As stated above, in accordance with the Brazilian Law, the project area is legally authorized and documented to be converted to non-forest land and the baseline was established according to the BL-PL module. The agent of deforestation is the project proponent, CKBV (see Section 2.4 of the PD). As stated above, no peatland is present within the project area (see Section 1.9 and Figure 1.3 of the PD). Furthermore, the project area was visited by the audit team and on-site observations confirmed that the project activity is not taking place on peatlands
LK-ME	
This module is applicable for calculating market-effects leakage from REDD projects that are anticipated to reduce levels of wood harvest substantially and permanently. When REDD project activities result in reductions in wood harvest, it is likely that production could shift to other areas of the country to compensate for the reduction. As referenced in the Framework (REDD-MF) the module is mandatory where: • The process of deforestation involves timber harvesting for commercial markets; • The baseline is calculated using BL-DFW AND fuel wood or charcoal is harvested for commercial markets	According to PD v.01, Section 2.4, and the Suppression Plan (Ref. 11), the project area would be clearcut, with wood from the area extracted for sawnwood and fuelwood markets.
M-MON	
The module is always mandatory. Without application of this module the methodology shall not be used. Where selective logging is taking place in the project case: • Emissions from logging may be omitted if it can be demonstrated the emissions are de minimis using T-SIG; • If emissions from logging are not omitted as de minimis, logging may only take place within forest management areas that possess and maintain a Forest Stewardship Council (FSC) certificate for the years when the selective logging occurs; • Logging operations may only conduct selective logging that maintains a land cover that meets the definition of forest within the project boundary; • All trees cut for timber extraction during logging operations must have a DBH greater than 30 cm;	The audit team verified that at the time of validation in 2012, the entire project area was under FSC certification. As detailed in Section 1.8 and 2.2 of the PD v.01, logging practices implemented are selective, low impact logging with a minimum DBH cut of 50 cm. Logging slash is not piled and burned in the with-project case (although some burning of woody debris would occur post suppression activities in the baseline). Harvested timber volumes are routinely measured and recorded in annual harvest reports. To ensure compliance with this applicability condition, the Poty area (377.4 ha), included in the Suppression Plan but where harvest took place during the project crediting period and prior to secure FSC certification, was removed from the final delineate project area.

• During logging operations, only the bole/log of the felled tree may be removed. The top/crown of the tree must remain within the forested area; • The logging practices cannot include the piling and/or burning of logging slash; • Volume of timber harvested must be measured and monitored.	
X-UNC	
The module is mandatory. It is applicable for estimating the uncertainty of estimates of emissions and removals of CO_2-e generated from REDD project activities. The module focuses on the following sources of uncertainty: • Determination of rates of deforestation and degradation; • Uncertainty associated with estimation of stocks in carbon pools and changes in carbon stocks; • Uncertainty in assessment of project emissions.	Uncertainties associated to rates of deforestation and degradation and project emissions were not estimated given that they were based on the Suppression Plan (Ref. 11) (See Sections 2.4 and 3.2 of the PD). Uncertainty associated with estimation of stocks in carbon pools and changes in carbon stocks was estimated in the 'baseline' worksheet of the spreadsheet 'CIKEL APD analysis Feb2012 post-visit (Ref. 29)' and reviewed by the audit team.

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

2.4 VCS Standard Section 3.13: Project boundary

The project boundary shall be described (using diagrams, as required) and GHG sources, sinks and reservoirs shall be identified and assessed in accordance with the methodology applied to the project. The project shall justify not selecting any relevant GHG source, sink and reservoirs.

Findings from Field Audit			
Project boundaries are defined in Section 2.3 of the PD v.01. GHG sources, sinks and reservoirs are indentified in Table 2.2 and their inclusion and/or exclusion were fairly justified.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

2.5 VCS AFOLU Requirements Section 4.3.1 and VCS AFOLU Requirements Sections 4.3.5 – 4.3.24 (Project type specific carbon pools): Relevant carbon pools

The relevant carbon pools for AFOLU project categories are aboveground tree biomass (or aboveground woody biomass in ARR and ALM projects), aboveground non-tree biomass (aboveground non-woody biomass in ARR and ALM projects), belowground biomass, litter, dead wood, soil (including peat) and wood products. Methodologies shall include the relevant carbon pools set out in Table 2 of Section 4.3.1 of the VCS AFOLU Requirements.

Specific carbon pools and GHG sources, including carbon pools and GHG sources that cause project and leakage emissions, may be deemed *de minimis* and do not have to be accounted for if together the omitted decrease in carbon stocks (in carbon pools) or increase in GHG emissions (from GHG sources) amounts to less than five percent of the total GHG benefit generated by the project. Additional information on *de minimis* carbon pools is available in section 4.3.3 of the AFOLU Requirements.

The VCS AFOLU Requirements contain project type specific requirements for all AFOLU project types, the following criteria shall be met for each project type:

- ARR: VCS AFOLU Requirement 4.3.7
- ALM: VCS AFOLU Requirements 4.3.8 – 4.3.11
- IFM: VCS AFOLU Requirements 4.3.12 – 4.3.15
- REDD: VCS AFOLU Requirements 4.3.16 – 4.3.17
- ACoGS: VCS AFOLU Requirements 4.3.18 – 4.3.21
- PRC: VCS AFOLU Requirements 4.3.22 – 4.3.24

Findings from Field Audit			
Relevant carbon pools are defined in Section 2.3 of the PD v.01. Their inclusion and/or exclusion were fairly justified (see Table 2.3) in accordance with the methodology carbon pools selection and the current VCS AFOLU requirements set for APD REDD activities with pasture grass as the land cover in the baseline scenario.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

2.6 VCS AFOLU Requirements Section 4.3.5 and 4.3.6: Non-CO_2 GHGs

Reductions of N_2O and/or CH_4 emissions are eligible for crediting if in the baseline scenario the project area would have been subject to livestock grazing, rice cultivation, burning and/or nitrogen fertilization. Reductions of CH_4 emissions are eligible for crediting if fire would have been used to clear the land in the baseline scenario.

