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CCB - Validation Report

Fundação Amazonas Sustentável - FAS

The Juma Sustainable Development Reserve-Project: Reducing Greenhouse Gas Emissions from Deforestation in the State of Amazonas, Brazil

REPORT NO. 1177277 - CCBA

2008, September 30

TÜV SÜD Industrie Service GmbH

Carbon Management Service
Westendstr. 199 - 80686 Munich – GERMANY

Report No.	Date of first issue	Revision No.	Date of this revision	Certificate No.
1177277	2008-9-30	-	-	-

Subject: Validation of a CCBA Project	
Accredited TÜV SÜD Unit: TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199 - 80686 Munich Federal Republic of Germany	**TÜV SÜD Contract Partner:** -
Client: Amazonas Sustainable Foundation Rua Álvaro Braga, 351 Parque 10 de Novembro, Manaus Amazonas, Brazil	**Project Site(s):** Project Area as defined in PDD
Project Title: The Juma Sustainable Development Reserve Project: Reducing Greenhouse Gas Emissions from Deforestation in the State of Amazonas, Brazil.	
Applied Methodology / Version: none / project specific	**Scope(s):** 14
First PDD Version: Date of issuance: 2008-07-05 Version No.: 3 Starting Date of GSP 2008-07-20	**Final PDD version:** Date of issuance: 2008-09-29 Version No.: 5
Estimated Annual Emission Reduction:	361,172 t tons CO_{2e} (over first 10 years)
Assessment Team Leader: Martin Schröder	**Further Assessment Team Members:** Gabriel Medina

Summary of the Validation Opinion:

☒ The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. In our opinion, the project meets all relevant CCB requirements..

☐ The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence to determine the fulfilment of all relevant CCB criteria.

Abbreviations

CCB (A)	Climate Community and Biodiversity (Alliance)
ACM	Approved Consolidated Methodology
AM	Approved Methodology
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CR	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission reduction
GHG	Greenhouse gas(es)
GSP	Global Stakeholder Process
KP	Kyoto Protocol
MP	Monitoring Plan
NGO	Non Governmental Organisation
PDD	Project Design Document
PP	Project Participant
TÜV SÜD	TÜV SÜD Industrie Service GmbH
tCER / lCER	temporary CER; long-term CER
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

Table of Contents Page

1 INTRODUCTION

1.1 Objective

The validation objective is an independent assessment by a Third Party of the proposed project activity against all defined criteria as defined by the Climate Biodiversity and Community Alliance (CCBA).

In line with the framework for the validation of a CDM project, corresponding tasks are carried by an Independent Operational Entity (DOE). TÜV SÜD is a DOE that is accredited by UNFCCC to validate AR-CDM projects. CCBA recognizes this AR-CDM accreditation.

Validation will finally result in a conclusion by the executing DOE whether a project activity is complying with the CCB standards and whether this project should be submitted for registration with CCBA. The ultimate decision on the registration of a proposed project activity rests with CCBA .

The project activity discussed by this validation report has been submitted under the project title:

The Juma Sustainable Development Reserve Project: Reducing Greenhouse Gas Emissions from Deforestation in the State of Amazonas, Brazil.

1.2 Scope

The scope of any CCB assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities.

For any CCB project activity the scope is set by:

- CCB standards, in their most recent version, as published at www.climate-standards.org
- Technical and methodological guidelines and information for best practice in land use based mitigation projects
- Internal and national standards on monitoring and QA/QC
- The sectorial framework of the project (technical scope)

In case of a CCB project that is also designed to comply with the requirements of an AR-CDM project the scope includes furthermore the following:

- The Kyoto Protocol, in particular § 12
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Further COP/MOP decisions with reference to the CDM
- Decisions by the EB published under http://cdm.unfccc.int
- Specific guidance by the EB published under http://cdm.unfccc.int

- Guidelines for Completing the Project Design Document (CDM-PDD), and the Proposed New Baseline and Monitoring Methodlogy (CDM-NM)
- The applied approved AR CDM methodology

The validation is not meant to provide any consulting towards the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

Once TÜV SÜD receives a first PDD version, it is made publicly available on the internet at CCBA's webpage for starting a 21 day global stakeholder consultation process (GSP). In case of any request a PDD might be revised (under certain conditions the GSP will be repeated) and the final PDD will form the basis for the final evaluation as presented by this report. Information on the first and on the final PDD version is presented at page 1.

The only purpose of a CCB validation is to indicate compliance with the CCBA standards and to use the corresponding reports during the registration process with CCBA. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the validation opinion.

2 METHODOLOGY

The project assessment aims at being a risk based approach and is based on the methodology developed in the Validation and Verification Manual, an initiative of Designated and Applicant Entities, which aims to harmonize the approach and quality of all such assessments.

In order to ensure transparency, a validation protocol was customised for the project. TÜV SÜD developed specific checklists and a protocol based on the templates presented by the Validation and Verification Manual. The protocol shows, in a transparent manner, criteria (requirements), the discussion of each criterion by the assessment team and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements that a CCB project is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The validation protocol consists of several tables. The different columns in these tables are described in the figure below.

The completed validation protocol is enclosed in Annex 1 to this report.

Validation Protocol Table 1: CCB - Conformity of Project Activity				
Checklist Topic / Question	***Reference***	***Comments***	***Conclusion on PDD in GSP***	***Final Conclusion***
The checklist is organised according to the sections of the CCBA standards. Each section is then further subdivided. The lowest level constitutes a checklist question / criterion.	*Gives reference to documents where the answer to the checklist question or item is found - in case the comment refers to documents other than the PDD or the applied methodology..*	*The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached. In some cases sub-checklist are applied indicating yes/no decisions on the compliance with the stated criterion. Any **Request** has to be substantiated within this column*	*Conclusions are presented based on the assessment of the first PDD version. This is either acceptable based on evidence provided (☑), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question (See below). **Clarification Request (CR)** is used when the validation team has identified a need for further clarification.*	*Conclusions are presented in the same manner based on the assessment of the final PDD and other background documentation version.*

Validation Protocol Table 2: CCB - Resolution of Corrective Action and Clarification Requests			
Clarifications and corrective action requests	***Ref. to table 1***	***Summary of project owner response***	***Validation team conclusion***
If the conclusions from table 1 are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	*Reference to the checklist question number in Table 1 where the Corrective Action Request or Clarification Request is explained.*	*The responses given by the client or other project participants during the communications with the validation team should be summarised in this section.*	*This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 1, under "Final PDD".*

In case that the CCBA project activity undergoes simultaneously a CDM validation, the corresponding CDM validation protocol will be attached in order to provide the complete and consistent set of considered criteria.

In these cases, the content of Annex 1 will be structured as follows:

- Validation Protocol Table 1a): **CCB** - Conformity of Project Activity
- Validation Protocol Table 1b): **CDM** - Conformity of Project Activity
- Validation Protocol Table 2a): **CCB** - Resolution of Corrective Action and Clarification Requests
- Validation Protocol Table 2b): **CDM** - Resolution of Corrective Action and Clarification Requests

In case of a denial of the project activity more detailed information on this decision will be presented in table 3.

Validation Protocol Table 3: Unresolved Corrective Action and Clarification Requests		
Clarifications and corrective action requests	***Id. of CAR/CR 1***	***Explanation of the Conclusion for Denial***
If the final conclusions from table 2 results in a denial the referenced request should be listed in this section.	*Identifier of the Request.*	*This section should present a detail explanation, why the project is finally considered not to be in compliance with a criterion.*

2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national environment TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV SÜD Certification Body “climate and energy”. The composition of an assessment team has to be approved by the Certification Body ensuring that the required skills are covered by the team. The Certification Body operates four qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL)
- Greenhouse Gas Auditor (GHG-A)
- Greenhouse Gas Auditor Trainee (T)
- Experts (E)

It is required that the sectoral scope linked to the methodology has to be covered by the assessment team.

The validation team was consisting of the following experts (the responsible Assessment Team Leader in written in bold letters):

Name	Qualification	Coverage of technical scope	Coverage of sectoral expertise	Host country experience
Martin Schröder	**ATL**	☑	☑	☑
Gabriel Medina	E	☑	☑	☑

Martin Schröder is appointed as Assessment Team Leader by the certifcation body "climate and energy" of TÜV SÜD. He holds a masters degree in tropical forest science. Within TÜV SÜD he is responsible for the validation and verification of forestry based greenhouse gas mitigation projects. He passed successfully internal training schemes in the field of auditing. Before entering the company, he worked on development projects in the Amazon Region and managed voluntary carbon offset projects.

Gabriel Medina is appointed as Forestry Expert by the certifcation body "climate and energy" of TÜV SÜD. Mr. Medina is based in Belem, Brazil and works with a focus on forestry projects. He holds a Phd title in the field of community forestry and development projects. In the context of the present audit he provided expertise on the national framework relevant for reforestation and forest conservation projects.

2.2 Review of Documents

The first PDD version submitted by the client and additional background documents related to the project design and baseline were reviewed as initial step of the validation process.

A complete list of all documents and proofs reviewed is attached as annex 2 to this report.

2.3 Follow-up Interviews and visited sites

In the period of July. 24 to 31, 2008 TÜV SÜD performed interviews on-site with project stakeholders to confirm selected information. The table below provides a list of all persons interviewed in the context of this on-site visit.

Name	Organisation
Britaldo Soares Filho	Professor / UFMG
Lucio Pedroni	Consultant / Carbon Decisions
Mariano Cenamo	IDESAM
Garbriel Ribenboim	Project Manager / FAS
Virgilio Viana	Director General / FAS
Luiz C. Viallares	Director Financial Dep. / FAS
Raquel Luna	FAS
João Tezza Neto	GIS unit / FAS
Gabriel C. Carrero	IDESAM / INPA
Gustavo A Reginato	IDESAM
Mariana Noguiera Pavan	IDESAM
Romulo F. Batista	Consultant
Domingos Macedo	CEUC / SDS
Marina T Campos	CECCLIMA / SDS
Nadia Ferreira	Director / SDS
Denis Minev	Secretario / SEPLAN
Philip M. Fernside	Researcher / INPA
Niro Higuchi	Researcher / INPA
Furthermore numerous local inhabitants of communities were interviewed. Due to the large number of participants, only the name of presidents of the community visited are given:	
Boa Frente – President / José Marlos Ajunar	
Com. Primavera - President / Claudes Braga Paula	
San Francisco – community members were internviewed	

In the context of the onsite visit, the project area due to be protected has been visited. Field trips to confirm baseline conditions in the large project area were carried out by car, boat and plane.

In first insitance the areas were visited by travelling on the only intersecting road. Then one of the main rivers was passed on with boat, visiting a selection of the communities at the rivershore. Last but not least, it was navigated to a set of preselected GPS points with a small plane – principally to confirm land use classification.

2.4 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to resolve the requests for corrective actions and clarifications and any other outstanding issues which needed to be clarified for TÜV SÜD`s positive conclusion on the project design. The Corrective Action Requests and Clarification Requests raised by TÜV SÜD were resolved during communication between the client and TÜV SÜD.

To guarantee the transparency of the validation process, the concerns raised and responses that have been given are summarised in Chapter 3 below and documented in more detail in the validation protocol in Annex 1.

2.5 Internal Quality Control

As final step of a validation the report and the protocol have to undergo and internal quality control procedure by the Certification Body “climate and energy”, i.e. each report has to be approved either by the Head of the certification body or his Deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one.

In the current case, quality control has been further more supported by Dr. Hubertus Schmidtke, who is an appointed forestry auditor on behalf of the Certification Body “climate and energy”.

It rests at the decision of TÜV SÜD’s Certification Body whether a project will be submitted for registration with CCBA.

3 SUMMARY OF FINDINGS

As informed in previous chapters above, all finding are summarized in Table 2 of the attached validation protocol. In total the assessment team issued 31 Clarification Requests and 32 Corrective Action Requests.

This large number of Requests is partially explained by the fact that projects which focus on reducing emissions from avoided deforestation do not have an approved baseline and monitoring methodology available.

Key Requests for Clarification and Corrective Action were related to the project's baseline deforestation rates, the scheduled activities as well as project additionality. Furthermore it was focussed on the consistency of the monitoring plan in regard to main parameters. In regard to CCBA specific requirements it was requested, among others, that further information on net project effects and conflict management procedures were elaborated.

In regard to these Requests for Clarification further information and additional documents have been requested whenever the submitted documents did not allow a judgement of corresponding criteria. Based on this additional information all Requests for Clarification have been answered sufficiently. Only in regard to the leakage assessment and a necessary approval a Forward Action Request was posed, which is to be revisited at verification.

Forward Action Request 1:
The geographic limits of a leakage belt remain to be confirmed. The methodological approach of factoring out regular migration / deforestation from project related migration / deforestation remains, i.e. as part of an approved VCS methodology.

Forward Action Request 2:

Approval of the project as defined per PDD by the Juma Reserve Council to be revisited at verification.

Other main findings on the project are the following:

Project area

The project with an area of 472,677 ha is located south of Manaus in the State of Amazonas. The project area is fully covered with native tropical forests. In order to assure consistency for the baseline estimates and later monitoring, intervened areas as well as other areas without forest cover have been excluded through satellite image based mapping exercises. Partially the exclusion of non-forest areas was triggered through the audit. The audit team requested that changes to the boundary shall be monitored. The entire project area is part of the Juma Reserve, a protected area installed by the State of Amazonas. As indicated above, all non forest areas within the Reserve (community areas, areas with land claims, roads, rivers etc) have been excluded from the project area.

It has been documented and sustained with evidence that the area of the Reserve is in state ownership and that FAS may be authorized by the Executive Power to commercialize environmental services. Based on this mandate, an agreement on the project and the merchan-

dising of carbon benefits has been signed by FAS and the Governor as well as the project sponsor. Therefore it is concluded, that at validation the contractual context is sufficiently defined.

While it is recognized that CCBA does not foresee the issuance of carbon credits, further legal analysis is considered necessary in regard to the interaction with evolving Brazilian federal legislation in case that Brazil assumes a national emission reduction target which may include the accounting for domestic land use activities.

Due to the latter and in order to reflect on the possibility of land property changes or claims, the audit team requested that the continued access to carbon rights from the project shall be monitored over implementation time.

Baseline

For the above indicated project boundary, the different forest types have been identified through a mapping process. The underlying carbon densities per forest type have been taken from credible literature sources which summarize studies that were compiled in the actual project region. Total carbon stocks for all biomass pools (with exception to soil organic carbon) have been estimated to be 156-161 t C / ha for the classes Alluvial Forest and Dense Forest.

It was noted that the project has opted to implement an initial forest inventory (after validation), which is scheduled to generate more precise data on the carbon densities present in the project area. This inventory is to be finalized before the first verification. While recognizing the relevance of the current literature based data used, the audit team considers this approach designed to generate project specific data sets as very capable to improve the overall quality of the baseline assessment. This leads to the fact that the considered baseline emissions may change to some extent at the first verification.

The actually expected deforestation for the project area under the baseline scenario has been another core element used for the estimates of the expected emission reductions. The software tool SimAmazonia has been applied for the modelling of the expected deforestation. Among others, the model and its functionality was documented in peer reviewed publications. Central input parameters, i.e. deforestation rates, and drivers, i.e. scheduled road construction, have been reviewed separately and were sustained with evidence. In light of the confirmation of core assumptions contained in the model and the fact that the model has been developed for the Amazon region, SimAmzonia is considered to be an adequate modelling tool for the project context. From the available scenarios that are part of the model, a scenario was selected that did not include changes in governance or the creation of additional protected areas. This is considered conisistent with the approach that the creation of the protected areas (posterior to 2003) is already part of a larger programmatic approach. CDM guidance on the consideration of policy changes posterior to 2001 (which reduce emissions) is also considered relevant (EB 22) in this context.

On the technical level, individual GIS layers were generated for each year of deforestation (by SimAmzonia) and then overlaid with the initial forest cover map. Based on this the yearly deforestation rates per forest type were elaborated. Corresponding processing has been documented.

The expected baseline emissions have been estimated through the multiplication of yearly deforestation rates with the difference between the initial carbon density (prior to deforestation) and the remaining carbon density (after deforestation) for each forest type. Remaining

carbon densities are taken from a regional study on this matter and are considered conservative literature based estimates.

Under the described baseline scenario it is assumed that further emission of non-CO_2 emissions emerge by the burning of deforestation areas. Burning is a documented common practice in the context of land use changes in the Brazilian Amazon region. A credible literature based emission factors for non-CO_2 emissions was applied.

In regard to biodiversity and social aspects, an abundant assessment carried out in the context of the creation of the Juma Reserve has been the main source for the definition of the initial project conditions in these fields. The provided information is considered to constitute a sufficient starting point for further monitoring.

Ex-ante emission reductions (and net effects)

The expected emission reductions are calculated by the above described estimates on the baseline emissions. A discount of 10 % (on the modelled deforestation) was considered in order to reflect on the fact that the project activities may not be able to stop deforestation completely.

Cumulated emission reductions until year 10 of implementation (2016) are expected to be 3.764.564 t CO_2 due to avoided stock changes and an additional 248.461 t $CO_{2\text{-}e}$ from avoided burning, totalling to 4,013,025 t $CO_{2\text{-}e}$. The project opted to include a further discount of 10 % in order to reflect on overall risks and further leakage assessment (401,302 t $CO_{2\text{-}e}$). Up to the year 2016 when the baseline is to be revised, the expected emission reductions are quantified with 3,611,723 t $CO_{2\text{-}e.}$ It is considered credible that potential leakage, i.e. due to deforestation by settlers that move out of the Reserve, is going to be sufficiently covered by this buffer (see comments below on monitoring).

Thus, the given estimations are considered to be sufficiently substantiated by verified data and assumptions.

It is underlined that the risk assessment according to VCS requirements (as basis for permanence buffer) has not been part of the scope of this CCBA audit.

In the field of biodiversity and social aspects, the project is considered to generate net positive impacts. On the social side it has been noted that continued information and on the project programmes that are designed to generate additional and partially alternative (to wood harvesting) income to the local population is of elevated relevance.

Additionality

The creation of the Juma Reserve in 2006 has been the reference for the definition of the starting date of this project.