Findings from Field Audit			
CH_4 emissions from biomass burning occurring exclusively under the baseline scenario were conservatively excluded (see Table 2.2 of the PD v.01). CH_4 and N_2O emissions from fossil fuel combustion are small and negligible. Emissions from the use of fertilizers are small and negligible for CH_4 and excluded for N_2O (no increase in fertilizer use is contemplated in the project case as part of leakage mitigation or any other activity).			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

3 Additionality and baseline selection

3.1 VCS AFOLU Requirements Section 4.5 and VCS Standard Section 3.14: Baseline scenario selection

The baseline scenario for the project shall be determined in accordance with the requirements set out in the methodology applied to the project, and the choice of baseline scenario shall be justified. Equivalence in type and level of activity of products or services provided by the project and the baseline scenario shall be demonstrated and, where appropriate, any significant differences between the project and the baseline scenario shall be explained. In developing the baseline scenario, assumptions, values and procedures shall be selected that help ensure that net GHG emission reductions and removals are not overestimated.

Findings from Field Audit	
Baseline Determination Step	**Findings**
STEP 1 of T-ADD. Identification of alternative land use scenarios to the AFOLU project activity.	For the selection of the most reasonable baseline scenario for the project, two baseline scenarios were identified: Alternative 1. Clearcut native forest with sale of wood and forest residues, and subsequent use of the opened area for livestock activity, according to the business plan. Details and assumptions for Alternative 1 are provided below. Alternative 2. Cancel Forest Suppression/Livestock Activity Plan and continue limited forest management.
STEP 2 of T-ADD. Investment analysis to determine that the proposed project activity is not the most economically or financially attractive of the identified land use scenarios. Barriers analysis of the T-ADD.	As presented in the PD, Section 2.5, and the spreadsheet 'FINAL investment analysis CIKEL APD Feb2012 post-visit'(Ref. 27) reviewed by the audit team, Alternative 1 is the most economically attractive scenario (see Table 2.8 and 2.10 of the PD v.01). According to the investment analysis concluded, the project activity (Alternative 2) is not attractive without the benefits of VCU's.
STEP 3 of T-DD. Barriers analysis.	Apart from the lack of financial attractiveness of the project scenario, the following barriers were also identified (see Table 2.16 of the PD): • The project is the first of its kind, and; • Institutional barrier related to the delay in the issuance of the Authorization for Forest Exploration (AUTFE) from the State Environmental Agency.
STEP 4 of T-ADD. Common practice analysis.	As stated in the PD, Section 2.5, cancellation of an approved permit to conduct suppression activities to clear land for productive use cannot be characterized as common practice in the region of the project. Further, as noticed by the audit team and in conformance with the arguments in PD, it is a by local

	experts that legal forest management activities in Brazil face several barriers and such activities are substantial less profitable that other land uses such as agriculture and grazing.
PART 1.1 of BL-PL. Identify the agent of planned deforestation in each baseline stratum *i.*	The agent of deforestation in all strata is the project proponent, CKBV (see Section 2.4 of the PD). This was confirmed by the audit team through review of the Suppression Plan (Ref. 11) and the Livestock business plan (Ref. 17).
PART 1.2 of BL-PL. For all instances of planned deforestation REDD projects, there must be an immediate site specific threat of deforestation. The threat must be concrete and would lead to deforestation within a defined period of time.	The Suppression Plan (Ref.11) and the Livestock business plan (Ref.17) developed for the area were presented to the audit team, as well as other documents used for development of such plans which represent an immediate site specific threat of deforestation (Ref. 52, 53, 51, 17, 44, 13, 43, 9, 10, 9, 12 and Section 2.4, Table 2.4 and Figure 2.1 of the PD v.01).
PART 1.3 of BL-PL. Where a valid verifiable plan exists for rate at which deforestation is projected to occur, this rate shall be used. If no verifiable plan exists, the rate shall be established by examining proxy areas.	As stated above, a valid verifiable plan was presented to the audit team and its deforestation rate was used (Ref. 11).

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

3.2 VCS Standard Section 3.15: Additionality

Additionality shall be demonstrated and assessed in accordance with the requirements set out in the methodology applied to the project.

Findings from Field Audit			
In conformance with the information stated above, since the selected baseline scenario is to clearcut native forest with sale of wood and forest residues, and subsequent use of the opened area for livestock activity, according to the business plan and the project scenario the cancelation of the Forest Suppression/Livestock Activity Plan and continuation of limited forest management, the proposed project activity clearly demonstrates additionality (see Section 2.5 of the PD).			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

4 Quantification of GHG emissions

4.1 VCS Standard Section 3.16: Quantification of GHG emission reductions and removals

GHG emissions and/or removals shall be estimated for each GHG source, sink and/or reservoir relevant for the project (including leakage) and the baseline scenario.

Findings from Field Audit			
As stated in the PD, Section 3, emissions are calculated for aboveground biomass, belowground biomass, and harvested wood products. GHG emissions from the baseline and project scenarios, as well as emissions from leakage are calculated in the excel spreadsheet titled 'CIKEL APD analysis Feb2012 post-visit' (Ref. 27). See section 5 below for findings relevant to leakage calculations. Table 2.3 of the PD v.01 presents justifications for the inclusion and exclusion of carbon pools under the project context. The audit team's field visit to the project area and review of the Suppression Plan (Ref. 11) for deforestation calculations confirmed that GHG emission reductions and removals are in conformance with VM0007 v.1.0 through the revision of the calculation spreadsheet.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

4.2 VCS AFOLU Requirements Section 3.1.1: Data requirements

As set out in the *VCS Standard*, standards and factors used to derive GHG emissions data as well as any supporting data for establishing baseline scenarios and demonstrating additionality shall be publicly available and derived from a reputable and recognized source, such as *IPCC 2006 Guidelines for National GHG Inventories or the IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry*.

Findings from Field Audit

Equations used for the calculation of carbon stocks are presented in the spreadsheet titled 'CIKEL APD analysis Feb2012 post-visit'. This spreadsheet includes all calculations of baseline scenario carbon stocks and emissions, project scenario emissions, baseline deforestation area calculations, leakage calculations, and total VCU calculations.

In order to select and validate a biomass equation to estimate the carbon stocks in the project area, five peer-reviewed volumetric equations were tested (Higuchi et al.,1998; Araujo et al., 1999; Chambers et al., 2001; Chave et al., 2005; Nogueira et al., 2008). The results from each equation were compared to CKBV's volumetric equation (RCC), that resulted from the destructive measurement of 1106 individuals with diameter at breast height (DBH) greater than or equal 50 cm (up to 156 cm) from CIKEL's area (the RCC equation report was reviewed by the audit team). The equation developed by Higuchi et al. (1998) proved to be best choice to estimate carbon stocks in the project area, presenting the lowest error results (see 'Forest Biomass Inventory Results for CIKEL' document – Ref. 24).