The Juma Reserve is embedded to an initiative on the expansion of protected areas, which shows characteristics of a programme of activities (if i.e. compared to the CDM mechanism of the Kyoto Protocol). As a result of this initiative the State of Amazon has increased the Protected Areas of the State by almost 10 million ha during the years 2003-2007 (up to a total of 17 million ha). This expansion is not considered part of the baseline (compare above). It was documented and sustained with evidence that the commercialisation of environmental services, including carbon credits, has been the intention since the start of this initiative on the increase of protected areas (and with that prior to the date of creation of the Juma Reserve). The underlying state programme “Green Free Trade Zone” and the subsequent series of events (i.e. in the international climate change arena where this approach was pro-

moted) have been documented. The final PDD (i.e. pp 157-166; 169) includes an overview of measures part of this de facto programmatic but project based REDD approach.

It was furthermore analyzed that the typical funding provided to the State's protected areas in times prior to 2003 were not sufficient to assure an effective protection. It was analyzed that average funding in these times (prior to the start of the programme) has not been significant, also i.e. in comparison to the scheduled expenditures of the project. At the point of validation, the institutions involved (SDS / IPAAM) underlined and documented that were no other state funds pledged to conservation measures in the Reserve.

In light of the latter the audit team concluded that the creation of the Juma Reserve and the project's measures of conservation and development do not represent the business as usual scenario. The project activities are considered additional.

Monitoring

Core elements of monitoring, also in regard to biodiversity and social components, have been included to initial monitoring plans that are made part of the PDD. All key parameters were considered (i.e. on stock changes in different pools, land use changes posterior to project start etc). Nonetheless the definition of operational procedures i.e. on the monitoring of fire events remains to be further specified in the course of implementation and prior to the first verification. This also includes the concrete calculation approaches and the consideration of uncertainties in measurements.

It was noted that the project foresees a specification of the baseline carbon densities through an inventory in the pristine forest areas. The relevance of the chosen source on carbon densities in typical non-forest classes (to which forests would have been converted to in the case of deforestation) were discussed and made part of the monitoring plan.

Furthermore the accuracy of the baseline projections (of deforestation) will be re-assessed at year 10 of implementation.

Besides that (unintended) land use changes within the area under the project scenario are going to be monitored through remote sensing. As part of project activities complementary field assessments on deforestation events are carried out

Other CCBA requirements:

The following table resumes the compliance of the different sections of the CCBA standards:

Industrie Service

CCBA scorecard

Project title	The Juma Sustainable Development Reserve Project: Reducing Greenhouse Gas Emissions from Deforestation in the State of Amazonas, Brazil

Industrie Service

General Section		Required	Extra score	Conclusion
	Baseline Projections	x		☑
	Project Design and Goals	x		☑
	Management Capacities	x		☑
	Land Tenure	x		☑
	Legal Status	x		☑
	Adaptave Management for Sustainability		1	**1**
	Knowledge Dissemination		1	**1**

Climate Section

	Net Positive Climate Impacts	x		☑
	Offsite Climate Impacts - Leakage	x		☑
	Climate Impact Monitoring	x		☑
	Adapting to Climate Change and Climate Variability		1	**1**
	Carbon Benefits withheld from regulatory markets		1	**1**

Community Section

	Net Positive Community Impacts	x		☑
	Offsite Community Impacts	x		☑
	Community Impact Monitoring	x		☑
	Capacity Building		1	**1**
	Best Practices in Community Involvement		1	**1**

Biodiversity Section

	Net Positive Biodiversity Impacts	x		☑
	Offsite Biodiversty Impacts	x		☑
	Biodiversity Impact Monitoring	x		☑
	Native Species Use		1	**1**
	Water and Soil Enhancement		1	**1**

Complying with the 15 mandatory criteria, the project receives the status “approved”. For the silver standard, approved projects need to receive at least one additional point from three different sections (general, climate, community, biodiversity). For a gold evaluation, six extra points have to be made with at least one point from each of the four sections.

Final conclusion on CCBA status:	
Approved	
Silver	
Gold	☑

Finally, the audit team considers the following procedural aspects relevant:

It was noted that the present project also foresees to undergo a VCS validation. The methodology approval process as required by VCS has not been finalized at the present date. It is underlined that the approved VCS methodology may impact the expected emission reductions and monitoring approaches chosen and presented in the present CCBA PDD. Currently, there is no procedure available to potentially adapt and change a validated PDD. Nonetheless, the project host decided to proceed with the finalization of the CCBA audit while the VCS audit and its methodology approval has not been completed.

Furthermore it is underlined that from the auditor's perspective a combined CCBA and VCS audit is feasible as CCBA does not foresee the actual issuance of carbon credits. Thus, no immediate risk of double counting is seen. The latter approach of one project and two standards is nonetheless crucial and will need to be considered further in the context of the pending VCS validation.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

The project documents have been published on the CCBA websites. Comments by stakeholders were invited during a period of 21 days.

The following table presents all key information on this process:

<table>
<tr><td colspan="2">webpage:
http://www.climate-standards.org/projects/index.html</td></tr>
<tr><td colspan="2">Starting date of the global stakeholder consultation process:
2008-07-20</td></tr>
<tr><td>Comment submitted by:
-</td><td>Issues raised:
-</td></tr>
<tr><td colspan="2">Response by TÜV SÜD:
-</td></tr>
</table>

5 VALIDATION OPINION

TÜV SÜD has performed a validation of the following proposed CCBA project activity:

The Juma Sustainable Development Reserve Project: Reducing Greenhouse Gas Emissions from Deforestation in the State of Amazonas, Brazil.

The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria.

In our opinion, the project meets all relevant CCBA requirements. According to the scorecard approach introduced by CCBA, TÜV SÜD considers the project to comply with GOLD status.

An analysis as provided by the applied methodology demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

Given that the project is implemented as designed, the project is likely to achieve the estimated amount of 3,611,723 t $CO_{2\text{-}e}$ $tCO_{2\text{-}e}$ in avoided GHG emissions over the first 10 years of the defined crediting period, which equals an average GHG removal of 361,172 $tCO_{2\text{-}e}$ per year.

The validation is based on the information made available to us and the engagement conditions detailed in this report. The validation has been performed using a risk based approach as described above. The only purpose of this report is its use during the registration process as part of the CCBA project cycle. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

Munich, 2008-09-30

Certification Body “climate and energy”
TÜV SÜD Industrie Service GmbH

Munich, 2008-09-30

Assessment Team Leader

Annex 1: Validation Protocol

General introduction to the CCB Standards:

This Validation Protocol Template for the CCB Standards ("Climate, Community and Biodiversity Project Design Standards") is based on or the translation of the following document:

- CCBA. 2005. Climate, Community and Biodiversity Project Design Standards (1st edition). CCBA, Washington DC. May 2005. Available at: www.climate-standards.org

The CCB Standards are designed to identify land based projects that can simultaneously deliver compelling climate, biodiversity and community benefits. The CCB Standards are primarily designed for climate change mitigation projects. They were developed by the Climate, Community and Biodiversity Alliance (CCBA). The CCBA is a global partnership of research institutions, corporations and environmental groups, with a mission to develop and promote voluntary standards for multiple benefit land use or land management projects.

The criteria of the CCB Standards comprise the following:

- General criteria
- Climate criteria
- Community criteria
- Biodiversity criteria

In all, there are 23 sub-criteria of which 15 are mandatory and 8 are optional. "Point scoring"- criteria have to be fulfilled in order to receive a "silver or gold standard". Complying with the 15 mandatory criteria, the project receives the status "approved". For the silver standard, approved projects need to receive at least one additional point from three different sections (general, climate, community, biodiversity). For a gold evaluation, six extra points have to be made with at least one point from each of the four sections. Potential tools and strategies for providing evidence that the different criteria have been met, can be found in appendix A of the standards.

The CCB Standards evaluate projects in the planning or early stage of project implementation. In order to be evaluated, the project proponents must first compile specific information about the proposed project. External certifiers will then use this information to determine whether the project satisfies the indicators associated with each given criterion.

TÜV SÜD recommends using the PDD format of the CDM under the Kyoto Protocol, as it contains many of the relevant items to be described. Extra chapters should be included on:

- Community impact monitoring
- Net positive biodiversity impacts
- Offsite biodiversity impacts
- Biodiversity impact monitoring

Table 1

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
G. General Section					
G.1. Original Conditions at Project Site					
G.1.1. Are the location of the project and the basic physical parameters (e.g. soil, geology, climate) clearly described?	2,3, 4	DR, I FV	As per PDD the location is described with the "Juma" Sustainable Development Reserve (*Reserva de Desenvolvimento Sustentável do Juma,*) Novo Aripuanã municipality, Southern Amazonas, State of Amazonas, Brazil. During the onisite visit the sources for boundary definition were discussed and confirmed. Compare section G.3.3. Among others the PDD includes key data on hydrology and geology as well as geomorphology / soils. Climate data was according to the broader and global Köppen-Geiger classification. During the onsite visit it was confirmed that the assessment compiled in the context of the creation of the Reserve has been the main source for the description of the ecological conditions in the project area. However, also in this assessment study, the results on geology and soils (and vegetation) was taken from the RADAM study on natural ressouces in the entire Amazone region carried out in the 1980ies (RADAM 1978). The underlying maps generated by RADAM have the scale of 1:1,000,000. In spite of the broad scale they continue to be the best source available. As indicated in the PDD, 13 sampling plots of RADAM are located in the project area. Hence, for the purpose of the general description of basic conditions on geologoy and soils of this large project area, the used sources are considered sufficient.	**CR 1**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Clarification Request No. 1. Differences in the project area in regard to climate conditions shall be clarified (in the PDD) and more specfic information (from nearest meteorological stations) incorporated to the PDD: **Observation:** The GIS layers in regard to soils / geomorphology are considered potentially releant relevant for the further improvement of the classification process of vegetation types. Their utilization shall be considered, if appropriate.		
G.1.2. Is sufficient information provided concerning types and condition of the vegetation?	2, 4	DR	Main vegetation types defined in the initial PDD are: • Submontane Ombrophyllous Dense Forest • Alluvial Ombrophyllous Dense Forest • Lowland Ombrophyllous Dense Forest • Pioneer Formation of Pluvial Influence The main source of information is again the RADAM study, which as differentiated among other the above indicated forest types. During the onsite visit the audit, it was noted that also Landsat Images are available, i.e dated 2002 and 2007. The latter are considerd an adequate source to comlement and / or replace the RADAM mapping (generated based on side looking Radar but then aggregated to broad scale maps), which is currently used for the differentiation of forest and vegetation types in the project area. In the context of the overflights carried out, it has been	**CAR 1** **CAR 2**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			noted that also non-forest areas were included to the project boundary (particulary of the bushland / savanah type, located on sandy soils) **Corrective Action Request No 1** The stratification (classification) of forest types within the net project area (used for initial carbon estimates) shall be adapted based on recent and high resolution satellite data (i.e. Landsat Images). Other sources and criteria (such as i.e. elevation, soils, previous intervention), which could impact the classification of forest types / carbon densities, shall be discussed and considered if adequate. Accuracy assessments of the stratification / classification results shall be carried out and included to the PDD. If there is further forest types differentiated, they are to be described in the PDD. The process of stratification shall be described (in order to assure for transparency and documented data sets, if used later i.e. as part of multiphase sampling approach for carbon inventories). **Corrective Action Request No 2** It shall be clearly documented in the PDD (including also the Monitoring Plan) that the current carbon densities associated to the (stratified) forest types have preliminar character and that they will be further specified by carbon monitoring / inventories which will be carried out for these classes before the first verification. **Observation:** The project is also undergoing a validation according the requirements of the Voluntary Carbon Standard (VCS). Consistency in the project's methodology for baseline		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			and monitoring needs to be assured.		
G.1.3. Are the current carbon stocks properly explained, e. g. by using approved methodologies for the CDM or from the IPCC Good Practice Guidance?	2,5	DR, I	Regional inventory data have been discussed and compared in the PDD. Data as compiled by Noguiera was used for estimating the carbon stock of the four different vegetation types divided in the initial PDD. **Corrective Action Request No 3** The carbon pools to be considered in the context of the project (above ground, below ground, dead wood, litter, soil organic carbon) shall be clearly identified. If any pool is not considered, it shall be documented and sustained why it is conservative to do so. **Corrective Action Request No 4** The utilized tables indicating the results of regional studies on carbon stocks shall be furthermore structured according to the pools considered, as well as other key parameters applied (i.e. ranges of DAB considered, form factors, RS, CF, BEF,) in order to allow a straigth forward comparison of the results and an estimate of conservativeness of the data applied. In case that there is furhther forest types differentiated through the classification / stratification process, document (conservative) choices in the association of carbon densities. **Corrective Action Request No 5** All tables (i.e. table 02) need to carry clear labelling in regard to units (t/Mg, ha, C etc).	**CAR 3** **CAR 4** **CAR 5**	☑
G.1.4. Are the communities in and around	2,6,7	DR, I	Information due to the last social inventory are provided	**CAR 6**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
the project area adequately illustrated including basic socioeconomic information? This should be done using appropriate methodologies such as the livelihoods framework.			in the PDD in regard to: • Housing • Sewage • Energy • Subsistence (manioc, fruit) • Education • Health • Economy • Income (fishing, hunting, fruit, timber, nuts, oil) • Transport (by boats) According to recent assessments 1138 people are living in 27 communities within the Reserve (thus directly neighboring to the boundary of the project area). As confirmed during the onsite visit, this data was gathered by field visits in the context of the Bolsa Floresta programm carrried out in June 2008. The inquiry sheets for gathering data were reviewed during the onsite visits. During the onsite visit it was furhtermore clarfied that some additional families / communities living within the Reserve have been identified. As part of the onsite interviews by the audit team, several community inhabitants (of the communities at the rivershore) sustained that there is currently rather a migratory trend to the local Municipality of Novo Aripuanã (leaving the Reserve) rather than migration towards the Reserve. Based on anecdotical evidence obtained through local intereviews, the latter might be considered different for the area along the only road, which passes through the Reserve. In these areas traditional “land grabbing” was ongoing (especially until the recent creation of the reserve). Some further land grabbing might be ungoing. It	**CR 2**	

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			was reported that increased law inforcement and reduced probabilities to obtain land tiles after Reserve creation already slowed settlement processes to some extent. Compare discussion on Leakage (CL 2) **Corrective Action Request No 6** Additional communities that were identified after the PDD definition shall be included to a revised PDD. Corresponding maps shall be updated. The maps shall be complemeneted with a list of all communities (population and GPS coordinates) included to the PDD in order to assure for full documentation. **Clarification Request No. 2.** It shall be clarified in the PDD if the analysis of communities also considered communities that are located outside the Juma Reserve.		
G.1.5. Is the current land use as well as the land tenure at the project site clarified?	2,3, 9,22	DR, I	The land use is forest conservation area, as declared by the authorities of the State of Amazonas. A description of the different forest types present in the Reserve is included to section G.1.2. In regard to the Reserve, it is indicated in the initial PDD that main land use with 98.9% is natural forest. Only 1.1% have been cleared due to illegal logging. The actual boundary will only include forest areas. All other areas with intervention were excluded. Corresponding mapping processes are considered to be able to comply with this task with sufficient accuracy. The Reserve contains State land. Within the Reserve there are about 20 private land title	**CAR 7**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			claims, which have not been registered yet on an area of 16,865.4 ha. These areas have been excluded from the project area. It was clarified that the geographic data of these claims have them provided by the authority in charge, which is ITEAM. Hence, official and independent sources were used. It was sustained through interviews that the land title claims are not related to people actually living on or of these remote peaces of lands. Thus, it is estimated that there is no risk of displacement of people in case that the scheduled review of the title claims leads to a confirmation that land ownership is held with the state. The state category of the protected area is: Reserve for Sustainble development, which may include private property (as well as activities of sustainble management). In regard to carbon rights, it was taken note of a letter including a preliminary assessment of the legal aspects of forwarding carbon rights from a perspective of the State of the Amazonas. **Corrective Action Request No 7** Land ownership and access to carbon rights of all lands included to the project boundary shall be monitored over time and therefore included to a monitoring plan. **Observation:** If this activity is intended to generate issued carbon credits, i.e under VCS, it shall be clarified through further legal analysis, which state and/or federal entity(ies) have the mandate to forward carbon rights based on voluntary activities on state land. This item is considered relevant if cabon rights are acutally to be forwarded from FAS to another entity (current contractual agreements with the donor (compare Art 4.c) are not considered to explicitly		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			do so).		
G.1.6. Are the current biodiversity conditions and threats characterized (using e. g. a key species habitat analysis or a connectivity analysis)?	2, 3	DR,I	The newly created Reserve was defined based on previous workshops, which defined priority areas for conservation. Thus, conservation and bioidiversity protection is actually a core activity objective. In the creation phase of the Reserve, rapid assessments of biodiversity were carried out and compiled in the corresponding study. The documentation has been reviewed and is considered appropriate to sustain and describe biodiversity conditions in the region. Due to richness in biodiversity of the area, documentation and monitoring is considered complex. Further studies have characterized the region. During the onsite visit it was clarified that monitoring of biodiversty is carried out embedded and according to the programm PROBUC, promoted by state authorities. Compare section B.3. The main threats are considered to be related to deforestation, which is briefly described in the PDD. **Clarification Request No. 3.** The current biodiversty conditions in regard to flora shall be documented in the PDD. **Clarification Request No. 4.** In section G.1.6 the biodiversity conditions are described while section B.3 indicates the monitoring approach. Clarify the consisteny between initial assessment and monitoring (and the corresponding methods of assessment used) and indicate to which extend these results will allow a qualified comparison.	**CR 3** **CR 4**	☑
G.1.7. Is substantial and appropriate ref-	2	DR,I	Adequate references have been indicated in the PDD.	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
erence material for question G.1.6. provided?					
G.1.8. Are species that belong to the IUCN Red List and / or on a nationally recognized list (the latter if available) found within the project boundary? Is a list available? (also B1)	2	DR,I	A list of IUCN with threatened species found within the project area has been included to the PDD. The species considered were identified by comparing the results of the initial assessments with the corresponding online database. It is indicated that the lists have initial status and are likely to receive furhter expansion once further assessments are carried out. As the project itself is not considered to pose a threat for the biodiversity conditions and in light of the abundance in biodiversity, the work approach of further perfection of corresponding lists in line with furhter assessment work is considered acceptable. **Clarification Request No. 5.** Clarify the work approach in the generation of the list as currently included to the PDD, and if all species included to the initial assessment have been checked in regard to their Red list status. (Note: in PDD it is indicated that only Mammals are considered while the table includes further categories). **Corrective Action Request No 8** It shall be revisited at verification if the list of threatened species found in the project area has been updated. Thus, this activity shall be monitored.	**CR 5** **CAR 8**	☑
G.2. Baseline Projections					
G.2.1. Is the most likely land-use scenario in the absence of the project activity plausibly identified and described in de-	2, 11	DR, I, FV	A description has been included to the PDD. The SimAmazonia I (simulation program) projections indicate that the region where the Juma Reserve is located	**CAR 9** **CR 6-9**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
tail?			is highly vulnerable to deforestation. In the initial PDD, the simulations indicate that up to 75,4% (444,541 hectares) of the forest within the Reserve will be deforested by the year 2050. For the actual project boundary (to be adapted, Compare Requests above) deforestation is estimated up to 2050. Further land use developments and changes posterior to deforestation are discussed broadly based on a regional study (Fernside 2006) During the onsite visit it was clarified that the basline assumptions shall be revisted after 10 years. **Observation:** Potential adaptation of boundary if re-run of model is necessary (in order to include only areas under threat of deforestation). It was noted that the publication of SimAmazonia model has been achieved in peer reviewed journals. The model has been "validated" (based on more current deforestation data and a modelled Business as usual scenario) and at a large scale of i.e 50x50 km. The latter generated accuracies in the range of 63 % for 2002 and 90% for 2007. **Corrective Action Request No 9** The applicability of SimAmazonia I to accurately and conservatively model the expected deforestation for the project area shall specified in further detail in the PDD. This shall include - a list and description of the most relevant deforestation drivers for the project area (as considered in model layers; such as road construction, conservation unit, migra-		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			tion, etc) - A sustained analysis if and why embedded assumptions on these drivers lead to conservative deforestation estimates for the project area. Discuss in detail a) the relevant sub-regions / strata of the model and its main characteristics (and how the “rate of anthropogenic pressure” of the model matches with conditions in the project region). b) a detailed discussion of the PRODES data set considered. As part of this, provide evidence on deforestation rates considered in the model, and estimate how the generated results on deforestation would change if a wider reference times was covered (i.e. in regard to average deforestation and inter-annual variability). (Note: consistency with VCS methodology drafts on historic deforestation rates of (5-)10 years). c) the relevance of road construction in the specific project context. Provide evidence on planned road construction and reasoning if / why the model is conservative in this aspect. d) the consideration of conservation status of the project area. The choice of scenario in the model shall be consistent with decisions on the creation of reserves by the state and the chosen starting date of the project activity. **Clarification Request No. 6.** Clarify and potentially consider uncertainties in regard to deforestation estimates in project area due to 1x1 km cell size of model (versus i.e. 30x30 m in Landsat images used for boundary definition / forest classification). **Clarification Request No. 7.** Clarify and potentially consider uncertainties related to the deforestation model. Conservativeness of estimates shall be assured.		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Clarification Request No. 8. Summarize in the PDD (and consider to document internally) how the Model results on deforestation have been processed and overlayed (in a GIS environment) with the project boundary in order to arrive at the deforestation (per forest type). **Clarification Request No. 9.** A list with the main sources used in the SimAmazonia Model shall be included to the (annex of the) PDD, indicating for which parameters these sources were used and which timeframes of data they covered, if applicable. **Observation:** In general, consistency with envisioned VCS approach shall be assured.		
G.2.2. a) Has a projection of future carbon stock changes in the absence of the project been adequately described?	2, 12, 13	DR, I, FV	The future carbon stock change in the baseline scenario has been included to the document. In average a remaining stock level of 15 % of initial stocks has been assumed in the context of the model (not considered for calculations). An overview table with biomass load per ha in different land use classes are presented based on results of Fernside 2006. A global estimate of 28,5 t C per ha is assumed as the average remaining carbon stock for all vegetation types. Table 05 presents the output of the SimAmazonia Model. Further excel spreadsheets have detailed the calculation for the project area. **Corrective Action Request No 10** Deforestation and stock changes should be indicated in the PDD for individual forest class, while consistency with	**CAR 10** **CAR 11** **CR 10** **CR 11**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			adapted boundaries and the identified and mapped forest types is be assured. For reasons of transperancy, include main table from excel spreadsheets / Data RED area to PDD. (If table 05 and 09 remain unchanged, labelling of vegetation type, Da, Db etc, needs to be explained). **Corrective Action Request No 11** In regard to the assumptions of carbon stocks remaining after deforestation activities it shall be clarified and sustained further to which classes / land uses the deforested areas are likely to be switched to. - the regional Fernside study that was applied should be compared to local conditions and most likely land use changes shall be confirmed for the specifc conditions of the project area (i.e using local land use statistics), - the aspect of residence within one land use class shall be discussed (as currently the immediate switch to equilibrium stage is assumed; equilibrium is achieved after about 20 years) - discuss conservativeness of carbon stocks in land use classes used by Fernside by comparison to other recognized sources (i.e. IPCC) **Clarification Request No. 10.** Negative values in baseline emissions included to table 05 (and also table 09) shall be explained. **Clarification Request No. 11.** Clarify for all processes and estimates relevant to the project's calculation of emission reductions how uncertainties have been considered (ie. boundary definition, carbon density estimates, modelling, etc.)		
G.2.2 b) Do existing laws and regulations not require the project activity to be underta-	2,3	DR, I, FV	The project is hosted by FAS. The project activity and its implementation involve different public agencies as part-	**CR 12**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
ken anyway?			ners (compare management section below). Partly the same agencies are involved with conservation activities in other (conservation) areas in the State of Amazonas. Most prominent examples are considered to be the Bolsa Floresta Programm and the Biodiversity Monitoring Programm (PROBUC). Also improved enforcement activities are planned (compare Request below on definition of specific project activitites). The project area is part of a Reserve which was recently created for conservation purposes. Thus, conservation measures are a legal task to be complied by state authorities. During the onsite visit it was analyzed that public measures and activitites directed towards conservation within the protected areas are widely absent and / or systematically and / or partly not inforced. Conservation authorities have confirmed the absence of publicfunding for conservation measures. **<u>Clarification Request No. 12.</u>** It shall be described in detail in the PDD, if the project participants (and partners) involved and their specific contribution to the project activtities are part of a corresponding legal obligation of these entites. For the relevant entitie, it shall be described and sustained with evidencne to what extent these regular obligations are complied with under the baseline setting. Only project specific activities that can be considered a surplus to regular tasks and performance shall be considered. (Note: additionality test as defined for the CDM for VCS validation)		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
G.2.2 c) Are future carbon stock changes under the scenario in G.2.1. properly anticipated? The timeframe for this should be either the project's lifetime or its accounting time.	2	DR, I, FV	In the initial PDD, calculations are carried out for a timeframe of 50 years. **Corrective Action Request No 12** Baseline as well as project scenario calculations are to be updated in line with the request for baseline revision at year 10. Results and accumulated values shall be documented correspondingly.	**CAR 12**	☑
G.2.2 d) Are proofs available evidencing that non-CO_2 GHGs such as CH_4 or N_2O account for more than 15% of the baseline GHG fluxes at the project site (in terms of CO_2 equivalents)? If so, are these emissions estimated appropriately?	2	DR, I, FV	For the baseline, non-CO_2 emissions are not discussed, included or estimated in the initial PDD. For section CL1.2 / project scenario it is indicated that no other gases are considered. **Corrective Action Request No 13** A list of emissions (gases as well as sources) relevant to the project and considered (under baseline and project scenario) shall be clearly included to the PDD. Calculate the contribution of non-CO_2 gases if applicable. Discussion on relevance of non-CO2 gases.	**CAR 13**	☑
G.2.3. Does the baseline scenario describe the effects on the local community in the project area?	2	DR, I, FV	It is expected that continued deforestation affects the following activities of the communities: timber extraction for building houses; non-timber forest products for domestic consumption and supplemental income (Brazil nuts, *copaiba* oil etc), and a decline in prey and fish populations for subsistence hunting and fishing. Potential conflicts with land grabbers are mentioned. Community impacts of the baseline scenario are expected to be negative. The description of negative baseline effects on communities is considered credible. **Clarification Request No. 13.** Clarify in last paragraph of G.2.3 as well as in section G.3.1 the wording on "State Government action" and if project activities or non-project activities are meant. Cur-	**CR 13**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			rently it is considered that State action (versus activities of participants) is put equal to project activity. This needs to be clarified and terminology shall be used consistently throughout the PDD.		
G.2.4. Does the baseline scenario describe the effects on biodiversity in the project area in a sufficient manner?	2	DR, I, FV	In essance it is indicated in the PDD that continued deforestation would affect biodiversity negatively in the region. The description of negative baseline effects on biodiversity is considered credible.	☑	☑
G.2.5. Does the baseline scenario describe the effects on the water and soil resources in the project area?	2	DR, I, FV	The PDD includes a generalized description of the influences of deforestation on water and soil ressources. Deforestation by fire will lead to strong erosions of soil as no plant material will protect the above ground soil. This affects also the nutrient storage in the soil. The description of negative baseline effects on water and soil ressources is considered credible.	☑	☑
G.3. Project Design & Goals					
G.3.1. Are the scope of the project and a summary of the major climate, community and biodiversity goals demonstrated?	2	DR, I, FV	It is indicated that the project is characterized by the creation and implementation of a Protected Area on an area that would be practically fully deforested on a "business as usual" scenario. The project is scheduled to implement the actions to control and monitor the deforestation inside the project's boundaries, also reinforcing the law and improving the welfare of the traditional communities. Main project scope is to avoid deforestation by supporting forest control as well as measures directed to developement alternatives and incentives to the local communities.	**CR 14** **CR 15**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			The audit team noted the incorporation of an extended number of project partners. **<u>Clarification Request No. 14.</u>** It shall be sustained with secondary evidence how the involved institutions have formalized their cooperation and if corresponding agreements / contracts include indications on the claim and recognition of ownership of carbon rights generated through this project activity. Contracts on carbon rights shall be monitored. **<u>Clarification Request No. 15.</u>** The concrete contribution in regard to project activities of the different participants / partners shall be specified in the PDD. (compare section G.2.2 and the Request that it shall be clearly indicated how these contributions in project activities are additional to regular tasks)		
G.3.2. Is each major project activity (if more than one) and its relevance towards achieving the project's goal described?	2	DR	Two major project activities are indicated in the initial PDD: 1) The development and implementation of the Management Plan for the reserve. 2) The generation of funds from carbon credits through reducing greenhouse gases emissions from deforestation (RED). The generation of funds is considered an objective of the participants rather than an acitivity. The implemenation of the Management Plan includes: • Monitoring and law enforcement • Income generation through sustainable business development • Community development, education and scientific re-	**CAR 14**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			search • Direct payment for environmental services (Bolsa Floresta Program) It was taken note of the fact that currently a Management Plan for the Reserve is under development, taking special enfasis on participatory aspects. The audit team has participated in a constituatory session of the association of inhabitants of the reserve during the onsite visit, which is considered an important player for the "Councel for the Reserve Management" to be established by different entities according as foreseen by state legislation. This councel will then also approve the Reserve Management Plan (process supported by CEUC). For the specific carbon project, development measures are designed in order to lower pressure from inside the Reserve on the forest ressources. It was indicated in onsite visit that the project / FAS supports forest control and enforcement (in cooperation with IPAAM y CEUC). It is indicated that the project design will inlcude an endowment fund which channels funding from carbon merchandising to the project. **Obeservation:** In regard to the envisioned endowment fund, the audit team considers that robust and stable structures that are resistant to political influences are important to assure for long term project success. **Corrective Action Request No 14** The detailed and specific desciption of the actual project activities shall be included to the PDD and the relevance to achieve emission reductions shall be described.		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Note: It shall be assured that the claimed emission reductions are fully attributable to the project activity. Thus, it shall be documented (and assured through monitoring) that only those reductions are considered that are achieved through specific project activities. This is considered most relevant in regard to forest control measures which partially not part of the project activity.		
G.3.3. Is the project location clearly described including a map with the major activities and georeferenced boundaries?	2, 17	DR, I, FV	An overview map of the reserve has been included to the document. Reserve limits were obtained from official sources and authorities in charge. It was noted that the project team related the project boundary primarely to the limits of the Juma Reserve. Also areas which a) remain prestine according to the baseline deforestation model and b) areas with unclear land tenure or non-forest cover were included to the boundary as included to the initial PDD In regard to item b) the project team considers to expand the project area (in a second phase), if the land title claims currently under consideration show to be unsustained and therefore may possibly be included to the project (also for reasons of transparency in regard to the claims on carbon benefits only areas under control of the participants are included). Only the net project area (considered under baseline and project scenario) shall be included, among others in order to assure for a clear monitoring basis. Therefore it is considered necessary that the boundary is adapted accordingly (including only areas with forest cover considered under threat of deforestation according to baseline model). **Corrective Action Request No 15**	**CAR 15** **CR 16** **CR 17**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Please adapt the project area and include only forest area, which is going to be impacted by the project. Define the criteria applied to defined forest areas (forest definition). Provide a corresponding map / shape file (GIS) for the "carbon credit area" only. **Clarification Request No. 16.** An overview table of the data layers used to define the net project area and its corresponding sources shall be included to the PDD. **Clarification Request No. 17.** In regard to the definitions of data layers used to define the net project area (i.e. buffers from roads, spacial limits of communities, deforested areas) clarify and describe the work approach in the PDD and sustain how it was assessed that these choices on boundary definition are adequately and conservatively reflecting field conditions. **Observation:** If at all possible, a potential expansion of the boundary at a later point of time will need to comply with the requirements of the chosen standard and methodogoly and might require, (partial) revalidation.		
G.3.4. a) Is the project's timeframe clearly characterized? Is a rationale provided for fixing the project's lifetime?	2, 15, 16	DR, I, FV	In the initial PDD the project activitiy is indicated to start with the creation of the Reserve (July 3rd, 2006). The beginning of the crediting period is January 2008 the date by which the preparation for the project's field activities started. Ending date for the crediting period: January 2050. Evidence was received that after the signing of a contract of payment with a donor, first field activities were carried out as part of this particular project.	**CAR 16** **CAR 17** **CAR 18** **CAR 19**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			The creation of the Reserve is considered part of the policy of the Authorities of the State of the Amazonas to expand conservation areas. It was noted that state legislation includes the option to utilize sources from Payment for Environmental Services (PES) to finance Reserves. A further law sustaining the creation of a Reserve does not include specifications on carbon projects. In essence, the audit team comes to the conclusion that the general policy of the State may be considered innovative by incorporating the concrete option of the utilization of funds from PES. However, the latter focusses on the state level and is considered mainly of contextual relevence when focussing on a particular starting date of an activity. No concrete evidence was received that at the point of time of the creation of the Reserve, the present project and its components were already defined and scheduled. (Compare additionality test as foreseen by VCS) **Corrective Action Request No 16** The format of starting and crediting date should be used consistent (format DD/MM/YYYY). **Corrective Action Request No 17** The starting date needs to be consistent with the start of real action as part of the project activity according to the indications of the audit team in section G.3.4. **Corrective Action Request No 18** Crediting period remains to be adapted so that crediting starts with jointly with the starting date (as otherwise there could be emissions not considered). **Corrective Action Request No 19** An operational project lifetime shall be defined. It is not		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			considered possible that the project lasts forever.		
G.3.4. b) Is a rationale provided for fixing the project's life time?	2	DR,I	The rationale for this time period has been provided, by indicating that all calculations are carried out until 2050. See Section G.3.4 a)	**CAR 16-19**	☑
G.3.4. c) If applicable, is a reason delivered for the life time differing from the accounting period for carbon credits?	2	DR,I	The accounting period is at least equal to the project life-time. The latter is considerd adequate. See Section G.3.4 a)	☑	☑
G.3.5. a) Are likely risks to climate, community and biodiversity benefits outlined?	2	DR,I	A table (No. 08) indicates the expected risks from short-term to log term. **Corrective Action Request No 20** The risks included and described should be differentiated towards risks for climate, community and biodiversity benefits. Specify further how deforestation could occur inspite of the project action and put project benefits at risk (deforestation risk)	**CAR 20**	☑
G.3.5. b) Are measures planned against these risks in G.3.7. explained?	2	DR,I	Measures undertaken to mitigate these risks have been included in table 08 in the PDD. See Section G.3.5	☑	☑
G.3.6. Have the local stakeholders been well defined including documents on this definition?	2,3, 18 19	DR,I	Stakeholders were first defined by the studies on the creation of the Reserve. The informatin is also considered to be applicable to the project. For the particular project it was demonstrated with evidence that a regional meeting and also interviews with communities were undertaken. Recent activities prior to the present validation were mostly related to the "Bolsa floresta" programm, which is part of the project. It was noted that the participation in Bolsa Floresta is not fully complete.	**CAR 21**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Last community meetings occurred on 23 June 2008 with discussion on the project and the Bolsa Floresta Programm in local schools. **Corrective Action Request No 21** Specifically list and document core stakeholders defined in the corresponding PDD section (including titles / names). **Observation:** Consider to include to documentation other authorities/entities beyond local level, and how they have been consulted.		
G.3.7. Is transparency secured? Have all project documents been publicly available at or near the project site? Have local stakeholders been informed how the documents can be accessed? Have key documents been made available in local or regional languages? Has information withhold really to be considered confidential?	2	DR,I	In the PDD it is documented that relevant information will be made publically available through the Website of the Fundação Amazonas Sustentável – FAS (www.fas-amazonas.org); and that these documents will also be made available at the operational bases of the project located in the Juma Reserve and adjacent areas. During the onsite visit it was confirmed that the project team schedules to make documents available locally (in portugues as the local language) and to further inform stakeholders on accessibility. The sessions held in the communities on the project – which are complementary to those held once the Reserve was created - have informed and given the opportunity to comment on the project for local communities. In vision of high illiteracy rates in the area this approach is considered adequate. It was noted that the local communities view the carbon project to be one unit with the entire set of activities directed to Reserve management and conservation.	**CAR 22**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			As part of the audit process the PDD has been published on the CCBA website for commenting. **<u>Corrective Action Request No 22</u>** It shall be specified in the PDD how access to documentation and the option to comment will be achieved and first action to comply with this task shall be clarified. The option to access project information and comment shall be monitored over time and compliance revisited at verification.		
G.4. Management Capacity					
G.4.1. Does the management team have enough experience with regard to land management projects? Is documentation on this issue available?	2	DR,I	FAS has demonstrated to have installed the corresponding technical capacities. While the organization is relatively new, the staff contracted counts with the relevant expertise. Main staff capacities are concentrated in Manaus, which is in distance of a daytrip by boat to the project area (or costly air travel). Additional staff is being contracted on the local level. The latter approach is considered adequate for the starting phase of the project. Local representation and sustained presence in the area is crucial is considered crucial for the implementation phase. Through local interviews it has been demonstrated that also the partners count with the needed capacities, which are: • Secretaria do Meio Ambiente e Desenvolvimento Sustentável do Estado do Amazonas, SDS • Centro Estadual de Unidades de Conservação, CEUC	**CARs above**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			• Centro Estadual de Mudanças Climáticas, CECLIMA • Amazonas Sustainable Foundation - FAS • Instituto de Conservação e Desenvolvimento Sustentável do Amazonas, IDESAM The audit team was informed that CEUC and the Bolsa Floresta Programm as well Units of SDS are expanding their teams, which is also related to the project. **Observation:** See above. Other Requests underline the formalization of cooperation between project partners (in regard to activities pledged to the project and carbon rights), specification of project activities, and limitation to additional activities of the partners.		
G.4.2. If relevant skills are lacking, will appropriate partners implement the project?	2	DR,I	It is indicated that an experienced team will be available. **Clarification Request No. 18.** Concrete capacitiy building measures for the project team shall be clarified (i.e in a secondary document on project implementation).	**CR 18**	☑
G.4.3. Is the management capacity adequate for the scale of the project?	2	DR,I	The involved institutions are described. The management capacties analyzed and encountered as part of the audit are considerd adequate.	☑	☑
G.4.4. Are key technical skills necessary for a successful implementation documented? Are members of the management team or project partners identified who possess appropriate skills?	2	DR,I	Technical skills are necessary i.e. in regard to forest control measures as well as activities directed to sustainable development. The project team is considered to have corresponding skills and it has been demostrated that defined proccesses for the selection of additional personnel are followed.	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
G.4.5. Is the financial of the implementing organization(s) documented?	2, 20	DR,I	A description of the financial situation of FAS at point of creation, a description of the relevanve of PES schemes for the State's conservation policy, and background information on the cooperation with the donor have been included to the PDD. As part of the audit, documentation on the recent creation of FAS has been reviewed. It was clarified that a financial auditor will review financial health in future. No indications have been received that the financial health of FAS is at risk. It has been taken note of an initial investment plan for the next 4 years described in table 13 of section CM.1 in the initial PDD. No sources of income are considered (other than carbon merchandising). **Clarification Request No. 19.** Currently an investment plan is presented that incudes expenses by FAS for 4 years. If the project includes funds (services) of partners other than FAS, it shall be clarified if these are to be considered in an overall project budget. If applicable, adaptions shall be carried out in order to have an overview of the total of annual project finances/costs. **Clarification Request No. 20.** Overall financial feasability shall be clarified for periods beyond the initial phase (i.e. considering estimated yearly costs of implementation, updated emission reduction estimates and conservative carbon price estimates).	**CR 19** **CR 20**	☑
G.5. Land Tenure					
G.5.1. Is it guaranteed that the project will	2, 16	DR,I	Compare G. 3.3:	**CAR**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
not encroach unwontedly on private property, community property, or government property?			Areas with title claims are excluded. Only the state property was considered. The ceation of the Reserve is considered to underline state property status. Compare Requests in G.1.5: Land ownership status shall be monitored over time and included to the monitoring plan.	**above**	
G.5.2. Is no relocation of people occurring or, if the case, is any relocation necessary 100% voluntary and helping to resolve tenure problems in the area?	2, 3	DR,I	In the initial PDD the legal basis, the possibility of expropriation and compensation is discussed for land title claims. For areas within the project boundary, FAS confirmed during the audit that no relocation of people is foreseen. For areas inside the boundary it has been indicated that there is no people living on claimed lands.	☑	☑
G.5.3. Is "in-migration" from surrounding areas likely to take place? If relevant, is the project's response appropriate?	2	DR,I	Migration into communities is prohibited unless it is approved by the Reserve's Advisory Council. Communities are located in neighboring areas to the project boundary. Benefits of the Bolsa Floresta Programm will be granted once people are living in communities for more than 2 years. Thus measures to limit in-migration have been defined. It is considered that increased deforestation around communities would be detected through regular monitoring of forest cover.	☑	☑
G.6. Legal Status					
G.6.1. Is any law violated by the project activity?	2, 21, 22	DR,I	The PDD describes the analysis that has been carried out regarding any legal conflict in regard to the project activity. The conclusion of this analysis determined that there were no conflict between the Juma RED Project and the relevant State and Federal regulations. No indications have been received that the project op-	**CAR above**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			poses or infracts legal requirements or laws. The indicated legal statement by Lopes 2007 has been considered and reviewed. Compare indication on G.1.5 for legal analysis on carbon rights.		