During the field audit in November 2011, the inventory plot maps presented to audit team (Ref. 3, 6) did not represented fairly the permanent sample plot (PSP) used for the biomass estimation in Rio Capim Complex area. These maps (Ref. 3, 6) had more sampling plots than it should had, since it also included PSP used for harvest monitoring. In this way, it was not clear to the audit team which PSPs were part of the project biomass estimation. As a result, several plots that were not part of the REDD project were re-measured by the audit team (P12 REDD/P14 CIKEL and P11/REDD13, at UPA 9). Furthermore, PSPs were not fully georeferenced and the traceability of inventory data was compromised. The data from PSP in the maps (Ref, 3, 6); biomass inventory field sheets (Ref. 2) and Forest Biomass Inventory Results for Rio Capim property (Ref. 5) did not match. The data in the field sheets were not standardized, since some of them were in CAP and others in DAP, further were not clear whether they were in cm or mm. Finally, part of the inventory data was systematized and stored in excel files, witch does not ensure suitably quality control of the transfer of the data from field sheets to excel files. **NCR 01/12**

However, part of the inventory date was stored in the Software MFT - Monitoring Tropical Forest (Ref. 01), a robust program with a high data quality control, since it provides specific tools for debugging and correction of the data entered in the software. The MFT checks and reports any error occurred in the typing process. Moreover, it analyzed each tree measurement entered in the program based in the margins value established for each tree species. Once an error is detected, the original field sheets are revised and if necessary a field check occurs.

As the audit team re-measured inventory plots (GEO_5_2011; PARA_5_11; PARA_3_2011; 2002_13_2003; 2003_3_2004; 2003_23_2004; 2008_13_2008; 2008_1_2008; 2008_7_2008; PARA_14_2011 and PARA_2_2011) some of the parcels were found not to follow the orientation described in the first version of the document 'Forest Biomass Inventory Results for CIKEL' presented to the audit team. Additionally, the field procedures used to measure the inclined trees was found to be inaccurate, as diameters measurements were not parallel to the trunk of the tree. As such the procedures defined by the Project Proponent were not fully implemented. However, as the measurement procedures used did not overestimate the biomass stock, but rather underestimate biomass stocks, the audit team found these findings did not represent a material nonconformance for the validation audit, but should be addressed prior furthers inventories. **OBS 02/12**

Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	**NCR 01/12** **OBS 02/12**		

4.3 VCS AFOLU Requirements Section 4.5: Calculation of emissions in the baseline scenario (ex-ante estimate)

Methodologies shall establish procedures to quantify the GHG emissions or removals for the project and baseline scenario. *The IPCC 2006 Guidelines for National GHG Inventories* or the *IPCC 2003 Good Practice Guidance for Land Use, Land-Use Change and Forestry* 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.

Section 4.5.3 of the AFOLU Guidance includes specific requirements for the quantification of carbon stocks in belowground, dead wood, soil carbon, and wood products pools. Projects shall follow methodological guidance for the estimation of carbon stock change all required and selected SSRs.

Findings from Field Audit
During the field audit, the audit team reviewed all GHG calculations with the staff responsible for GHG calculations. Below is a review of the findings from the interviews in relation to the emission calculations from the baseline scenario. As stated above the emissions from the baseline scenario followed the BL-PL module. The emissions were calculated in the worksheet 'Baseline' of the spreadsheet titled 'CIKEL APD analysis 12Jan2012' (Ref. 28) in accordance with the Suppression Plan developed by CKBV. Hence, the deforestation rate used was a direct result from the areas to be suppressed each year

according to the developed plan.

As states in the PD, Section 3.1, and explained previously, deforestation is legal permissibility, as the Brazilian Forest Law/Legislation, no 4771 of 1965, in its article 16, allows the owner to suppress up to 20% of the total area for its economic use such as livestock or agricultural activities. RCC, in 2006 had 197,811.95 ha (prior to geo-referencing in 2008, which established legal recognition of an even larger property area of 209,130.54 ha), allowing legal deforestation of up to 39,562.39 ha. As 10,091.80 ha were already without forest at the time of acquisition of the property by CKBV, this left an area of 29.470,59 ha in 2006, which after excluding designated areas of permanent protection, results in an area of 27,934.48 ha that could be legally deforested (of which 27,434.9 ha the project area, meet VCS REDD project eligibility criteria).

The carbon removals from forest compensation (9,427 ha) of the Suppression Plan (Ref. 11), required by Law, was calculated based on an increment of 4.2 m^3 ha^{-1}, for a mix of native commercial species. A BCEF conservative factor of 4 was applied and the carbon faction considered was 0.47 (both values suggested by IPCC, 2006). The belowground biomass was estimated according to the equation developed by Cairns et al. (1997). The total amount of carbon reductions estimated for the compensation activity was 1,491,269 t CO_2-e for the first 10-years period, which was discounted from the baseline scenario (see worksheet 'compensation' in the 'CIKEL APD analysis Feb2012 post-visit' file – Ref. 29)

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

4.4 Calculation of emissions reductions or avoided emissions due to the project (ex-ante estimate)

Findings from Field Audit

As noted in 4.3 above, the audit team reviewed all GHG calculations with the staff responsible for the completed calculations. Project area ex ante estimates include projected areas that were logged from 2008 (see worksheet "w proj ex ante" in the 'CIKEL APD analysis Feb2012 post-visit' file – Ref. 29). In this worksheet, project exploited area per year was based on the M-MON v.2.0 module. The estimated volume of sawlogs exctracted per unit area was 18.34 m^3 ha^{-1} (Average from CIKEL logging reports "RELATORIOS DE ATIVIDADES DO POA" 2000 to 2006 – Ref. 49) and the estimated volume of residues extracted per unit area was 67.665 m^3 ha^{-1} (study from the Rural Federal University of Amazônia – Ref. 18). The values used for L_{SKID}, W_{SKID}, A_{ROAD}, and A_{DECKS} were averages from sample CIKEL logging reports "RELATORIOS DE ATIVIDADES DO POA -– Ref. 49) " from the project area. All the values were reviewed by the audit team. The total emission from forest management activity within the project area from 2008 to 2017 was estimated to be 1,101,266 t CO_2-e.

Carbon stocks within the 3 strata of the project area are calculated using the forest inventory (see findings related to forest inventory issues above). Aboveground biomass is then calculated using a Higuchi et al. (1998) equation. Wood density values used were from the Brazilian government research institution EMBRAPA's database (see Section 3.1 of the PD v.01). Belowground biomass is calculated using the equation proposed by Cairns et al. (1997) which was verified during the field audit. Total aboveground and belowground biomass is then calculated by multiplying the per area stock by the individual stratum area. The calculations were found to be in conformance with CP-AB.

The carbon stocks for the forest type within the project area presented were properly estimated in compliance with X-UNC module :

Forest type	Ha	Mean ABGB (t C/ha)	95% C.I.	95% C.I. as % of mean
FOD	20064,8	175,5	9,9	6%
FS	7747,3	100,1	56,4	56%
APP	0,2	119,2	56,5	47%
			$Uncertainty_{BSL,SS}$	11,2%

Calculation of carbon stored in harvested wood products was reviewed during the field audit. The project used equations and default values as required per CP-W. Specifically, in the worksheet titled 'wood product' in the spreadsheet 'CIKEL APD analysis Feb2012 post-visit – Ref. 29', the required equations from CP-W are used. The use of these equations was reviewed by the audit team and found to be in conformance with CP-W requirements.

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

4.5 Calculation of emissions from project activities (ex-ante estimate)

Findings from Field Audit			
As explained above (section 4.3) the emissions from logging activities from 2008 to 2017 were estimated in worksheet “w proj ex ante” in the ‘CIKEL APD analysis Feb2012 post-visit’- Ref. 29’ file, in accordance with the M-MON v.2.0 module. PD v.01, Section 3.2 states that the analysis conservatively assumed that all stocks are emitted from within skid trails (rather than limiting emissions to only stocks below a threshold diameter). Estimation of carbon stocks retained in long-lived wood products was limited to volumes of sawlogs (not residues that will be converted to charcoal and emitted). Other emissions from project activities are considered to be insignificant and as such are excluded from ex ante projections.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

4.6 VCS AFOLU Requirements Sections 3.1.8 and 4.5.4: ARR and IFM Long-term average calculation

ARR or IFM projects with harvesting activities shall not be issued GHG credits above the long-term average GHG benefit maintained by the project. The long-term average GHG benefit shall be calculated as set out in Section 4.5.3 of the VCS AFOLU Requirements.

Findings from Field Audit			
Within the project area harvesting is planned within the project scenario. All volume removed will be tracked and counted as a loss in the project calculations in accordance with M-MON v.2.0 module. LTA is not applicable for REDD projects, however the auditors note that harvesting is being accurately counted in ex ante estimates and should be confirmed in all future verifications.			
Conformance	Yes ☐	No ☐	N/A ☒
NCR/OBS	Not Applicable.		

4.7 The assumptions made for estimating GHG emission reductions and/or removals

Findings from Field Audit			
As explained above (section 4.3), the following assumptions were made: • The estimated sawlogs volume exctracted per unit area was 18.34 m^3 ha^{-1} (Average from CIKEL logging reports "RELATORIOS DE ATIVIDADES DO POA" 2000 to 2006 – Ref 49) and; • The estimated volume of residues extracted per unit area was 67.665 m^3 ha^{-1} (study from the Rural Federal University of Amazônia – Ref. 18). • The deforestation rate used was a direct result from the areas to be suppressed each year according to the developed Suppression Plan (Ref. 11). Apart from these assumptions, the values for used for L_{SKID}, W_{SKID}, A_{ROAD}, and A_{DECKS} were averages from sample CIKEL logging reports "RELATORIOS DE ATIVIDADES DO POA – Ref 49" from the project area. All the values were reviewed by the audit team.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

5 Leakage

5.1 VCS AFOLU Requirements Section 3.6.1: Identification of leakage

The potential for leakage shall be identified, and projects are encouraged to include leakage management zones as part of the overall project design. Leakage management zones can minimize the displacement of land use activities to areas outside the project area by maintaining the production of goods and services, such as agricultural products, within areas under the control of the project proponent or by addressing the socio-economic factors that drive land use change.

Leakage that is determined, in accordance with Section 4.3.3, to be below *de minimis* (ie, 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 *Tool for testing significance of GHG Emissions in A/R CDM Project Activities*.

Findings from Field Audit
The agent of deforestation is the project proponent, CKBV (see Section 2.4 of the PD v.01) and as a result, the project proponent states in the Section 3.3 of the PD v.01 that only two sources of leakage were considered: activity shifting and market leakage (see Item 5.3 below).

Activity-shifting leakage was treated by applying module LK-ASP. Option 1.2 from LK-ASP was used, where baseline annual deforestation by the deforestation agent (CKBV), is based on historic deforestation average over the period 5 years prior to project start (from 2002 to 2007). Since CKBV had not undertaken any forest conversion activities during this period, the annual baseline deforestation rate (parameter $WoPR_{i,t}$) was set to the planned baseline deforestation rate for the project. As no deforestation activities are expected by the baseline agent, nor are any non-CO_2 greenhouse gas emissions from fertilizer use or biomass burning, activity-shifting leakage is projected ex ante to be zero.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

5.2 VCS AFOLU Requirements Section 3.6.2: Leakage mitigation

Activities to mitigate leakage and sustainably reduce deforestation and/or degradation are encouraged and may include the establishment of agricultural intensification practices, lengthened fallow periods, agroforestry and fast-growing woodlots on degraded land, forest under-story farming, ecotourism and other sustainable livelihood activities, and/or sustainable production of non-timber forest products. Leakage mitigation activities may be supplemented by providing economic opportunities for local communities that encourage forest protection, such as employment as protected-area guards, training in sustainable forest use or assisting communities in securing markets for sustainable forest products, such as rattan, vanilla, cacao, coffee and natural medicines.

Findings from Field Audit			
As state above, and in accordance with Section 3.3 of the PD v.01, since no deforestation activities are expected by the baseline agent, nor are any non-CO_2 greenhouse gas emissions from fertilizer use or biomass burning expected, the activity-shifting leakage is projected ex ante to be zero, and no leakage mitigation activity was designed in the PD. v.01 (see Section 1.13).			
Conformance	Yes ☐	No ☐	N/A ☒
NCR/OBS	Not Applicable		

5.3 VCS AFOLU Requirements Section 3.6.4, 4.6.4, 4.6.14 and 4.6.15: Market leakage

Market leakage assessments shall occur at validation and verification. The rules and requirements for the assessment of market leakage are set out in Section 5 of VCS AFOLU Requirements. Projects shall account for market leakage where the production of a commodity (eg, timber) is significantly affected by the project. The significance of timber production is determined as set out in Section 4.3.3 above or as set out in Table 3 of the VCS AFOLU Requirements.