G.6.2. Are all documents available evidencing that the project has or expects to obtain all approvals necessary from the relevant authorities?	2, 3, 24, 25	DR,I	The project activity as currently designed is considered to be in line with the legal requirements. Further approvals may become necessary but are not considered a substantial risk to exclude project implementation (see below) SNUC The national legislation for conservation unities was established in July 2000 with the creation of the law 9.985 establishing the National Sistem of Conservation Unities (Sistema Nacional de Unidades de Conservação - SNUC). One of the modalities of conservation unities regulated by the SNUC law in the article 20 is the Sustainable Development Reserve (Reserva de Desenvolvimento Sustentável – RDS), which is the case of Juma. RDS is defined as an area inhabited by traditional population whichs livelihoods relys on sustainable systems of natural resources exploitation. The RDS is managed by a Concil (Conselho Deliberativo) lead by the government agency responsible for the reserve and composed by representatives of the different government agencies, NGOs and communities. For Juma Reserve the RDS Council was under creation while the audit was carried out. SEUC	**CR 21**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Each state is allowed to create its on legislation on conservation unities – by definition, the local legislation can be more strict but not more flexible than the national. In June 2007 the Amazonas State approved the creation of the State Protected Areas System (SEUC). The definition of RDS in given in the article 21 and the use of areas by communities in the article 75. The assessment study on the creation of RDS Juma has been approved by the authorities in charge. The management plan for the RDS is still under elaboration while the audit was carried out. Large overlapps with project activities may be expected. The Management Plan remains to be approved by the RDS Council. **Clarification Request No. 21.** While the project activity is largely in line with the objectives of the RDS, it remains to be analyzed if the project activity will require the RDS Council's approval. This is pending as the Council is still in creation process. If the latter is the case, approval shall be scheduled (and confirmed with first verification).		
G.7. Adaptive Management for Sustainability (optional)					
G.7.1. Is it demonstrated that management actions and monitoring programs are designed to generate reliable feedback that is used to improve the project's outcome?	2, 26	DR,I	In the PDD it is indicated that the project applies: • Planning of the management and strategic mapping (Matrix on strategic analysis – CUTE or SWOT; Balanced Scorecard – BSC; Demonstrative Management Panel); • Effectiveness indicators for the implementation of protected areas; • Monitoring of social and economic indicators within	**CR 23**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			the project lifetime • Monitoring of the population migration It is indicated that the results will provide input for management and design adaption. In the creation phase of the Reserve, participatory planning of necessarties and activities in the Reserve has been applied. **<u>Corrective Action Request No 23</u>** In regard to adaptive management: It shall be specified in the PDD how feedback loops will be installed concretely in the project management practices, and specify also contents of Araujo (2007) on proteted areas management in the PDD.		
G.7.2. Does a management plan exist for documenting decisions, actions and outcomes and is this information shared with others within the project team? This should secure that experience is transferred rather than lost when individuals leave the project.	2	DR,I	It is indicated that there will be a management panel, a quarterly report and an executive committee. These elements of management were found to be installed. **<u>Clarification Request No. 22.</u>** Provide a procedure / guideline (i.e. as part of internal process documentation) for documenting decisions, actions and outcomes and how this information is shared.	**CR 22**	☑
G.7.3. Is the project design flexible enough to accommodate potential changes? Are processes defined or in place to adjust project activities as needed?	2	DR,I	It is indicated that SDS follows a systematic monitoring to reduce uncertainty over time, and that this system allows for the integration of lessons learned into the project and the manner in which SDS operates. It is furthermore indicates that FAS will follow the management plan of the Reserve. The relation of these management processes to the	**CR 23**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			acutal project **<u>Clarification Request No. 23.</u>** The relevance of the described monitoring (as generally implemented by SDS) for the actual project activities remains to be further described and clarified in section G.7.3. A procedure for adjustments of project activities remains to be defined and made available.		
G.7.4. Are proofs available for an initial commitment towards long-term sustainability (beyond the end of initial financing)?	2	DR,I	In this section of the PDD long term financing of the project is discussed. Beyond this, long term sustainability commitments are not described in this section. However, the project is considered to contain a strong sustainability focus. I.e. it is part of the scope to provide local communities with development alternatives to forest harvesting. Thus, additional funding directed to the project would promote sustainability.	☑	☑
G.8. Knowledge Dissemination (optional)					
G.8.1. Are relevant or applicable lessons learnt documented sufficiently?	2	DR,I	In general terms it is indicated CEUC uses a documentation approach for its activities and that this approach will also be applied to the Juma Project. Documents are going to be made available via the internet. In sectoin G.8.2 it is discussed that the entire project generates lessons leaned as one of the first RED projects in Brazil. Experiences are going to be spread through publications, conferences etc. It has been noted that knowledge dissemination is scheduled but that corresponding activities are only broadly defined at the early design stage of the project.	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Observation Consider to specify and include "knowledge dissemination" to monitoring.		
G.8.2. Is it described how the generated lessons learned (G.8.1.) are disseminated in order to encourage replication of successful practices?	2	DR,I	See above G8.1.	☑	☑
CL. Climate Section					
CL.1. Net Positive Climate Impacts					
CL.1.1. Is the methodology used to estimate the net change in carbon stocks developed by IPCC GPG or approved by the CDM Executive Board? The net change is equal to carbon stock changes with the project minus the ones without the project.	2, 14	DR,I	The simulation model SimAmazonia I has been used for the calculation of deforestation rate. For an *"ex-ante"* estimation of the carbon stocks of the project, the values for the carbon stocks presented in by NOGUEIRA (2008) were used. See section G1.3 on baseline details. In the initial PDD a complete stop of deforestation in all vegetation types is assumed. **Corrective Action Request No 24** The compliance with IPCC GPG requirements (as requested by CCBA) shall be discussed in detail in the PDD. **Clarification Request No. 24.** Clarify in the PDD how the quantity of avoided deforestation was assessed. Currently assumed complete deforestation stop is not considered conservative and shall be adapted. (in this context, compare Requests above on main deforestation drivers and further specifications on project activities designed to stop deforestation. This shall be put into context with / related to the assumed reduction of deforestation)	**CAR 24** **CR 24** **CR 25**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Clarification Request No. 25. Clarify in the PDD if / how the location of avoided deforestation has been defined and how location (respectively carbon densitiy at a specific site) is considered in an overall conservative estimate of the preserved carbon stocks / reduced emisssions (i.e. relevant if specifc forest types would be better protected than others). **Observation** Consider to document the calculations carried out in step wise approach in the PDD.		
CL.1.2. Are the assumptions about how the project activities will alter carbon stocks over the duration of the project or the project accounting period clearly defined and defendable?	2, 14	DR,I	See CL 1.1 above. The project accounting period is defined up to 2050 according to SimAmazonia. Intermediate baseline reassessment was requested.	**CAR above**	☑
CL.1.3. Are the assumptions about how the project activities will alter non-CO2 GHG emissions over the duration of the project or the project accounting period clearly defined and defendable?	2, 14	DR,I	Non-CO_2 gas emissions are not considered in the project emissions. They are not considered significant. See section G.2.2 and included Requests on gases and sources to be considered. . **Observation** In line with previous Request negative numbers in table 09 need to be clarified / corrected also in this section. In line with previous Request: In regard to other gases / sources, relevance shall be dicussed and if applicable emissions shall be assesed (i.e. transport).	**CAR above**	☑
CL.1.4. If the non-CO2 gases CH4 and N2O are likely to account for more than 15% (in terms of CO2 equivalents) of the project's overall GHG impact, are these to gases factored into the net change cal-	2, 14	DR,I	Not applicable. Non CO_2 gases are not accounted for.	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
culations?					
CL.1.5. Does the project clearly demonstrate that the net climate impact of the project (including changes in carbon stocks and non-CO2 gases where appropriate) will give a positive result in terms of overall GHG benefits delivered?	2, 14	DR,I	The Juma RED Project estimates to prevent several million tons of CO_2 from being released into the atmosphere. A net climate impact can be expected	☑	☑
CL.2. Offsite Climate Impacts ("Leakage")					
CL.2.1. Are the potential offsite decreases in carbon stocks (increases in emissions or decreases in sequestration) due to project activities properly estimated?	2	DR,I	In the initial PDD the indicates reasons for leakage are: (1) Deforestation by populations that were required to leave the reserve (expropriation) and therefore had to clear new areas of forest to replace those already cleared within the reserve; (2) Deforestation by residents of the reserve who, for some reason, cleared forest outside the reserve. In the PDD, the project participants expect neither of the indicated types of leakage to occur. The audit team considers that it is adequate to assume that the project will not trigger mayor migratory processes from the communities inside the Juma Reserve / in the direct neighborhood to the project boundary to other forest areas (in-out leakage). This estimate is also related to the fact that the project contains a strong development focus. However, the interviewed community members confirmed that currently there is a tendency of migration to the closer cities parting from the communities within the Reserve (especially due to the fact that no advanced shools are available in the communities). **Corrective Action Request No 25** Migration from the communities inside the Juma Reserve	**CAR 25** **CR 26** **CAR 26**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			to other forest areas shall be monitored (as part of Climate Impact Monitoring / CL.3). **Clarification Request No. 26.** In the PDD it is indicated that Leakage will be detected through monitoring. Clarify and specifiy the monitoring activities carried out in regard to Leakage i.e. in sourrounding areas (as part of Climate Impact Monitoring / CL.3). **Corrective Action Request No 26** The relevance of deforestation by land grabbers (who in future would move to the project area and are now possibly diverted to other areas) shall be discussed and it shall be clarfied how the project takes account of these aspects (out-out leakage).		
CL.2.2. Are mitigation efforts referring to these negative offsite impacts documented?	2	DR,I	No mitigation scheduled due to no expected leakage.	**CR 26**	☑
CL.2.3. Is the extent to which such impacts will be reduced adequately estimated?	2	DR,I	As no impacts are expected no estimations have been done. Compare Request above on Consideration of “out-out” leakage.	**CAR 26**	☑
CL.2.4. Are likely project-related unmitigated negative offsite climate impacts subtracted from the climate benefits claimed by the project? The total net effect (net increase in onsite carbon stocks minus negative offsite climate impacts) has to be positive.	2	DR,I	In initial PDD it is stated that no estimations have been carried out as there is no leakage expected. It is indicated that if more deforestation outside the boundary will be monitored, these amounts will be considered for the carbon calculation. It is indicated that a global buffer of 10 % of net emissions reductions will be withheld in order to balance possible leakage. **Observation:** Consider to include formula how to consider and quantifyleakage based data gathered through leakage monitor-	**CARs above**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			ing. Approach likely to be impacted by VCS methodolgoy.		
CL.3. Climate Impact Monitoring					
CL.3.1. Is an initial monitoring plan in place *The CCB Standards accept at this stage of the project development that some of the plan details are not fully defined, especially if a small-scale project.*	2	DR,I	A detailed monitoring plan has not been defined yet. A strategy for monitoring the most important parameters has been included to the document. Different sources of information are indicated: a) Monitoring by satellite by the National Institute for Space Studies (INPE). b) Monitoring of the carbon dynamic and forest carbon stock (indicating also pools to be considered) c) Participatory Monitoring "in loco" (SDS-ProBUC/IPAAM) d) Surveillance Program by community members. **Corrective Action Request No 27** An (initial) monitoring plan with concrete parameters shall be elaborated and included to the PDD for climate impact monitoring. Each parameter shall be clearly specified, shall be consistent with the formulae for the calculation of emission reductions, and shall count with a clearly indicated monitoring frequency. **Observation:** • For VCS, a complete monitoring plan will need to be included that allows gathering all data relevant for emission reductions calculations. • Consistency of data provided by the indicated sources / programms with the necessary data / parameters for emission reductions calculations remains to be analyzed.	**CAR 27**	☑
CL.3.2. Are the corresponding measurements and the sampling strategy (includ-	2	DR,I	No concrete indications on sampling strategy included. A monitoring frequency is not included. See above.	**CAR 27**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
ing the monitoring frequency) stated?			**Corrective Action Request No 28** The specific sampling approach in regard to the monitoring of deforestation shall be specified in the PDD.	**CAR 28**	
CL.3.3. Are all potential pools (aboveground biomass, litter, dead wood, belowground biomass and soil carbon) included? Any pool expected to decrease as a result of the project activities must be included.	2	DR,I	Pools are indicated as part of a general statement on carbon monitoring. **Observation:** Consistency of Monitoring with previous Request on considered pools to be assured.		☑
CL.3.4. Are non-CO2 gases part of the monitoring plan? *(Only applicable if these gases account for more than 15% of the project's net GHG impact)*	2	DR,I	Not applicable		☑
CL.4. Adapting to Climate Change and Climate Variability (optional)					
CL.4.1. Are likely regional climate change and climate variability impacts adequately identified using available studies (e.g. in studies)?	2	DR,I	Possible regional impacts have been adequately identified. Most important impacts of climate change are considered to be droughts and with that an increased fire risk. As the project focusses on the conservation of existing native forests, adaptation through project design is considered less relevant (i.e. in comparisn to AR projects).	☑	☑
CL.4.2. Are these potential impacts anticipated by the project (design) and will appropriate measures to minimize the negative consequences be taken?	2	DR,I	A list of risks and mitigation strategies has been included to the document. Indicated mitigation measures are of general character. Extended forest conservation is considered to be the most important activity to minimize negative consequences. **Clarification Request No. 27.**	**CR 27**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Specify the concrete measures taken to mitigate risks from climate change. **Observation:** Contents of Table 08 and 10 are almost identiticate		
CL.5. Carbon Benefits Withheld from Regulatory Markets (optional)					
CL.5.1. Will the project proponents not sell at least 10% of the total carbon benefits (including e.g. avoided deforestation) generated by the project into regulated GHG markets (Kyoto or other regulated markets)? Projects are allowed to sell these carbon benefits in a voluntary market or retire them.	2	DR,I	During the onsite visit it was discussed that currently the project foresees to carry out this project based on received carbon finance. The activity has voluntary status.	☑	☑
CM. Community Section					
CM.1. Net Positive Community Impacts					
CM.1.1. Were appropriate methodologies (e.g. livelihoods framework) used to estimate the net benefits to communities resulting from planned project activities?	2, 3, 18	DR,I	For the community impacts a SDS-AM Sustainability Matrix was applied in each community (see Figure 12, section G 3.2) The option of possible negative impacts was analyzed further during the onsite visit: Most severe impact for the communties is considered to be that forest harvesting is limited in the project context. However, communities members have areas reserved for (slash and burn) agriculture (in the area excluded through a buffer from the project boundary). In the past there has been partially some (illegal) logging in the neighboring areas of some communities. Benefits for communities and individuals were negotiated for each intervention.	**CAR 29**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Corrective Action Request No 29 The net benefits for communities (baseline vs. project) remain to be described and the methdology used for the assessment remains to be described in the PDD. Assumptions on community wellbeing and its alteration over time shall be defined.		
CM.1.2. Are changes in the community wellbeing included in the net benefits? Are the corresponding assumptions about how social and economic wellbeing will be altered over time clearly defined and defendable?	2, 3, 18	DR,I	The investment plan for the first 4 years has been included to the document. It includes activities that benefit communities. The most important posts are: • Infrastructure (schools, health, energy, water, greenhouse) • Staff (teachers, health agents) • Compensation payments (Bolsa florestal) • Training	**CAR 29**	☑
CM.1.3. Is the net community benefit positive ("with project" scenario compared to baseline scenario of social and economic wellbeing)?	2, 3, 18	DR,I	In the absence of the project the communities would not gain these benefits mentioned above. The benefits are considered positive.	**CAR 29**	☑
CM.1.4. Is the local stakeholder participation documented in the project's planning, also including potential dialogues? In cases where it is unclear whether a project will be implemented or not, it is acceptable to start with a preliminary community consultation, provided there are plans for a full engagement once the project is funded.	2, 3, 18	DR,I	Public hearings have taken place in the communities as part of the Reserve creation as well as specifically for the REDD project (sustained with correponding evidence). The planning of the Reserve has followed principles of participatory planning. As there are large overlaps with the project activity, this participatory element is also relevant for the project. Compare Requests above on further information access and commenting options (transperency).	**CAR 29**	☑
CM.1.5. If the project occurs in an area with significant local stakeholders, is a diversi-	2, 3, 18	DR	Yes, different stakholders have been involved, considering relevant subgroups.	**CAR 29**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
ty of stakeholders engaged including appropriate subgroups, underrepresented groups and women living in the project vicinity?			For Bolsa Floresta program it was noted that payments are forwarded to women / mothers in family.		
CM.1.6. Did the stakeholders have the chance to raise concerns about potential negative impacts, to express desired outcomes and to provide input on the project design before the project design was finalized? Has the project proposal been revised or will it be revised based on the input accordingly?	2, 3, 18	DR,I	It was clarified that up to date of site visit there have been no grievances or complaints registered regarding the Juma RED Project. The project team indicated as an example for participation, the elaboration of the Management plan for RDS Juma in diferent sessions and meetings, the joint decision taking on locations for additional schools as well as first control measures. Compare Requests above on further information access and commenting options (transperency). **Corrective Action Request No 30** An overview / list of events carried out in which main stakeholder groups had the option to comment shall be included to the PDD.	**CAR 30**	☑
CM.1.7. Is a clear process defined for dealing with unresolved conflicts and grievances that arise during the planning and implementation?	2, 3, 18	DR,I	See also CM 1.6. The conflicts generated during the planning and implementing of the Juma Reserve will be presented to the Advisory Council and the Reserve Management team. The formal responses to these complaints will be the responsibility of the relevant authority. **Clarification Request No. 28.** A procedure how the project deals with grivieances shall be defined and made available.	**CR 28**	☑
CM.1.8. Did the project design include a process for hearing, responding to and resolving community grievances within a reasonable time period? Has the griev-	2, 3, 18	DR,I	See CM.1.7	**CR 28**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
ance process been publicized to local stakeholders?					
CM.1.9. Have attempts been undertaken to resolve all reasonable grievances raised and have written response to grievances been provided within 30 days?	2, 3, 18	DR, I	See CM.1.7	**CR 28**	☑
CM.1.10. Have the grievances and the project responses been documented?	2, 3, 18	DR; I	See CM.1.7	**CR 28**	☑
CM.2. Offsite Community Impacts					
CM.2.1. Have any potential negative offsite community impacts been identified that the project is likely to cause?	2	DR,I	The project is not expected to have negative social impacts on the communities outside of the Juma Reserve. See above / CM.1 on net benefits.	☑	☑
CM.2.2. Are the mitigation efforts concerning these negative social and economic impacts properly described?	2	DR,I	Not relevant at validation.	☑	☑
CM.2.3. Is the net social and economic effect of the project positive when comparing the social and economic benefits within the project boundaries with likely unmitigated negative offsite impacts?	2	DR,I	Positive as no negative impacts occurred or expected.	☑	☑
CM.3. Community Impact Monitoring					
CM.3.1. Is an (initial) plan available for how community variables to be monitored are selected? Potential variables include income, health, roads, schools, food security, education and inequality. *The CCB Standards accept if at this stage of the project development some of the monitoring plan details are not fully*	2	DR,I	In the PDD it is indicated that the "Sustainability Matrix method" will be implemented for monitoring. It will monitor education, housing, health, energy, trash collection, water, sewage system, environmental monitoring, etc. **Corrective Action Request No 31** An (initial) monitoring plan with concrete parameters shall be elaborated and included to the PDD for community impact monitoring. Each parameter shall be clearly speci-	**CAR 31**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
defined, especially if the project is a small-scale project.			fied and shall count with a clearly indicated monitoring frequency. Include also parameters at risk to be negatively impacted.		
CM.3.2. Is the monitoring frequency clarified?	2	DR,I	See CM.3.1.		☑
CM.3.3. Are community variables at risk of being negatively impacted by the project activities included in the monitoring plan?	2	DR,I	See CM.3.1. .		☑
CM.4. Capacity Building (optional)					
CM.4.1. Is the capacity building structured in a way that the needs of communities (not only of the project) are met?	2	DR,I	The PDD indicates that: • The project will undertake organizational, management and technical capacity building activities • Insure their involvement in the decision-making and implementation of programs. • Workshops, trainings and events for exchange experiences will be organized. At the moment of validation, activities mainly focussed on the finalisation of the management plan. It is indicated that this plan will include capactiy buidling measures. Furthermore, this section of the PDD general statements on activitites and capacities are included. Statements are related to a selection of organisations and Programms. **Clarification Request No. 29.** Jointly with the further specification of project activities per partner organisation included to the present project activity, a concrete capactiy building plan shall be indicated and described (if this optional point is to be collected, In this context also, also activity specifc informa-	**CR 29**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			tion on questions / sections CM.4.2 –CM4.4 shall be provided.		
CM.4.2. Is the capacity building targeted to a wide range of groups, not just elites?	2	DR,I	See CM.4.1 It is described that the capacity building focuses on communities. It can be confirmed that the community members are a more or less homogenous group. Thus in this regard, elites are not present.	**CR 29**	☑
CM.4.3. Is the capacity building targeted to increase the participation of women?	2	DR,I	See CM.4.1 Women are equally invited to the capacity building process as men. In regard to general participation the role of women in the Bolsa Floresta Programm is underlined.	**CR 29**	☑
CM.4.4. Is the capacity building aimed to increase the community participation in the project implementation?	2	DR,I	See CM.4.1 General statements on participation are included – no indications on capacity builiding.	**CR 29**	☑
CM.5. Best Practices in Community Involvement (optional)					
CM.5.1. Was the project developed with a strong knowledge of local customs? Is the project compatible with local customs?	2,3	DR,I	For establishing the management plan local customs for use and management of the reserve will be taken into account. Creation process included a focus on participatory planning. Most important needs of communities have been indicated. “Annual operation plan” to be approved by the the Council currently being established. The Bolsa Floresta Programms was also developed based on a census and interview data generated with the communities. The project is considered compatible with customs.	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
CM.5.2. Will local stakeholders fill all employment positions (including management) if the job requirements are fulfilled?	2	DR,I	In the PDD it is confirmed that according to the job requirements local people will be prepared, trained and will have the opportunity to be hired within some of the programs to be implemented as part of the development of this project (e.g., biodiversity monitors, climate monitors). They will also be invited to work in supporting field activities from Project and Reserve managers. It has been confirmed that partly also local staff is contracted if the qualifications are met. CEUC and Bolsa Floresta has recently expanded their staff. **Clarification Request No. 30.** The process and established guidelines (procedure) for contracting personnel shall be clarified for the project activity and specifically reflect on contracting of project personnel by all partners involved. Questions CM5.3-5.8. remain to be covered and documented. (if the optional point of CM 5 wants to be achieved).	**CR 30**	☑
CM.5.3. Is the manner explained by which local stakeholders are selected for positions? Do traditionally underrepresented stakeholders and women get a fair chance to fill positions for which they can be trained?	2	DR,I	No information given in PDD. See section CM5.2	**CR 30**	☑
CM.5.4. Are workers informed about their rights by the project proponents?	2	DR,I	See section CM5.2 It is indicated that SDS and FAS follow defined procedures for contracting and information of workers right. The employment of these entities is regulated. Health insurance coverage varies between public and private employees. No indications on contracting of staff by other partners given.	**CR 30**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
CM.5.5. Does the project comply with international rules on worker rights?	2	DR,I	See section CM5.2 No information given in PDD.	**CR 30**	☑
CM.5.6. Are situations and occupations that pose a substantial risk to worker safety comprehensively assessed?	2	DR,I	See section CM5.2 In PDD it is stated that mainly during potantial forest management and the use of machinery a risk to workers may occur. For the purpose of monitoring frequent field visits are carried out. The latter may include an elevated risk for the personnel in regard to snakes.	**CR 30**	☑
CM.5.7. Is a plan in place to inform workers of potential risks and to explain how to minimize such risks?	2	DR,I	See section CM5.2	**CR 30**	☑
CM.5.8. Are risks being minimized using best work practices, where worker safety cannot be guaranteed?	2	DR,I	See CM.5.7.	**CR 30**	☑
B. Biodiversity Section					
B.1. Net Positive Biodiversity Impacts					
B.1.1. Are the methodologies (e.g. key species habitat analysis, connectivity analysis) used to estimate the changes in biodiversity resulting from planned project activities appropriate?	2, 27	DR,I	The monitoring system used is called the Program for Monitoring of the Biodiversity and Use of Natural Resources of the State of Amazonas (*Programa de monitoramento da Biodiversidade e do Uso dos Recursos Naturais do Estado do Amazonas,* PROBUC) Fruther details on methodology applied for biodiversity impact monitoring are not provided in the PDD. **Corrective Action Request No 32** The net benefits for biodiversity (baseline vs. project scenarios) remain to be described and the methdology used for the assessment remains to be described in the	**CAR 32**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			PDD. Assumptions on biodiversity impacts and its alteration over time shall be defined.		
B.1.2. Referring to B.1.1: Are the assumptions for this estimate clearly defined and defendable?	2	DR,I	No assumptions included.	**CAR 32**	☑
B.1.3. Referring to B.1.1: Is the net biodiversity benefit positive ("with project" scenario compared to baseline biodiversity scenario)?	2	DR,I	Yes, a positive net biodiversity benefit can be expected in the project scenario.	☑	☑
B.1.4. Are possible adverse effects of non-native species on the area's environment described (including impacts on native species and disease introduction or faciliation)?	2	DR,I	Not applicable	☑	☑
B.1.5. If the impacts of B.1.4. are substantial, is the necessity of using non-native species over native species justified?	2	DR,I	Not applicable	☑	☑
B.1.6. Is a list of threatened species available (G.1.8)? Is documentation available showing that the project activities will not be detrimental in any way to these species?	2	DR,I	Yes, red list of IUCN has been included to the document and background information is given. No negative impacts expacted as this is a conservation project.	☑	☑
B.1.7. Are all species to be used by the project identified? Will no known invasive species be used?	2	DR,I	No invasive species used. No planting occurs. All species used will be native ones-	☑	☑
B.1.8. Is it guaranteed that no genetically modified organisms will be used to generate carbon credits?	2	DR,I	Not applicable	☑	☑
B.2. Offsite Biodiversity Impacts					
B.2.1. Are potential negative offsite biodiversity impacts that the project is likely to	2	DR	No negative offsite biodiversity impacts are expected due	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
cause identified?			to the project activity outside the reserve. Possibility of displaced logging impacting biodiversity negatively may not be fully exluded. This would be detected through monitoring and considered ex-post.		
B.2.2. Are the mitigation efforts concerning these negative biodiversity impacts properly described?	2	DR	**Observation** Monitoring of areas outside the boundary will be used to detect leakage. See Request above on Leakage.	☑	☑
B.2.3. Is the net biodiversity effect of the project positive when comparing the biodiversity benefits within the project boundaries with likely unmitigated negative offsite impacts?	2	DR	The net biodiversity effect of the project can expected to be positive.	☑	☑
B.3. Biodiversity Impact Monitoring					
B.3.1. Is a plan available for how biodiversity variables to be monitored are selected? Potential variables include species abundance and diversity, landscape connectivity, forest fragmentation, habitat area and diversity. *The CCB Standards accept if at this stage of the project development some of the monitoring plan details are not fully defined, especially if the project is a small-scale project.*	2	DR	A monitoring plan has been included to the PDD. It is indicated that the monitoring plan will follow the directives of ProBUC, which involves the monitoring of the species richness of animals (mammals, birds, reptiles as well as associated products like eggs and leather) and plants (timber and non timber products) utilized by the communities. Monitoring of a set of parameters with defined frequencies included to the PDD. The ProBuc approach is considered sufficient to comply with defined requirements. Its characteristic is considered to be the community involvement in monitoring. Compare with Request above: Consistency of initial biodiversity assessment with monitoring shall be assured.	**CR 31**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Compare with Request above **<u>Clarification Request No. 31.</u>** Summarize in the PDD how the data gathered through the ProBuc programm will be analyzed and processed and which conclusions may be drawn from this data (i.e in regard to changes in biodiverstiy)		
B.3.2. Is the monitoring frequency clarified?	2	DR	Monitoring frequency of the different groups (like: flora, fauna, etc.) has been included to the PDD.	☑	☑
B.3.3. Are biodiversity variables at risk of being negatively impacted by the project activities included in the monitoring plan?	2	DR	Biodiversity variables (species) at risk are included.	☑	☑
B.4. Native Species Use (optional)					
B.4.1. Is it proven that the project will only use species being native to the region? **…OR…**	2	DR	No plan or intention exists to use exotic species in any activity within the reserve, except those that are already part of the traditional production of the local communities (e.g. fruit trees, pasture grasses)	☑	☑
B.4.2. If non-native species are planned to occur, is their use justified by being superior to native species for generating concrete biodiversity benefits (e. g. for rehabilitating degraded areas unlikely to support natives or for producing fuel wood that reduces logging pressure on intact ecosystems)?	2	DR	Not Applicable	☑	☑
B.5. Water and Soil Enhancement (optional)					
B.5.1. Are project activities that are likely to enhance water and soil resources identified?	2	DR	In the PDD it is stated: The appropriate conservation measures within the Juma Reserve and its buffer areas will allow the forests and rivers to remain in their natural state. This is key for maintaining the natural hydrological	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			cycles, quality and quantity of water and soil conservation. Thus, a conservation project is considered to contribute to water and soil enhancement.		
B.5.2. Is it credibly demonstrated that these activities are likely to improve water and soil resources compared to the baseline?	2	DR	Project activity will improve the water and soil resources in comparison to the baseline scenario.	☑	☑
B.5.3. Do justifiable assumptions about cause and effect as well as relevant studies support the statements in B.5.2.?	2	DR	Yes, assumptions are justifiable and reference has been cited.	☑	☑