Findings from Review on INSERT FIRST DATE			
Market leakage was treated applying module LK-ME. According to Section 3.3 of the PD v.01, in the baseline case, a total of 7,619,226 m^3 of wood products would be removed from the project area (from 2008 to 2017). The volumes were calculated from the permitted volumes in the Suppression Plan – Ref. 11 (50.84 m^3 ha^{-1} of sawnwood for export and 277.72 m^3 ha^{-1} of residues/fuelwood). An assumption based of the sawnwood historical of exportation (Ref. 27 and 51) and the designed business plan of CKBV, orientated for timber exportation, assume that all sawnwood, processed on-site at CKBV's sawmill units located in Rio Capim Complex and Ananindeua, would be destined for the export market, and was therefore not considered further in assessment of market leakage, in conformance with guidance set out in VCS AFOLU Requirements section 4.6.5 "Leakage occurring outside the host country (international leakage) does not need to be quantified" and section 4.6.14 Table 3 "Where leakage is out of country [market leakage discount factor equals] 0", and reflected in module LK-ME "As per the VCS AFOLU requirements international market leakage is not considered." (see Table 3.11 of the PD v.01). Further, this assumption was reviewed internally with team responsible for the FSC certification in the project proponent's area and was found to be in conformance with the CKBV well known business orientation and goals. Hence, market leakage was only assessed for the woody biomass addressed to the charcoal production (volume referred as "residues" in Table 3.10 of the PD v.01). Per the methodology, a fixed leakage factor, LF_{ME}, of 0.4 was used. A default carbon fraction of biomass of 0.47 was applied for parameter CF (IPCC, 2006). Parameter D_{mn} was set as 0.65 metric tons per cubic meter, representing the average basic wood density of the Forest Products Laboratory (LPF) of the Brazilian Forest Service database. The audit team reviewed the market leakage estimation presented in the worksheet 'market leakage' of the spreadsheet 'CIKEL APD analysis Feb2012 post-visit' with the project technical staff. Total market leakage from fuelwood was calculated ex ante to be 3,330,034 t CO_2-e.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

5.4 VCS AFOLU Requirements Sections 4.6.8 – 4.6.23: Project type specific leakage requirements

The VCS AFOLU Requirements includes the following project type specific criteria (see VCS AFOLU Requirements for complete reference of criteria requirements):

- ARR: VCS AFOLU Requirements Sections 4.6.8 – 4.6.9
- ALM: VCS AFOLU Requirements Sections 4.6.10 – 4.6.12
- IFM: VCS AFOLU Requirements Sections 4.6.13 – 4.6.14
- REDD: VCS AFOLU Requirements Sections 4.6.15 – 6.6.16
- ACoGS: VCS AFOLU Requirements Section 4.6.17 – 4.6.18
- PRC: VCS AFOLU Requirements Sections 4.6.19 – 4.6.23

Findings from Field Audit			
VCS AFOLU Requirements for APD are described in 4.6.15. This requirement states: *"a) Where the deforestation agent can be identified, it shall be demonstrated that the management plans and/or land-use designations of the deforestation agent's other lands (which shall be identified by location) have not materially changed as a result of the project (eg, the deforestation agent has not designated new lands as timber concessions, increased harvest rates in lands already managed for timber, cleared intact forests for agricultural production or increased fertilizer use to enhance agricultural yields)."* As previously stated, the agent of deforestation is the project proponent, CKBV (see Section 2.4 of the PD v.01), and the deforestation is expected to happen as designed in the Suppression Plan, in accordance with the Brazilian Law. Further, the CKBV area is currently under FCS Certification (see Sections 1.1, 1.8 and Annex 2 of the PD v.01), which implies that its land use activities could not materially have changed its harvest rates in other lands owned by CKBV.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

5.5 VCS AFOLU Requirements Section 4.6.3: Quantification of leakage

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 in Section 4.7 of the VCS AFOLU Requirements includes an example of indirect leakage accounting.

Findings from Field Audit			
Application of required activity shifting leakage and market leakage modules was reviewed by audit team with staff responsible for GHG calculations. As noted above, the audit team found the leakage calculations to be in conformance with the requirements of the modules.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

6 Summary of GHG emission reductions and removals

6.1 VCU Calculation

As set out in the AFOLU Requirements, any leakage shall be subtracted from the number of GHG emission reductions and removals eligible to be issued as VCUs.

VCUs should be estimated, and auditors should evaluate the correct calculation of buffer contribution in order to derive ex ante estimates of anticipated VCUs from project activities.

Findings from Field Audit			
All the worksheets of the spreadsheet 'CIKEL APD analysis Feb2012 post-visit – Ref.29' were reviewed by the audit team with the project technical staff. Leakage is correctly subtracted from gross project GHG emissions. As a result from the previous worksheets, the 'total VCU calc' worksheet presents the estimated net GHG emission reductions for the project activity (7,454,138 t CO_2-e). A summary with this information is also available in the PD v.01, Section 3.4 (Table 3.13). The VCU were properly assigned to the project pooled buffer account, still no release of buffer credits at subsequent verification events were estimated.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

6.2 Uncertainties assessment associated with the calculation of emissions

Generally uncertainty deduction methods are detailed within the VCS approved methodologies. Auditors should confirm appropriate uncertainty assessments have been conducted when calculated GHG emission reductions and/or removals.

Findings from Field Audit			
As explained above (section 2.3), the X-UNC module was used to address uncertainties. Uncertainties associated to rates of deforestation and degradation and project emissions were not estimated given that they are based on the Suppression Plan (Ref. 11) (See Sections 2.4 and 3.2 of the PD). Uncertainty associated with estimation of stocks in carbon pools and changes in carbon stocks was estimated in the 'baseline' worksheet of the spreadsheet 'CIKEL APD analysis Feb2012 post-visit – Ref. 29'.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

7 Monitoring plan

7.1 VCS Standard Section 3.18.1: Data and parameters available at validation

The project proponent shall ensure that all documents and records are kept in a secure and retrievable manner for at least two years after the end of the project crediting period.