Table 2: Responses to CAR and CR

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
Corrective Action Request No.1. The stratification (classification) of forest types within the net project area (used for initial carbon estimates) shall be adapted based on recent and high resolution satellite data (i.e. Landsat Images). Other sources and criteria (such as i.e. elevation, soils, previous intervention), which could impact the classification of forest types / carbon densities, shall be discussed and considered if adequate. Accuracy assessments of the stratification / classification results shall be carried out and included to the PDD. If there is further forest types differentiated, they are to be described in the PDD. The process of stratification shall be described (in order to assure for transparency and documented data sets, if used later i.e. as part	G.1.2.	Project Team, 17. Sep 2008: The classification of the forest types and its geographical boundaries was readjusted based on a “remote sensed” flyover on the project area, which generated a new vegetation map. The methodology used to correct the vegetation map is described in Annex VI, and the new map is presented at section G1.2. The RADAMBRASIL classification also considers criteria as elevation and soils for the definition of the boundaries for the forest types. Previous human intervention on the forest was considered for the definition of the project boundaries and are presented in section G3.3. Audit Team 22. Sep 2008: The adaptation of the identified land use classes /strata was carried out. The process description in Annex VI of the PDD allows concluding that this process was carried out under consideration of good practices in the analysis of remote sensing data. The achieved accuracies in the classification are considered to sufficiently sustain the assumptions that the units / strata are	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
of multiphase sampling approach for carbon inventories).		actually covered with the subdivided forest types. Nontheless the classification needs to consider uncertainties. The classification forest / non-forest has also impacted the definition of the boundary which now includes a total of 472,677 ha (table 04) The boundary and strata shall be monitored as part of the monitoring plan (Request below, unclosed). Project Team 26.Sep 2008 The table with specific variables, sources, frequency and other relative parameters are now included as part of the monitoring plan *(see Annex XIII p. 185)*. Audit Team 29.Sep 2008: The adaptations have been carried out.	
Corrective Action Request No.2. It shall be clearly documented in the PDD (including also the Monitoring Plan) that the current carbon densities associated to the (stratified) forest types have preliminary character and that they will be further specified by carbon monitoring / inventories which will be carried out for these classes before the first verification.	G.1.3	Project Team, 17. Sep 2008: On item G1.3 it is fully explained the methodology used to obtain the carbon stocks from both authors used (Nogueira, 2008 and MCT, 2006), derived from the RADAMBRASIL project. It is further explained how these data were used on the project context, attesting clearly that these parameters are preliminary and will be confirmed and validated on forest inventories, to be carried out before project' first verification, as part of the carbon stocks monitoring plan (see annex XIII). Audit Team 22. Sep 2008: It was confirmed that the basline estimates have preliminar character.	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		The data sets and approach used is considered to constitute a sufficient basis for the validation stage. The audit team considers that the (newer) inventory data developed by Noriega is substantiated and qualified and of equal credibility as the MCT data. In light of this, and the actual later inventory of basline stocks, the approach is accpeted. The importance of credible image classifications for efficient ground inventories is underlined once more. Clarify why MCT does not include the pools litter and dead wood (see table 01 and 02) and indicate in PDD if this was not assessed or simply not specified due to averaging effects of basic RADAM data. Project Team 26.Sep 2008 MCT didn't include the pools litter and dead wood since it followed the methodology guidance provided by IPCC (2000), which predicts only the consideration of aerial biomass for emissions due land use change *(see note at Table 01, p. 20)*. Project Team 29.Sep 2008: The aspect has been clarified.	
Corrective Action Request No.3. The carbon pools to be considered in the context of the project (above ground, below ground, dead wood, litter, soil organic carbon) shall be clearly identified. If any pool is not considered, it shall be documented and	G.1.3.	Project Team, 17. Sep 2008: Item G1.3 (Table 03) presents the carbon pools considered for the project, as well as the sources of information used for its determination. The carbon pools considered are: aboveground live biomass, dead wood, litter and belowground biomass. Audit Team 22. Sep 2008:	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
sustained why it is conservative to do so.		The only pool omitted is soil organic carbon. It is credible that soil carbon under the project scenario will be higher than under a deforestation scenario as part of the baseline. The monitoring of the pools below ground, deadwood and litter remains to be described. Annex XIII includes indications on forest inventory only. Assure that relevant parameters are included to the Monitoring Plan. Project Team 26.Sep 2008 The specific variables, sources, frequency and other relative parameters related to the pools below ground, deadwood and litter will be monitored, and are described in the monitoring plan *(see Annex XIII, p. 185)*. Audit Team 29.Sep 2008: The adaptations have been carried out.	
Corrective Action Request No.4. The utilized tables indicating the results of regional studies on carbon stocks shall be furthermore structured according to the pools considered, as well as other key parameters applied (i.e. ranges of DAB considered, form factors, RS, CF, BEF,) in order to allow a straight forward comparison of the results and an estimate of conservativeness of the data applied. In case that there is further forest	G.1.3.	Project Team, 17. Sep 2008: The parameters and carbon pools considered in the estimates of each author are described along the text, from Tables 01 to 03. The tables present the final results, with all the parameters applied and giving the final values. The process of classification of each type of vegetation and their respective carbon stock densities is described on a stepwise approach. Audit Team 22. Sep 2008: The provided explanations in the PDD and secondary data have provided sufficient evidence on the calculation approach used	☑

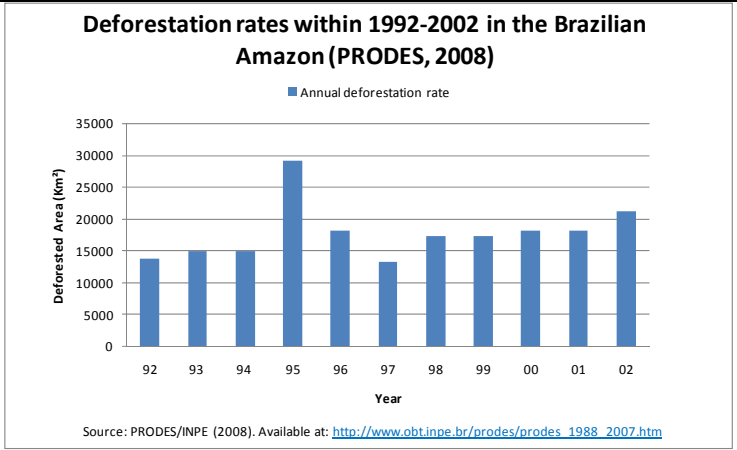
Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
types differentiated through the classification / stratification process, document (conservative) choices in the association of carbon densities		for the intial carbon stock estimations. Note that all relevant parameters related to carbon stocks should be incuded to the final monitoring plan. Project Team 26.Sep 2008 The specific variables, sources, frequency and other relative parameters related to all carbon stocks were included and are described in the monitoring plan *(see Annex XIII, p. 185)*. Project Team 29.Sep 2008: The adaptations have been carried out.	
Corrective Action Request No.5. All tables (i.e. table 02) need to carry clear labeling in regard to units (t/Mg, ha, C etc).	G.1.3.	Project Team, 17. Sep 2008: All the tables (01, 02 and 03) are now clearly identified with the specific unit (ha, tC/ha, tCO2/ha, biomass etc.) of the data presented. Audit Team 22. Sep 2008: Changes on labelling have been carried out accordingly.	☑
Corrective Action Request No.6. Additional communities that were identified after the PDD definition shall be included to a revised PDD. Corresponding maps shall be updated. The maps shall be complemented with a list of all communities (population and GPS coordinates) included to the PDD in order to assure for full documentation.	G.1.4.	Project Team, 17. Sep 2008: The communities maps (Figure 09 and 14) are updated, as well as the number of families, confirmed in the last socio-economic inventory. At Annex V are presented the GPS coordinates for each community, as well as the GPS coordinates of the boundaries of the Reserve. Audit Team 22. Sep 2008: The documentation has been updated accordingly. It is underlined that any spontanous settlement in the project area would need to be considered in the project design and its	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		activities. It is considered that corresponding changes due to settlement would be detected through the foreseen detection of disturbances described in Annex XIII.	
Corrective Action Request No.7. Land ownership and access to carbon rights of all lands included to the project boundary shall be monitored over time and therefore included to a monitoring plan.	G.1.5.	Project Team, 17. Sep 2008 All land and rights over its environmental services (including carbon) inside the project boundaries belong to Government of Amazonas, and was transferred to FAS in order to implement the Juma Reserve RED Project. However, it was identified some areas claimed as of private ownership inside the Juma Reserve, which will be subjected to a deep analysis of its legal status. Regardless the results of the analysis, these areas are excluded of the project crediting area and thus will not have any carbon credits claimed as part of the project activities. Although, activities ongoing inside of these areas can impact the project area inside the Reserve, and thus will have special attention in the monitoring plan. Audit Team 22. Sep 2008: While the ownership and carbon rights are considered to be sustained at the point of validation, the incorporation of a corresponding parameter to the monitoring remains (in order to assure that this is complied with over implementation/crediting time). Project Team 26.Sep 2008	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		The monitoring plan were complemented with specific variables, sources, frequency and other relative parameters to be monitored in order to assure the carbon rights and ownership (see Annex XIII, p. 185). Audit Team 29.Sep 2008: The adaptations have been carried out.	
Corrective Action Request No.8. It shall be revisited at verification if the list of threatened species found in the project area has been updated. Thus, this activity shall be monitored.	G.1.8.	Project Team, 17. Sep 2008 This item is already included as one of the biodiversity parameters to be monitored, presented at Table 25, item B3.1. At every year, the lists of existing species will be mixed with the lists of threatened species to verify if there was any change on the existing species. Audit Team 22. Sep 2008: The item has been included to the monitoring plan on biodiversity.	☑
Corrective Action Request No.9. The applicability of SimAmazonia I to accurately and conservatively model the expected deforestation for the project area shall specified in further detail in the PDD. This shall include - a list and description of the most relevant deforestation drivers for the project area (as considered in model layers; such as road construction, conservation unit, migration, etc)	G.2.1.	Project Team, 17. Sep 2008: It was prepared a detailed explanation about the SimAmazonia model, how it works, its main assumptions and how it results on the forecasted deforestation for the project area. This discussion is presented on Item G2.1 and, also in Annex I, which is a special chapter about the Simamazonia I. Furthermore, it was made a validation of the model, attesting its conservativeness for the project scale and conditions , which is presented in Annex II. Audit Team 22. Sep 2008:	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
- A sustained analysis if and why embedded assumptions on these drivers lead to conservative deforestation estimates for the project area. Discuss in detail a) the relevant sub-regions / strata of the model and its main characteristics (and how the “rate of anthropogenic pressure” of the model matches with conditions in the project region). b) a detailed discussion of the PRODES data set considered. As part of this, provide evidence on deforestation rates considered in the model, and estimate how the generated results on deforestation would change if a wider reference times was covered (i.e. in regard to average deforestation and inter-annual variability). (Note: consistency with VCS methodology drafts on historic deforestation rates of (5-)10 years). c) the relevance of road construction in the specific project context. Provide evidence on planned road construction and reasoning if / why the model is conservative in this aspect. d) the consideration of conservation status of the project area. The choice of scenario in the		Evidence on the assumptions especially on road construction has been received and was reviewed. In conclusion, the assumptions are considered to be sustained and conservative. Also the data on anthropogenic pressure is tracable and adequate. For the baseline estimates, of the project the BAU scenario with no further protected areas in the Amazon Region (ARPA) and lax inforcement of the SimAmazonia model was used. Additional to the documents reviewed and interviews carried out during the onsite visit, the audit team has taken note of the summary on the creation of additional protected areas in the State of the Amazon in recent years. Both, the state law on climate change (2007) and on protected areas (2007) as well as several contextual documents relate to policy making take reference to the importance of forests and environmental services for the mitigation of climate change. Also in light of CDM guidance (compare EB22 Annex 3) on this matte, it is considered acceptable that recent changes of policy are not considered in the baseline setting process. Thus, the basline does not consider the protected area status of Juma. Further explanations on deforestation data used the SimAmazonia Model was provided. The explanations on the calibration and assessment of the Model were noted. (Compare CR 7 in regard to uncretainties of	

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
model shall be consistent with decisions on the creation of reserves by the state and the chosen starting date of the project activity.		the model.) However, the data incorporated to the model (2001-2002 figures from PRODES and their average yearly derivatives from 1997 to 2002) should be compared and discussed with other available deforestation data for the region (item b of CAR 9). It shall be clarified if potential peaks of deforestation in few years may have increased the baseline deforesation rates leading to non-conservative estimates. (Note also VCS reference on p. 34 of VCS AFOLU document). <u>Project Team: 26 sep 2008</u> The deforestation data incorporated to the model considers deforestation rates between 1997 to 2002 (collected from PRODES/INPE). This is the official data published by Soares-Filho and authors in 2006, and is robust and realistic if compared with other annual deforestation rates in the period. Figure 01 presents the annual deforestation rates for Amazonia from 1992 to 2002 (data collected from PRODES/INPE): Figure 01: Deforestation rates in the Brazilian Amazon from 1992 to 2002	

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		 Source: PRODES/INPE (2008). Available at: http://www.obt.inpe.br/prodes/prodes_1988_2007.htm Table 01 shows a comparison of the deforestation data within 3 periods: • 1997-2002: 5 years period as used for the model • 1992-1997: period from the 5 previous years • 1992-2002: period from the 10 previous years |	Period analyzed | Average deforestation rate (km².ano-1) | Difference within the periods (A/B and A/C) | |---|---|---|---| | A | Model - 1997 a 2002 | 17.582,9 | | | B | 5 years - 1992 a 1997 | 17.337,5 | 1,4% | | C | 10 years - 1992 a 2002 | 17.845,0 | -1,5% | Source: INPE (2008). Available at: http://www.obt.inpe.br/prodes/prodes_1988_2007.htm As presented, the difference on the average deforestation rates	

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		within the periods analyzed doesn't change significantly, and proves also that the deforestation data considered by the project is realistic and conservative, since the average deforestation rate considered by the model (1997-2002) is still below (1,5%) the rate calculated using the 10 years period from 1992 to 2002. This is also in accordance with the guidance provided by VCS AFOLU document. *(See additionality tool, Annex III, p. 157)* Audit Team 29.Sep 2008: The considered basline deforestation rates are considered sufficiently sustained. It was noted that differences in average deforestation rates are not pronounced.	
Corrective Action Request No.10. Deforestation and stock changes should be indicated in the PDD for individual forest class, while consistency with adapted boundaries and the identified and mapped forest types is be assured. For reasons of transparency, include main table from excel spreadsheets / Data RED area to PDD. (If table 05 and 09 remain unchanged, labeling of vegetation type, Da, Db etc, needs to be explained).	G.2.2.	Project Team, 17. Sep 2008: Table 08 presents the carbon stocks changes expected on the baseline scenario for each individual forest class The labelling of each vegetation type is already described on item G1.2 as: AF – Alluvial Forest and DF – Dense Forest Audit Team 22. Sep 2008: The table was updated.	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
Corrective Action Request No.11. In regard to the assumptions of carbon stocks remaining after deforestation activities it shall be clarified and sustained further to which classes / land uses the deforested areas are likely to be switched to. - the regional Fernside study that was applied should be compared to local conditions and most likely land use changes shall be confirmed for the specific conditions of the project area (i.e using local land use statistics), - the aspect of residence within one land use class shall be discussed (as currently the immediate switch to equilibrium stage is assumed; equilibrium is achieved after about 20 years) - discuss conservativeness of carbon stocks in land use classes used by Fernside by comparison to other recognized sources (i.e. IPCC)	G.2.2.	Project Team, 17. Sep 2008: The justification of adopting the 28,5 tons of biomass per hectare is given by FEARNSIDE, 1996 – and is further explained on Item G2.2. An immediate switch from forest to equilibrium vegetation is, indeed, a conservative assumption considering that the biomass quantity on the initial land use (productive pasture) is lower than the biomass on a mature pasture, including many areas of “capoeiras”. If these values are compared with the actual land use in the project region, they can be considered as conservative – as locally the main land use after deforestation is mainly cattle ranching (88% of the land use) (IDAM, 2006). Although higher replacement landscape biomass decreases net emissions from deforestation, these estimates still imply large net releases. Comparing the values used by Fearnside, they can be considered very conservative, assuming that the biomass values used are also more than double those forming the basis of deforestation emissions estimates currently used by the IPCC (2003). Also, IPCC does not give information about specific types of vegetation, then, it is not possible a direct comparison. Audit Team 22. Sep 2008: The literature based estimates on average carbon densities in the land use types after deforestation are considered adequate for the exante estimations. It is noted that the sources used are applicable to the region.	☑.