Findings from Field Audit			
Section 4.3 of the PD v.01 states that all data sources and processing, classification and change detection procedures will be documented and stored in a dedicated long-term electronic archive maintained by CKBV at its main office in Ananindeua. Data archived will be maintained through at least two years beyond the end of the project crediting period, through July 2029. In addition, given the extended time frame and the pace of production of updated versions of software and new hardware for storing data, electronic files will be updated periodically or converted to a format accessible to future software applications, as needed.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

7.2 VCS Standard Section 3.17 Data and parameters monitored

Data and parameters used for the quantification of GHG emission reductions and/or removals shall be provided in accordance with the methodology. Quality management procedures to manage data and information shall be applied and established. Where applicable, procedures to account for uncertainty in data and parameters shall be applied in accordance with the requirements set out in the methodology.

Findings from Field Audit			
Section 4.2 of the PD v.01 details the data and parameters to be monitored. Every ≤ 5 years the following data and parameters will be monitored: • Area of recorded deforestation in the project area converted to other land use; • Area impacted by natural disturbance in post-natural disturbance; • Biomass carbon of trees cut and removed through degradation process from plots measured; • Volume extracted from logging, sawnwood and fuelwood gathered in the project area; • Length and mean width of skid trails • Area of roads and logging decks • The total area of deforestation by the baseline agent of the planned deforestation Every ≤ 10 years. the following data and parameters will be monitored: • Carbon stock and net carbon stock changes in all pools in the baseline case; • Mean live carbon stock of trees and non-tree biomass assumed to be killed per unit area in creation of skid trail; Areas potentially impacted by degradation processes will be monitored every ≤ 2 years. Other parameters are calculated based on the ones above. As no deforestation activities are expected by the baseline agent, nor are any non-CO_2 greenhouse gas emissions from fertilizer use or biomass burning, activity-shifting leakage is projected ex ante to be zero throughout the baseline period.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

7.3 VCS Standard Section 3.17.3 – 3.17.5 VCS AFOLU Requirements Section 4.8: Monitoring plan

The project proponent shall establish a GHG information system for obtaining, recording, compiling and analyzing data and information important for quantifying and reporting GHG emissions and/or removals relevant for the project (including leakage) and baseline scenario.

A monitoring plan for the project that includes roles and responsibilities shall be established. Where measurement and monitoring equipment is used, the project proponent shall ensure the equipment is calibrated according to the equipment's specifications and/or relevant national or international standards.

Leakage shall be monitored as set out in Section 4.6 of the VCS AFOLU Requirements. Where projects are required to account for leakage, such leakage evaluation shall be documented in the appropriate section of the project description and/or monitoring report, as applicable.

Findings from Field Audit
Section 4.3 of the PD v.01 details the monitoring plan, including a description of QA/QC implemented. Landsat imagery covering the entire project area will be acquired for the monitoring/verification date. Landsat scenes covering the RCC area include Path/ row 223/62 and 223/63. To allow flexibility in selection of cloud-free scenes, Landsat images spanning various months within the year of the monitoring/verification date may be mosaiced to produce a composite image. The composite image shall be at least 90% cloud free. For the interpretation and classification of Landsat images, masks of water, cloud and shadow of cloud will be used. The masking of water will be performed in xWaterMask module from software ImgTools 0.8 Beta, and presented in Img Tools 0.8 Beta. Normalized Difference Fraction Index (NDFI) will be generated for all images to highlight signals of forest degradation caused by woody exploration and fire. Based on NDFI images, it is possible map trails of forest exploration, characterized by the presence of log storage decks, connected to the roads (skid trails), beyond the fire. The classification of NDFI images is performed in two steps: obtaining a map of the base year (Baseline) and obtaining the maps of increment deforestation and degradation (MIDD) through the method of change detection. The baseline will be obtained through xNDFISlicer module present in the software ImgTools 0.8 Beta, where the NDFI image, referenced to the first year of the analysis was classified. In this classification were obtained five thematic classes: forest, non-forest, water, cloud (cloud and shade of cloud) and degradation. MIDD's were obtained in the xChangeDetection module, available in the software ImgTools 0.8 beta. For this it will be necessary to have the baseline and NDFI images of all years of the temporal series. In this classification were obtained six thematic classes: forest, non-forest, water, cloud (cloud and shade of cloud), degradation and deforestation. Activity-shifting leakage will be monitored by tracking forest cover change across all lands outside of the project area owned or under the management of CKBV ($A_{defLK,i,t}$). This will be accomplished using remotely sensed imagery that covers the properties at the needed monitoring intervals. Imagery that is freely available and accessible using Google Earth will be used preferentially when it is available. When it is unavailable, other remotely sensed imagery will be acquired for analysis. CKBV property boundaries will be overlaid on remotely sensed imagery to assess if forest cover changes have occurred. In the event that deforestation is noted, further confirmation will be made that the deforestation resulted from authorized deforestation activities by CKBV. If annual forest cover change data is unavailable, all changes in forest cover (due to planned deforestation) detected for the monitoring interval will be annualized. For estimations of market leakage, the main parameter monitored is annual volume of fuelwood harvested from the project area, which will be derived from annual harvest reports "Annual Operation Logging Report" with harvested volumes estimated as per the procedures described above. Annex 1 of the PD v.01 ('Annex_1_-_Fire_Fighting_Plan' document – Ref. 16) presents the Fire Fighting Plan developed for CKBV area. The audit team reviewed the plan with CBKV staff. Still, according to Section 4.3, for all aspects of project monitoring, CKBV will ensure that data collection, processing, analysis, management and archiving are conducted in accordance with the monitoring plan. The detailed responsibilities are presented in the table titled "Type of monitoring and responsibilities for monitoring actual emissions in the project area" in the same section of the PD.

Conformance	Yes ☒	No ☐	N/A ☐

NCR/OBS	No NCR/OBS raised.

8 Environmental Impact

8.1 VCS AFOLU Requirements Section 3.1.4: Negative environmental and socio-economic impacts

Project proponents shall identify potential negative environmental and socio-economic impacts and shall take steps to mitigate them. Additional standards such as the Climate, Community & Biodiversity Standards (CCBS) or Forest Stewardship Council (FSC) certification may be applied to demonstrate social and environmental benefits beyond GHG emissions reductions or removals. VCUs may be tagged with additional standards and certifications on the VCS project database where both the VCS and another standard are applied.