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		Confirm that the values include below ground and other pools considered? The carbon densities in non-forest classes shall be monitored over time. If better data becomes available this shall be used in verification. Thus include corresponding parameters to the Monitoring plan. Project Team 26.Sep 2008 The values used by Fearnside (1996) consider dry matter, including below ground and dead components. The specific variables, sources, frequency and other relative parameters related to the specified pools will be monitored and are described in the monitoring plan *(see Annex XIII, p. 185)*. Audit Team 29.Sep 2008: The aspect has been sufficiently clarified. Data is going to be monitoried.	
Corrective Action Request No.12. Baseline as well as project scenario calculations are to be updated in line with the request for baseline revision at year 10. Results and accumulated values shall be documented correspondingly.	G.2.2.c – (presented on item CL1.1)	Project Team, 17. Sep 2008: Table 17 (item CL1.1) presents the baseline emissions and the net results. This is the project “ex ante” estimation and would be subject to change, under two conditions: 1. After the first verification period and the new vegetation carbon stocks are defined 2. On 2016, ten years after the star of the project, when the baseline is revised. Audit Team 22. Sep 2008: It is clarified that the project intends to carry out a forest	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		inventory to confirm and adjust the applied carbon densities for forest types under the baseline conditions before first verification (compare coment above that this baseline confirmation should also include non forest types).	
Corrective Action Request No.13. A list of emissions (gases as well as sources) relevant to the project and considered (under baseline and project scenario) shall be clearly included to the PDD. Calculate the contribution of non-CO_2 gases if applicable.	G.2.2.d	Project Team, 17. Sep 2008: On CL1.2, table 18 presents all the sources (biomass burning, combustion of fossil fuels by vehicles, use of fertilizers and livestock emissions) and the respective gases considered (CO_2, NH_4 and N_2O), and which ones are considered and not, and the reason to do so. Audit Team 22. Sep 2008: The table is included and it is underlined that only biomass burning is included. Fossil fuel emissions are considered to be insignificant and less than under the baseline conditions. The approach is credible in vision of the planned activities and the magnitud of envisioned emission reductions.	☑
Corrective Action Request No.14. The detailed and specific description of the actual project activities shall be included to the PDD and the relevance to achieve emission reductions shall be described. Note: It shall be assured that the claimed emission reductions are fully attributable to the	G.3.2.	Project Team, 17. Sep 2008: The respective project activities and their specific relevance to the project are presented on Item G3.2 (Table 09) and the additionality aspects of the project are discussed in the application of the additionality tool (Annex III). Audit Team 22. Sep 2008: Table 09 (p. 43) indicates the different activities and the entities	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
project activity. Thus, it shall be documented (and assured through monitoring) that only those reductions are considered that are achieved through specific project activities. This is considered most relevant in regard to forest control measures which partially not part of the project activity.		and partners involved. Project Team: 26 sep 2008 The implementation of the project didn't conduce to any diversion of funds from the regular budget that were destined to the other environmental programs and protected areas already existing in the State of Amazonas. *(see table 09, p 44; and table 02 of the additionality tool - p. 163, where the annual budget is increased as the newly protected areas were created)* Audit Team 29.Sep 2008: The project activities have been sufficiently clarified and described.	
Corrective Action Request No.15. Please adapt the project area and include only forest area, which is going to be impacted by the project. Define the criteria applied to defined forest areas (forest definition). Provide a corresponding map / shape file (GIS) for the "carbon credit area" only.	G.3.3.	Project Team, 17. Sep 2008: The Juma project "carbon credit area" are defined as those that, on the beginning of the project had only intact forest vegetation, according to the Brazilian forest definition (single minimum tree crown cover value of 30 percent, a single minimum land area value of one (01) hectare and a single minimum tree height value of five (05) meters). The project "carbon credit area" is shown on figure 14. The excluded areas are described and shown on the Figure 15. Audit Team 22. Sep 2008: The considered forest definition has been clarified and applied for the adapted boundary.	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
Corrective Action Request No.16. The format of starting and crediting date should be used consistent (format DD/MM/YYYY).	G.3.4.a	Project Team, 17. Sep 2008: The date is presented on the request format (3rd July 2006), and both the project and crediting period start at the same date. Audit Team 22. Sep 2008: The format has been adapted. The starting date is the creation of the Reserve.	☑
Corrective Action Request No.17. The starting date needs to be consistent with the start of real action as part of the project activity according to the indications of the audit team in section G.3.4.	G.3.4.a	Project Team, 17. Sep 2008: See Annex III. For the purposes of assessing additionality. The starting date of the REDD project activity is 2003 – when the ZFV Program was launched. However, as for defining the project crediting period, the starting date of the project is the date of creation of the Juma Reserve (2006), when the project boundaries went clearly delimited and the Juma RED Project started to be implemented "on the ground". This is the same date of the crediting period start. Audit Team 22. Sep 2008: The starting date of the project activity can not be 2003 as the actual implementation did not start by that date. In was recognized in the context of the basline definition that the newly installed protected areas also focussed on environmental services such as carbon finance, leading to non consideration of these new parks. The creation of the reserve in 2006 constitutes the starting date.	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
Corrective Action Request No.18. Crediting period remains to be adapted so that crediting starts with jointly with the starting date (as otherwise there could be emissions not considered).	G.3.4.a	Project Team, 17. Sep 2008: The project and crediting period start at the same date (3rd July 2006). Audit Team 22. Sep 2008: Adaptations have been carried out. Consistency between starting date and crediting start exists.	☑
Corrective Action Request No.19. An operational project lifetime shall be defined. It is not considered possible that the project lasts forever.	G.3.4.a	Project Team, 17. Sep 2008: The Juma RED Project was created with the objective to last until 2050, which is the date where the carbon credits selling stops. Although, the main role of the project is to improve the livelihoods of the communities, as well as strengthening their production capacity, improve their health and education, and provide them with the necessary tools to allow them to generate their income from the sustainable use of natural resources. For this reason, even though the project specific activities end on 2050, it is expected that the communities are on an advanced level of organization that make the project activities sustainable. Audit Team 22. Sep 2008: The time horizon for baseline estimates at validation is defined as project lifetime.	☑
Corrective Action Request No.20. The risks included and described should be differentiated towards risks for climate, community and biodiversity benefits. Specify	G.3.5.a	Project Team, 17. Sep 2008: The risks are differentiated on Table 13 on item G3.5. Audit Team 22. Sep 2008: The risk levels are sufficiently described. Most substential risk is	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
further how deforestation could occur in spite of the project action and put project benefits at risk (deforestation risk)		deforestation in spite of the project.	
Corrective Action Request No.21. Specifically list and document core stakeholders defined in the corresponding PDD section (including titles / names).	G.3.6.	Project Team, 17. Sep 2008: On table 14, item G3.6, all the stakeholders involved in the process are listed, with their names, institutions, functions and relation with the project. Audit Team 22. Sep 2008: The stakeholders in the local context have been included to the PDD as required by CCBA.	☑
Corrective Action Request No.22. It shall be specified in the PDD how access to documentation and the option to comment will be achieved and first action to comply with this task shall be clarified. The option to access project information and comment shall be monitored over time and compliance revisited at verification.	G.3.7.	Project Team, 17. Sep 2008: All of the project activities as well as technical and administrative processes will consistently be made publically available at the project's operational bases located inside the Juma Reserve and in the Novo Aripuanã City office. All efforts, will be made to inform the communities and other stakeholders that they can access project information and comment influence on its management. These documents will also be made available at FAS website (www.fas-amazonas.org). The Project's field coordinator will always be available for receiving comments and grievances and clarify any doubts related to the project implementation, according to the project management procedures (see in details a at Figure 19, Item CM1.3c), forwarding any requests of, information or conflicts to	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		the Project Coordinators. The community members will be informed also about this open space with the field coordinator to direct any doubts or queries related to the project. Audit Team 22. Sep 2008: The scheduled acitivities are considered sufficient for validation. As indicated, monitoring of compliance will need to be documented at verification.	
Corrective Action Request No.23. In regard to adaptive management: It shall be specified in the PDD how feedback loops will be installed concretely in the project management practices, and specify also contents of Araujo (2007) on protected areas management in the PDD.	G.7.1.	Project Team, 17. Sep 2008: The process is better described; Figure 16 presents a fluxogram describing the whole chain of process to generate reliable feedback and all the necessary information to deal with the management practices. Audit Team 22. Sep 2008: An overview chart that described management processes has been included.	☑
Corrective Action Request No.24. The compliance with IPCC GPG requirements (as requested by CCBA) shall be discussed in detail in the PDD.	CL.1.1.	Project Team, 17. Sep 2008: The methodology used by the IPCC GPG (2003) assumes that the net emissions are equal to the changes on the carbon stocks on the existing biomass between two different points in time. The logic used in the Project is the same used by the MCT (2006) methodology used for the first Brazilian National GHG Inventory), and is explained in details during the section CL 1.1. Audit Team 22. Sep 2008: The IPCC approach of carbon density changes compiled in a change matrix of land use and vegetation types has been	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		followed for the ex-ante estimates. Compare comments above on further assessment of carbon stocks in defined land use types during initial implementation / before verification.	
Corrective Action Request No.25. Migration from the communities inside the Juma Reserve to other forest areas shall be monitored (as part of Climate Impact Monitoring / CL.3).	CL.2.1.	Project Team, 17. Sep 2008: The whole surrounding area will be monitored as part of the project's monitoring plan The migration from the communities inside the Juma Reserve to other forest areas and also the immigrations will be monitored by the Bolsa Floresta Program annual activities. The physical boundaries of the "surrounding zone" will be determined as part of the management plan of the reserve (see item CM5.1) during the first years of the project implementation. Usually this area is defined as minimum of a 10km buffer surrounding the reserve's perimeter (i.e. in the Juma Reserve the zone would be of at least t 494,318 ha). As a mitigation measure to guarantee that the offsite carbon stocks will not decrease, the project will commit an investment of at least 10% of the annual budget generated trough the sales of RED credits, to be invested in activities for forest conservation and sustainable development on the offsite project "surrounding zone". Audit Team 22. Sep 2008: It was noted that the project now forsees the installation of a leakage belt / surrounding zone. Offsite deforestation due to	**FAR 1**

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		diverted settlement from inside the Reserve is covered as part of a global 10 % discount in the reduced emissions. During the onsite interviews with local settlers in the neighborhood to the Project area / inside the Reserve have not indicated the wish to migrate out, among others due to the incentives of the project. In light of this and the remaining evidence available at validation i.e. on number and structure local pobulation, the approach of a global discount is considered acceptable. However, a Forward Action Request is posed in order to assure that refined leakage estimations due to deforestation caused by migratory processes attributable to the project are carried out before verification. It is underlined that regarding the emission reduction estimates, the leakage asessment results in an elevated level of uncertainty at the validation stage. <u>Forward Action Request 1:</u> The geographic limits of a leakage belt remain to be confirmed. The methodological approach of factoring out regular migration / deforestation from project related migration / deforestation remains, i.e. as part of an approved VCS methodolgoy.	
<u>Corrective Action Request No.26.</u> The relevance of deforestation by land grabbers (who in future would move to the project area and are now possibly diverted to	CL.2.1.	<u>Project Team, 17. Sep 2008:</u> As explained on CAR No.25, the activities to be carried out on the offsite project area will directly address the drivers and dynamics of deforestation in the region, such as illegal logging	**FAR 1**

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
other areas) shall be discussed and it shall be clarified how the project takes account of these aspects (out-out leakage).		and grazing, land grabbing, mining etc, that could be considered as a leakage effect from the project implementation – even though they cannot be attributable to the project activities (i.e. will occur anyway). These activities will be monitored on the Reserve's "surrounding zone" that will be an area defined as a strip of lands surrounding the reserve with specific geographical delimitation and in which land use will be subject to specific terms and conditions, established by law (as envisioned in SEUC, 2007) Audit Team 22. Sep 2008: See Comments above on CAR 24.	
Corrective Action Request No.27. An (initial) monitoring plan with concrete parameters shall be elaborated and included to the PDD for climate impact monitoring. Each parameter shall be clearly specified, shall be consistent with the formulae for the calculation of emission reductions, and shall count with a clearly indicated monitoring frequency.	CL.3.1.	Project Team, 17. Sep 2008: The monitoring plan is fully described on annex XIII, showing the respective frequency, indicators and other relevant info for the respective parameters presented. Audit Team 22. Sep 2008: While the CCBA requirement of an "initial monitoring" plan is complied, the current monitoring plan is not considered to be sufficient in order to guarantee that all data is monitored in order to be able to verifiy emission reductions at a later stage. The latter is also related to the aspect that no approved methodology with corresponding guidance has been applied. For instance, currrently no concrete parameters (with	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		frequencies, data etc) are included on: - Monitoring of project boundary - Monitoring of ownership status - Monitoring / assessment of baseline parameters for reconfirmation of carbon densities in main forest types and potentially also non-forest types in order to further calibrate the basline model before first verification - Forseen frequency of full scale monitoring of forest types and densities as part of baseline reassesment, i.e every 10 y (considering also changes every due to fire etc) - Monitoring of leakage parameters (FAR above), including monitoring design. - Monitoring of regular public funding directed to the Reserve (additionality related) Consider tables. Beyond this it is relevant that currently formulae for ex-post calculations i.e. as basis for a monitoring report and verification, are not included (one main formula included to CL1) - Specification of monitoring and especially calculation approach in regard to forest fires (non-CO2) and how this is going to be considered (formulae for estimates to be included to PDD) - Generall IPCC relevance in regard to uncertainties of assessments.	

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		Project Team 26 Sep. 2008 The specific variables, sources, frequency and other relative parameters related to all carbon stocks related above were included and are described in the monitoring plan *(see Annex XIII, p. 185)*. Audit Team 29.Sep 2008: The adaptations have been carried out.	
Corrective Action Request No.28. The specific sampling approach in regard to the monitoring of deforestation shall be specified in the PDD.	CL.3.2.	Project Team, 17. Sep 2008: The monitoring plan (Annex XIII) presents in details the sampling approach that will be used, as well as the strategy to monitor deforestation inside the project area. Audit Team 22. Sep 2008: The sampling design has been described. As indicated above sampling may be relevant for other monitoring activities.	☑
Corrective Action Request No.29. The net benefits for communities (baseline vs. project) remain to be described and the methodology used for the assessment remains to be described in the PDD. Assumptions on community wellbeing and its alteration over time shall be defined.	CM.1.1.	Project Team, 17. Sep 2008: Figure 18 presents the "Sustainability Matrix", that measures the condition and improvements of livelihoods in State Protected Areas of Amazonas. It is explained how the Matrix works and how it should be applied in a monitoring system. Table 21 also shows the parameters, situation without the project, program and activities, net benefits, indicators, budget and responsible institution for the activities and programs that will be carried out	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		as part of the project for the communities. Audit Team 22. Sep 2008: The net benefits have be described and are documented.	
Corrective Action Request No.30. An overview / list of events carried out in which main stakeholder groups had the option to comment shall be included to the PDD.	CM.1.6.	Project Team, 17. Sep 2008: The requested events are already listed at Table 09 (section G3.2). The stakeholders were informed verbally and through FAS' website announces that the Project Design Document was available at project (CEUC) base in Novo Aripuanã, for reading and commenting. During all the process, the stakeholders had chance to make their concerns about the project, even supporting in some actions and decisions. The meetings made with the communities (check item G3.2) were also a moment when the community, as the main stakeholder, could understand better and opine about the project. All the comments were taken into consideration for the project planning. Besides this events, the comments can be done and incorporated to the project during its implementation, as described at Item CM1.3. Audit Team 22. Sep 2008: Apart of the stakeholder identification already analyzed in prior sections, the local stakeholders had the option to comment.	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
Corrective Action Request No.31. An (initial) monitoring plan with concrete parameters shall be elaborated and included to the PDD for community impact monitoring. Each parameter shall be clearly specified and shall count with a clearly indicated monitoring frequency. Include also parameters at risk to be negatively impacted.	CM.3.1.	Project Team, 17. Sep 2008: An explanation of the monitoring plan was developed in this section based on the functioning of the sustainability matrix. The table with the concrete parameters and details is presented in Annex X. Audit Team 22. Sep 2008: The (initial) monitoring plan on community impact has been defined.	☑
Corrective Action Request No.32. The net benefits for biodiversity (baseline vs. project scenarios) remain to be described and the methodology used for the assessment remains to be described in the PDD. Assumptions on biodiversity impacts and its alteration over time shall be defined.	B.1.1.	Project Team, 17. Sep 2008: The expected net biodiversity benefits of the project are described on item B1.1 (Table 23 presents area, situation without the project, Program/Activity, Net Benefits, Indicators, Budget, Institution, and Table 25 the parameters to be monitored). The "with project" scenario assumes that the resources required to guarantee conservation and sustainable development are available. Under this scenario, it is assumed that at least 90% of the intact forests in the project area will be protected and thus promote great benefits in terms of biodiversity conservation when compared to the "baseline" scenario. In addition to these benefits, the project will make possible the establishment of a robust system for biodiversity monitoring and research for the natural resources in the Juma Reserve area and its surroundings. This system is based on an already established "Program for Monitoring of the Biodiversity and Use of Natural	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		Resources of the State of Amazonas" (*Programa de monitoramento da Biodiversidade e do Uso dos Recursos Naturais do Estado do Amazonas* - PROBUC) (MARINELLI *et al,* 2007). Audit Team 22. Sep 2008: The net benefits are considered positive and will be documented throught the described monitoring initiative.	
Clarification Request No. 1. Differences in the project area in regard to climate conditions shall be clarified (in the PDD) and more specific information (from nearest meteorological stations) incorporated to the PDD:	G.1.1.	Project Team, 17. Sep 2008: The specific map of climate classification from Köppen-Geiger was added to this new version of the PDD, showing the specific climate areas for the South America, locating the Juma Reserve in its specific climate zone. Audit Team 22. Sep 2008: The data has been incldued. General classification is considered sufficient in light of the large area and the absence of meteorological stations.	☑
Clarification Request No. 2. It shall be clarified in the PDD if the analysis of communities also considered communities that are located outside the Juma Reserve.	G.1.4.	Project Team, 17. Sep 2008: Item G 1.4 (4th paragraph) now provides an analysis considering the communities located outside the Juma Reserve. Audit Team 22. Sep 2008: The information was included to the PDD.	☑
Clarification Request No. 3. The current biodiversity conditions in regard to flora shall be documented in the PDD.	G.1.6.	Project Team, 17. Sep 2008: The flora data, obtained at inventories in the Study for the Creation of the Reserve was added to the PDD, showing the more frequent species on the area. These studies show that the	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		main families existent in the area are the *Chrysobalanaceae, Leguminosae, Sapotaceae, Moraceae, Burseraceae and Lecythidaceae,* which have many species with relevant potential for timber and non timber products. The most abundant species found are the Sumaúma (*Ceiba petranda*), Açaí (*Euterpe spp*.), Buriti (*Mauritia flexuosa*), Angelim da mata (*Hymenolobium petraeum*), Angelim Pedra (*Dinizia excelsa*), Castanha do Brasil (*Bertholettia excelsa*), Abioranas (*Pouteria spp*) and Matamatá branco (*Eschweilera odora*) (SDS, 2005). Audit Team 22. Sep 2008: In vision of the immense biodiversity and the large project area, the descriptions in the PDD can only remain general. Most important secondary source reviewed has been the study on the creation of the Reserve.	
Clarification Request No. 4. In section G.1.6 the biodiversity conditions are described while section B.3 indicates the monitoring approach. Clarify the consistency between initial assessment and monitoring (and the corresponding methods of assessment used) and indicate to which extend these results will allow a qualified comparison.	G.1.6.	Project Team, 17. Sep 2008: It was described the methodologies used to assess biodiversity conditions on the item G1.6, and on item B3, where the complete monitoring plan is presented, it is described the methods that will be used in the monitoring plan, which are consistent with those used on the preliminary inventories before the creation of the project. This way, will be possible to obtain results that have the same basis of comparison, as they were obtained through the same methodologies. Audit Team 22. Sep 2008: The outline of the biodiversity monitoring is included. It is	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		focussed on the ProBuc programm and scientific studies. It is considered that ProBuc focuesses especially on the monioring of change and impact in regard to easily measurable variables. Scientific studies, i.e. based on the intial data as included to the study on the creation of the Reserve, which further document status and change are indicated but remain to be defined further as the project advances. CCBA requirements on biodiversity monitoring are met.	
Clarification Request No. 5. Clarify the work approach in the generation of the list as currently included to the PDD, and if all species included to the initial assessment have been checked in regard to their Red list status.	G.1.8.	Project Team, 17. Sep 2008: The final list of threatened species found in the Juma Reserve was obtained in two steps. The first step was to identify on previous studies (such as Van Rosmalen, Cohn-Haft et al the "Study for the Creation of the Reserve") all the occurring species on the Reserve's area. Although some of these studies were not made exactly inside the project boundaries, they are in the same area between the Madeira and Tapajós Rivers. Thus, it is known that the species are distributed all across the region, which guarantees their occurrence also inside the project area. After identifying the species potentially present within the project boundaries, it was made a search on IUCN and IBAMA's list of threatened species, generating the list of all threatened species in Brazil and in the State of Amazonas. Then, these list were compared to the list of the project occurring species, matching the lists and generating the "IUCN ad IBAMA list of threatened species inside the Juma REDD Project". The list is presented on	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		Table 05 (item G1.7). Audit Team 22. Sep 2008: The work approach on the definition of Red List species has been clarified.	
Clarification Request No. 6. Clarify and potentially consider uncertainties in regard to deforestation estimates in project area due to 1x1 km cell size of model (versus i.e. 30x30 m in Landsat images used for boundary definition / forest classification).	G.2.1.	Project Team, 17. Sep 2008: As described on Annex I - In regard to the differences between the resolution of the model, which has pixels of 1 x 1 km, and the resolution of Landsat images, which is 30 x 30 m, these differences do not adversely affect the accuracy of the projections, since the resolution of the Landsat, which is the satellite that will be used to do the monitoring, is better than the one used in the model. For this reason, small spots of deforestation can be identified, being even more accurate than the model used to define the baseline scenario. Audit Team 22. Sep 2008: The model and its scale is considered independent to the resolution the images used for monitoring. It is furthermore considered that a larger cell size, i.e. 1 x 1 km, would tend to overestimate deforestation. The results of the study assessing modelling acc uracy are considered to underline this (p.152)	☑
Clarification Request No. 7. Clarify and potentially consider uncertainties related to the deforestation model. Conservativeness of estimates shall be	G.2.1.	Project Team, 17. Sep 2008: Please refer to the Annex II – SimAmazonia model validation. There, all the parameters and results that can prove the applicability and conservativeness of the model are explained.	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
assured.		Audit Team 22. Sep 2008: The results of a 'validation' of the model are described for the period of 2002 to 2007 with larger cell sizes. 63 to 78 % of correct classification have been achieved. As the baseline definition is a decisive element, it shall be assured that the estimated deforestation is conservative. This means that it is rather underestimated than overestimated in relation to the actual deforestation. Please clarify futher that / if this is achieved. Uncertainties beyond typical levels shall be considered /discounted in regard to the deforestation estimates (used for the (ex-post) calculation of the emission reduction). Project Team: 26 sep 2008 Even though the baseline estimation is considered robust and conservative (CAR 09), there are uncertainties that can affect the carbon credits generation. As a measure to deal with the model uncertainties the baseline will be re-validated at the end of each crediting period (10 years). At this time, if the baseline deforestation is verified as different than predicted (based on parameters defined by the model, as described in Annex XIII), the emission reductions for the previous period shall be recalculated. If deforestation is verified as lower than the predicted in the baseline, the project shall discount the respective amount of	

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		VERs form the next crediting period. If deforestation is verified as higher than the predicted in the baseline, the project will be able to issue the respective amount of VERs for the previous crediting period. *(see CL1.1, p 81).* Audit Team 29.Sep 2008: The adaptations have been carried out. The approach to calibrate the baseline model after 10 years is considered acceptable. Note: Under VCS the methodology approach as prerequisite of issuance after each verification remains to be complied with.	
Clarification Request No. 8. Summarize in the PDD (and consider to document internally) how the Model results on deforestation have been processed and overlaid (in a GIS environment) with the project boundary in order to arrive at the deforestation (per forest type).	G.2.1.	Project Team, 17. Sep 2008: The whole description of the methodology used is described on Item G 2.1 and Annexes I and, IX. The data in the model for each sub-region consists of the deforestation rate and its annual average derivative, as well as the extension of the remaining forests, deforested areas and protected areas. The database used for the region was obtained from PRODES[1] - which methodology to obtain the deforestation data is available on the annex IX. To generate the deforestation year by year on the Juma Reserve, the 44 rasters of the model, made available by the	☑

[1] Instituto Nacional de Pesquisas Espaciais. *Monitoramento da Floresta Amazônica Brasileira por Satélite- Projeto PRODES [online]*, available at: http://www.obt.inpe.br/prodes(2004).