Findings from Field Audit			
Section 5 of the PD v.01 describes how the project identifies potential negative environmental and socio-economic impacts. The description provided is in accordance with the information gathered by the audit team during the document review, field audit and interviews. The project proponent (CKBV Florestal Ltda) conducts their Forest Management in accordance with local regulation and has Sustainable Forest Management Plan (Ref. 41) approved by competent environmental body, SEMA - Environment Secretariat of the State of Pará. Furthermore, CKBV has been committed to the FSC certification since 2000 and nowadays all the project area is certified to the FSC Standards (A summary of FSC certification of the project area is in the section 1.8, pg. 10-12).			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised		

8.2 VCS AFOLU Requirements Section 3.1.5: Conversion of native ecosystems

Project activities that convert native ecosystems to generate GHG credits are not eligible under the VCS Program. Evidence shall be provided in the project description that any ARR, ALM or PRC project areas were not cleared of native ecosystems to create GHG credits (eg, evidence indicating that clearing occurred due to natural disasters such as hurricanes or floods). Such proof is not required where such clearing or conversion took place at least 10 years prior to the proposed project start date. The onus is upon the project proponent to demonstrate this, failing which the project shall not be eligible. **Additional requirements for PRC project types** are outlined in VCS AFOLU Requirements section 3.1.6.

Findings from Field Audit			
The proposed project is a REDD project with the goal of avoiding planned deforestation. During the field audit it was confirmed by the audit team that the project activity does not convert native ecosystems to generate GHG credits, nor are there any intentions to do so.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

9 Comments by stakeholders

9.1 Findings from stakeholder comments received

Findings from Field Audit			
In section 6 of the PD v. 01 there is a description regarding the stakeholder comments. The project person in charge of this subject was interviewed and all this information was checked by the audit team (Ref. 20), which included photos, attendance list, presentations and questionnaires. Public Consultations were carried on by the project proponent in Belém, 02 February 2012, focus on the PD, communities located around the project area (Barrerinha, Ararandeu, da Estrada de Acesso) and in Paragominas e Goianésia. The project proponent also presented to the audit team the Supporting letters from the following stakeholders: Paragominas Municipality, Goianésia Municipality; Amazon Institute of People and Environment (IMAZON), Tropical Forest Institute (IFT), Federal University of Para via the Institute of Biological Sciences (ICB), Brazil Indian Foundation (FUNAI).			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

10 Non-permanence Risk Assessment

Note: Risk factors are determined through a qualitative analysis conducted, following the guidance of the VCS AFOLU Non-Permanence Risk Tool. As stated in Section 1.1.3 "Project proponents shall clearly document and substantiate the risk analysis covering each risk factor applicable to the project. During the analysis, the validation/verification body shall evaluate the risk assessment

undertaken by the project proponent and assess all data, rationales, assumptions, justifications and documentation provided by the project proponent to support the non-permanence risk rating."

10.1 VCS AFOLU Non-Permanence Risk Tool Section 2.2.4.4: Projects with tree harvesting

For ARR and IFM projects with harvesting, project longevity may include the length of time the activities that maintain carbon stocks will continue, either through the continuation of the project activity or by replanting or re-growth of the trees after the last harvest in the project crediting period. Such commitment to continue the management practice, or to replant or allow re-growth shall be demonstrated through evidence such as certification of sustainable forest management under Forest Stewardship Council (FSC), Programme for the Endorsement of Forest Certification (PEFC) or other internationally recognized schemes, or contractual agreements for timber supply beyond the last harvest in the project crediting period. Re-growth may be considered only where project areas, after harvesting, will be managed for regeneration (naturally or with assistance), maintaining the current species mix and allowing trees to re-grow to an age equivalent to at least the age at which trees were harvested, as demonstrated in management plans.

Findings from Field Audit			
Reduced Impact Logging activities occur under the project area, nevertheless, all project proponent areas (not only the project area) are under FSC certification (see Section 1.1 and 1.8 of the PD v.01). The audit team reviewed the FSC certificates issued for the project proponent.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR/OBS raised.		

10.2 VCS AFOLU Non-Permanence Risk Tool Section 2.1.1: Risk analysis

Projects shall prepare a non-permanence risk report in accordance with VCS document *AFOLU Non-Permanence Risk Tool* at both validation and verification. In the case of projects that are not validated and verified simultaneously, having their initial risk assessments validated at the time of VCS project validation will assist VCU buyers and sellers by providing a more accurate early indication of the number of VCUs projects are expected to generate. The non-permanence risk report shall be prepared using the *VCS Non-Permanence Risk Report Template*, which may be included as an annex to the project description or monitoring report, as applicable, or provided as a stand-alone document.

The potential transient and permanent losses in carbon stocks shall be assessed over a period of 100 years from the start of the current monitoring period, unless otherwise specified in Sections 2.2 to 2.4 of the VCS AFOLU Non-Permanence Risk Tool, to determine the appropriate risk rating.

Risk Factor	Self Assessment Risk Rating	Findings (including description of any mitigation activities as required per VCS AFOLU Non-Permanence Risk Tool Section 2.1.2.2)	NCR/OBS
Internal Risks (VCS AFOLU Non-Permanence Risk Tool Section 2.2):			
Project Management: Shall be assessed using Table 1 of VCS AFOLU Risk Tool.	0	No trees were planted as part of the project activity (+0 scored on item "a"). The project proponent maintains good relationships with the surrounding neighbours, to prevent actions by external agents wanting to invade the area for illegal activities, like wood extraction and hunting (+2 scored on item "b") The team of managers, forest technicians, technicians in security and other professionals, each have 5 to 15 years experience in forest and land management (+0 scored on item "c"). The audit team interviewed them and confirmed their experience. The project proponent has a permanent	No NCR/OBS raised.

		office complex (+0 scored on item “d”). The management team does not have prior experience in the development of AFOLU projects (-0 scored on item “e”). Sustainable Forest Management/ Reduced Impact Logging activities at the complex are carried out in conformance with the Sustainable Forest Management Plan (FSC certified) (-2 scored on item “f”). Further, the project proponent has also prepared a report charactering the families and their properties around the project area (see Refs. 38 and 44).	
Financial viability: Shall be assessed using Table 2 of VCS AFOLU Risk Tool.	0	The project’s cash flow breakeven point is less than 4 years from the current risk assessment. Annual cash flow is positive in year 3. (+0 scored). In addition, the project has secured 80% or more of funding needed to cover the total cash out before the project reaches breakeven, due primarily to revenues from timber harvest exceeding cash out in the first years of the project, prior to realization of VCU revenues. REDD project development costs are also covered by finances secured by CKBV and 33 Forest Capital (+0 scored). Details are provided in cash flow analysis ‘FINAL CIKEL APD Non-permanent Risk Analysis (Ref. 40)’’ that was reviewed by the audit team together with the project staff responsible for CKBV financial analyses.	No NCR/OBS raised.
Opportunity cost: Shall be assessed using Table 3 of the VCS AFOLU Risk Tool.	8	NPV from most profitable land use alternative, Alternative 1 in the PD additionality analysis, is BRL 80,512,738 for the 20 year crediting period, equal to 372.9% of the project NPV (including VCU revenues) of BRL 21,589,798 for the same period, equal to a difference of 272.9%. (+8 scored). Details are provided in ‘FINAL CIKEL APD Non-permanent Risk Analysis (Ref. 40)’ that was reviewed by the audit team together with the project staff responsible for CKBV financial analyses. Furthermore other documents that support the NPV analyzes also were evaluated by the audit team, such as: business plan (ref. 43) and financial statements (ref.45) ,	No NCR/OBS raised.
Project longevity: Shall be assessed using Table 4 of the VCS AFOLU Risk Tool.	4 = 24 - (100/5)	The project was implemented without legal agreement or the requirement to continue the management practice. The project area is managed under a	No NCR/OBS raised.

		Sustainable Forest Management Plan (SFMP). The project proponent has specified in its management plan, amended in January 2012, that the project area will be maintained under sustainable forest management through at least July 2107.	
Total Internal Risk: Shall be calculated using Table 5 of the VCS Risk Tool.	12	The selected scores for the internal risk were properly accounted for.	No NCR/OBS raised.
External risks (VCS AFOLU Non-Permanence Risk Tool Section 2.3):			
Land and resource tenure: Shall be assessed using Table 6 of the VCS Risk Tool.	2	Cikel Group has the legal title of the entire project area (see section 2.1.3 of this report), however, according to the Brazilian legislation, the Brazilian Government) owns the subsoil natural resources. (+2 scored on item “b”). The project area is wholly owned by Cikel Group, and no disputes over land tenure exist (+0 scored on item “c”). Some neighbouring communities occasionally engage in subsistence hunting in the project area, which CKBV allows, and hence rights are not in dispute (nor does hunting pose any impact on forest carbon stocks) (+0 scored on item “d”).	No NCR/OBS raised.
Community engagement: Shall be assessed using Table 7 of the VCS Risk Tool.	0	No communities are living in the project area (+0 scored on item “a”). Only three communities were identified as such in the surrounding of the project area, two indigenous communities and a group of eight families traditionally living out of family agriculture, that rely on parts of the project area for subsistence hunting, which CKBV allows. The development of the REDD project was communicated to all the neighbours in community meetings and technical presentations (+0 scored on item “b”). In section 6 of the PD v. 01 there is a description regarding the stakeholder comments. The project person in charge of this subject was interviewed and all this information was checked by the audit team (Ref. 20), witch included photos, attendance list, presentations, questionnaires and support letters from the following stakeholders: Paragominas Municipality, Goianésia Pará Municipality; Amazon Institute of People and Environment (IMAZON), Tropical Forest Institute (IFT), Federal University of Para via the Institute of Biological Sciences (ICB), Brazil Indian Foundation (FUNAI).	No NCR/OBS raised.
Political risk: Shall be	0	Governance score of -0.32 to less than	No NCR/OBS raised.

assessed using Table 8 of the VCS Risk Tool.		0.19 = 0.0097. Details are provided in "FINAL CIKEL APD Non-permanent Risk Analysis.xls – Ref 32 (+2 scored on item "c") Brazil is implementing REDD+ Readiness (-2 scored on item "f").	
Total external risks: Shall be calculated using Table 9 of the VCS Risk Tool.	2	The selected scores for the external risk were properly accounted.	No NCR/OBS raised.
Natural Risks (VCS AFOLU Non-Permanence Risk Tool Section 2.4):			
Natural risks: Shall be assessed using Table 10 of the VCS Risk Tool.	1.5	Cochrane and Laurance (2002) estimated average fire return intervals in Paragominas of from 10 to 15 years. Emissions resulting from forest fires depend on the extent and condition of fuel sources, with initial burns averaging 8% loss of total biomass stocks, and subsequent more severe burns, with higher, drier fuel loads, resulting in losses of up to 45% of original stocks (Cochrane et al., 1999) (score LS = 2). As stated above, project proponent has a Fire Fighting Plan (Ref.41) (Mitigation deduction =* 0.25). There is no history of catastrophic forest disturbance due to forest pests or diseases in the region (score LS = 0). Over a 22 year period (1989 to 2011), two extreme weather events occurred, with each damaging 0.3% of the total area (recorded data) (score LS = 1).	No NCR/OBS raised.

10.3 VCS AFOLU Non-Permanence Risk Tool Section 2.5.1 – 2.5.3: Overall Project Risk Calculation

Note: As per VCS AFOLU Non-Permanence Risk Tool 2.5.2, the minimum risk rating shall be 10, regardless of the risk rating calculated using Table 11. Furthermore, where overall risk rating is greater than 60, project risk is deemed unacceptably high and the project fails the entire risk analysis (see VCS AFOLU Non-Permanence Risk Tool 2.5.3). For additional information on project risk assessment failure see VCS AFOLU Non-Permanence Risk Tool 2.1.

To determine the number of buffer credits that shall be deposited in the AFOLU pooled buffer account, the overall risk rating shall be converted to a percentage (e.g., an overall risk rating of 35 converts to 35%). This percentage shall be multiplied by the net change in the project's carbon stocks (stated in the verification report), as set out in the VCS document *Registration and Issuance Process*. Where a project is divided into more than one geographic area for the purpose of risk analysis, the overall risk rating percentage for each area shall be multiplied by the net change in the project's carbon stocks (stated in the verification report) in such geographic area.

Risk Factor	Self Assessment Risk Rating	Findings	NCR/OBS
Overall non-permanence risk rating as determined using Table 11 of the VCS	15.5	The selected scores for the overall non-permanence risk rating were properly accounted.	No NCR/OBS raised.

Risk Tool.		The determined number of buffer credits that shall be deposited in the AFOLU pooled buffer account was presented in Section 4.2 of the Non-Permanence Risk Report for the Cikel Brazilian Amazon REDD APD Project.	