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		author, were converted to a GIS format, and the dimension of the pixel converted for 100 x 100 m (1 hectare per pixel). This corresponds to the minimum mapping unit adopted in the project. The classified LandSat image (methodology available at Annex VI) was also converted to ArcGIS grid, with the same dimensions. Each vegetation class and land cover have their own and only number. Using an ArcGIS tool, was performed a multiplication of the grid for vegetation/land cover and the grids of each year of the model, obtaining the negative values for the pixels where deforestation happened, according to the model, and pixels with positive values, where there was no deforestation. Audit Team 22. Sep 2008: The process is considered to be sufficiently documented.	
Clarification Request No. 9. A list with the main sources used in the SimAmazonia Model shall be included to the (annex of the) PDD, indicating for which parameters these sources were used and which timeframes of data they covered, if applicable.	G.2.1.	Project Team, 17. Sep 2008: All of the assumptions and parameters considered by the SimAmazonia I model are described in Annex I. Audit Team 22. Sep 2008: The main input sources are described. Further information is available on the indicated webpage of SimAmazonia.	☑
Clarification Request No. 10. Negative values in baseline emissions included to table 05 (and also table 09) shall be	G.2.2.	Project Team, 17. Sep 2008: As the baseline emissions tables were corrected, these negative values no longer exist.	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
explained.		Audit Team 22. Sep 2008: Corrections have been carried out.	
Clarification Request No. 11. Clarify for all processes and estimates relevant to the project's calculation of emission reductions how uncertainties have been considered (ie. boundary definition, carbon density estimates, modelling, etc.)	G.2.2.	Project Team, 17. Sep 2008: For the boundaries definition there was no uncertainties, considering that the boundaries of the Reserve were obtained with precise GIS system by the SDS/AM. In the case of carbon density estimates, it was also adopted the uncertainties used by each author. About the modelling, the uncertainties of the SimAmazonia, which was the model used to predict the deforestation in the Juma Reserve is presented at Annex II. Audit Team 22. Sep 2008: Uncertainties in regard to boundary definition are considered acceptable as best data available was used. Sustained data on carbon densities will be further specified through inventory. No other major sources of uncertainties were defined. Uncertainties in deforestation model are analyzed in CR 7.	☑
Clarification Request No. 12. It shall be described in detail in the PDD, if the project participants (and partners) involved and their specific contribution to the project activities are part of a corresponding legal obligation of these entities. For the relevant entity, it shall be described and sustained with evidence to what extent these regular	G.2.2.b	Project Team, 17. Sep 2008: The partners and participants of the project are all listed and described in table 15, item G4.1. As these actions are all related to the fact of the creation of the Juma Reserve, considered the beginning of the project, all the activities related to the Reserve are specific and exclusive to the Project. Audit Team 22. Sep 2008: The list of involved entities is included to the PDD.	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
obligations are complied with under the baseline setting. Only project specific activities that can be considered a surplus to regular tasks and performance shall be considered. (Note: additionality test as defined for the CDM for VCS validation)		The intention of this Request is to differentiate regular activities of the involved public entities and those specific to the project. Therefore, it shall be demonstrated / monitored that activities are not diverted to this particular project (additionlity, see above). I.e. • SDS • IPAAM • CEUC • CECLIMA • ITEAM Project Team 26.Sep 2008 The specific variables, sources, frequency and other relative parameters regarding possible diversion of public funds were included and will be monitored as part of the monitoring plan *(see Annex XIII, p. 185)*. Audit Team 29.Sep 2008: The adaptations have been carried out.	
Clarification Request No. 13. Clarify in last paragraph of G.2.3 as well as in section G.3.1 the wording on “State Government action” and if project activities or non-project activities are meant. Currently it is considered that State action (versus activities of participants) is put equal to project activity.	G.2.3.	Project Team, 17. Sep 2008: The State Government actions are directly connected to all project activities, since the creation of the Juma Reserve . The Government of Amazonas is part of the project and the creation of the Juma Reserve was the first specific action for the Juma Reserve RED Project. As a consequence, every measure and action performed by the State Government in the Juma Reserve	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
This needs to be clarified and terminology shall be used consistently throughout the PDD.		is directly related to the RED Project. Annex III presents the application of the "additionality test", which explains in better how this affects the project additionality. Audit Team 22. Sep 2008: FAS and activities of other entities are combined in the project. Financing of implementation is mostly forseen through carbon finance. Compare CR 12. Consideration of state funding. Project Team, 26. Sep 2008: All investments made by the Government of Amazonas and FAS are part of the project scenario and were carried out as specific project activities *(see also G3.4, G 4.4 and additionality tool at Annex X III, p 157)*. Audit Team 29.Sep 2008: The adaptations have been carried out.	
Clarification Request No. 14. It shall be sustained with secondary evidence how the involved institutions have formalized their cooperation and if corresponding agreements / contracts include indications on the claim and recognition of ownership of carbon rights generated through this project activity. Contracts on carbon rights shall be monitored.	G.3.1.	Project Team, 17. Sep 2008: On Table 15, item G4.1. are described all the involved institutions, their respective functions, type of contract and the project activities developed by each of them. As said on item G3.1, all the carbon rights over the Juma Project belongs to FAS, and that will not be altered during the project duration. For this reason, there is no need for monitoring this. Audit Team 22. Sep 2008: FAS is deemed to hold the legal mandate to merchandise environmental services and with that carbon rights.	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		FAR Access to carbon rights remain to revisited at verification. Project Team 26.Sep 2008 Please see CAR 7. Audit Team 29.Sep 2008: The adaptations have been carried out.	
Clarification Request No. 15. The concrete contribution in regard to project activities of the different participants / partners shall be specified in the PDD. (compare section G.2.2 and the Request that it shall be clearly indicated how these contributions in project activities are additional to regular tasks)	G.3.1.	Project Team, 17. Sep 2008: The partners and participants of the project are all listed and described in table 15, item G4.1. As the beginning of the project is characterized by the creation of the reserve, these activities will only be carried as part of the RED Project. In the baseline scenario, there would be no Juma Reserve, and thus none of the activities expected would be carried out. For additionality purposes, please check Annex III. Audit Team 22. Sep 2008: See prior comments on starting date and additionality. Consideration of regular funding is to be considered. Project Team: 26 sep 2008 See prior comments on CAR 18 about starting date of the project and additionality. Regular funding from state budget to other protected areas and environmental programs will not be diverted – as described on CAR 18 – but nonetheless will be monitored as part of the monitoring plan, as described in PDD's page 185 (Annex XIII - Monitoring plan).	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		Audit Team 29.Sep 2008: The adaptations have been carried out. Other funding by state agencies will be monitored.	
Clarification Request No. 16. An overview table of the data layers used to define the net project area and its corresponding sources shall be included to the PDD.	G.3.3.	Project Team, 17. Sep 2008: The Table 11 shows the data layer, source and reference for each parameter used to define the net project area. Audit Team 22. Sep 2008: The table includes the relevant information.	☑
Clarification Request No. 17. In regard to the definitions of data layers used to define the net project area (i.e. buffers from roads, special limits of communities, deforested areas) clarify and describe the work approach in the PDD and sustain how it was assessed that these choices on boundary definition are adequately and conservatively reflecting field conditions.	G.3.3.	Project Team, 17. Sep 2008: The data layers, respective sources and references are presented in table 11 Item G3.3. The methodology used to define the net project area (pg. 49) was obtained through the exclusion of each one of the following excluded areas: Deforested areas, Titled lands, Areas under influence of the Apuí – Novo Aripuanã highway (AM-174), Community use areas and Non-Forest areas. The reasons to exclude these areas are described on Item 3.3. Audit Team 22. Sep 2008: The work process was clarified and has been documented further in the PDD.	☑
Clarification Request No. 18. Concrete capacity building measures for the project team shall be clarified (i.e in a secondary document on project implementation).	G.4.2.	Project Team, 17. Sep 2008: There is a description presenting the respective abilities and qualifications of each team involved in the project (CEUC, CECLIMA, IDESAM, FAS and Seplan), attesting that the skills available are adequate to the size of the project. In needed	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		case, courses and trainings will be offered. Audit Team 22. Sep 2008: The capacity planning measures and the involved institutions are defined.	
Clarification Request No. 19. Currently an investment plan is presented that includes expenses by FAS for 4 years. If the project includes funds (services) of partners other than FAS, it shall be clarified if these are to be considered in an overall project budget. If applicable, adoptions shall be carried out in order to have an overview of the total of annual project finances/costs.	G.4.5.	Project Team, 17. Sep 2008: At the Annex XII is presented a table showing all the investments that will be made by partners, showing who are these partners, the events occurred and respective dates. Audit Team 22. Sep 2008: List of expenditures by other orgnisations prior to the creation of the Reserve has been listed in the Annex. During implementation, activities and funding is provided by FAS as well as other institutions. These organisations will partially use own (public) funding sources. Project Team, 26. Sep 2008: All investments made by the Government of Amazonas and FAS are part of the project scenario and were carried out as specific project activities. When investments are made by both parts for the same activity, FAS pays the operational costs and Government of Amazonas only provides the staff for the activities. This staff is additional to the regular staff existent in the State before the start of the ZFV program, and can be reflected in the investments made by the Government on the State PA's since 2003 – as described by Table 02 of the additionality tool in Annex III *(p. 163)*.	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		Audit Team 29.Sep 2008: The approach on mixed funding on what is considered an additional programm is considered in line with additionality requirements.	
Clarification Request No. 20. Overall financial feasibility shall be clarified for periods beyond the initial phase.	G.4.5.	Project Team, 17. Sep 2008: At Annex XI is presented the whole overall budget, divided into four sections: 1 – Support for Monitoring and Law Inforcement 2 – Social Investment 3 – Community Development, Scientific Research and Development 4 – Payment for Ecosystem Services – Bolsa Floresta It presents every action predicted for each category, and how much would it cost, presenting the final values at the end. Audit Team 22. Sep 2008: An updated cost overview is included.	☑
Clarification Request No. 21. While the project activity is largely in line with the objectives of the RDS, it remains to be analyzed if the project activity will require the RDS Council's approval. This is pending as the Council is still in creation process. If the latter is the case, approval shall be scheduled (and confirmed with first verification).	G.6.2.	Project Team, 17. Sep 2008: The Juma Reserve Council is now in an advanced process of creation. All the members are already defined, and the only pendency is the legal formalization and the publication at the official diary. The prevision for this to happen is around January 2009. After the formalization of the Council, every predicted action will be consulted, and their approval needed. In the meanwhile, every action to be taken as part of the Juma Project is submitted for approval of the CEUC (State Center for	**FAR 2**

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		Protected Areas), that performs a formal consultation with the leaderships of the reserve, as well as public consultations for approval. Audit Team 22. Sep 2008: A Forward Action Request is posed in order to assure that it is complied with the approval by the Juma Reserve Council. During the onsite visit it was participated in one of constituting sessions of the Council – the members are aware of the project and the scheduled activities. Forward Action Request 2: Approval of the project as defined per PDD by the Juma Reserve Council to be revisited at verification.	
Clarification Request No. 22. Provide a procedure / guideline (i.e. as part of internal process documentation) for documenting decisions, actions and outcomes and how this information is shared.	G.7.2.	Project Team, 17. Sep 2008: In order to avoid the loss of information, FAS will adopt a project implementation process in which annual reports will be prepared by every monitoring program and any corrective action (i.e. to solve conflicts or apply suggestions) taken by the team will document right after the execution. Every member of the project will be aware of how to document the actions taken in the project and how to forward it to the Project Coordinator, who will keep track of this information and use it when necessary. All these documents can be consulted at any time by anyone, if necessary. The most relevant information will be divulgated to everyone involved in the project implementation during the project meetings or by mail.	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		This also follows the guidelines illustrated at G7.1 and CM1.3c. Audit Team 22. Sep 2008: The correspondig guidance on internal management and documentation processes has been described in the PDD.	
Clarification Request No. 23. The relevance of the described monitoring (as generally implemented by SDS) for the actual project activities remains to be further described and clarified in section G.7.3. A procedure for adjustments of project activities remains to be defined and made available.	G.7.3.	Project Team, 17. Sep 2008: The monitoring was better detailed and explained at section G7.3 and the procedure for adjustments is explained and illustrate at G7.1. Audit Team 22. Sep 2008: The different participating organisations carry out different parts of the overall monitoring activities (also CL3.1). The project design is considered flexible enough to accommodate potential changes.	☑
Clarification Request No. 24. Clarify in the PDD how the quantity of avoided deforestation was assessed. Currently assumed complete deforestation stop is not considered conservative and shall be adapted. (in this context, compare Requests above on main deforestation drivers and further specifications on project activities designed to stop deforestation. This shall be put into context with / related to the assumed reduction of deforestation)	CL.1.1.	Project Team, 17. Sep 2008: Although the project aims to reduce 100% of the deforestation predicted in the baseline, as a conservative measure to assure the benefits of the project and avoid the risks to that could be caused by deforestation happening in spite of the project activities, the project commits as creditable only 90% of the ongoing deforestation. In this way, the other 10% can be kept as "security carbon," in case small areas of deforestation occur inside the Reserve. Audit Team 22. Sep 2008: The ex-ante estimation approach is considered reasonable.	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		During the implementation phase any new deforestation will be actually monitored and considered as project emission.	
Clarification Request No. 25. Clarify in the PDD if / how the location of avoided deforestation has been defined and how location (respectively carbon density at a specific site) is considered in an overall conservative estimate of the preserved carbon stocks / reduced emissions (i.e. relevant if specific forest types would be better protected than others).	CL.1.1.	Project Team, 17. Sep 2008: The location of the areas for "avoided deforestation" was defined according to the assumptions and parameters defined for the RED crediting "excluded areas" – as described on Item G 3.3. No specific strategy was taken to protect more one type of forest than other. The carbon densities classes are defined by the natural vegetation in the project area, and may be adjusted/validated during the forest inventories to be carried out as part of the monitoring plan. Audit Team 22. Sep 2008: The process has become clear also in light of the description on the GIS overlay process (of deforestation per year) as modelled by SimAmazonia.	☑
Clarification Request No. 26. In the PDD it is indicated that Leakage will be detected through monitoring. Clarify and specify the monitoring activities carried out in regard to Leakage i.e. in surrounding areas (as part of Climate Impact Monitoring / CL.3).	CL.2.1.	Project Team, 17. Sep 2008: Negative offsite impacts on carbon stocks related to the project implementation are not expected. Nevertheless, as a measure to monitor this, the physical boundaries of the "surrounding zone" will be determined as part of the reserve's management plan (see item *CM5.1*) during the initial years of the project implementation. Usually this area is defined as at least a 10 km buffer surrounding the reserve's perimeter (i.e., in the Juma Reserve the zone would be about 494,318 ha). The entire surrounding area will be monitored as part of the	**FAR 1**

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		project's monitoring plan. As a mitigation measure to guarantee that the offsite carbon stocks will not decrease, the project will commit to invest at least 10% of the annual budget generated through the sales of RED credits, for forest conservation activities outside the project boundaries. Audit Team 22. Sep 2008: The details on ex-post leakage assessment are requested by FAR 1.	
Clarification Request No. 27. Specify the concrete measures taken to mitigate risks from climate change.	CL.4.2.	Project Team, 17. Sep 2008: CECLIMA is developing risk management programs for climate change with the goal of establishing a network of organizations to monitor climate and extreme climate events. As part of this effort, CECLIMA is conducting scientific studies of the issue to serve as the basis for a strategy to adapt to and mitigate the consequences of extreme weather events, such as intense droughts and flooding, that in the short, medium and long-term could be intensified in the State of Amazonas. This effort will be critical for the management of protected areas in the State of Amazonas. The Juma Reserve will receive all the necessary support from resources of the Juma RED Project, which will allow the reserve to serve as a model for the state's overall monitoring programs. The possible risks to the new benefits from the Juma RED Project and the actions proposed to mitigate them are listed in the Table 20, pag. 90.	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		Audit Team 22. Sep 2008: The potential risks through climate change are furhter specified.	
Clarification Request No. 28. A procedure how the project deals with grivieances shall be defined and made available.	CM.1.7.	Project Team, 17. Sep 2008: The procedure is explained, detailed and illustrate at CM1.3a, CM1.3b and CM1.3c. Audit Team 22. Sep 2008: The process was descirbed. See also CAR 22.	☑
Clarification Request No. 29. Jointly with the further specification of project activities per partner organization included to the present project activity, a concrete capacity building plan shall be indicated and described (if this optional point is to be collected. In this context also activity specific information on questions / sections CM.4.2 –CM4.4 shall be provided.	CM.4.2.	Project Team, 17. Sep 2008: The capacity building activities planned are described at CM4.4. Audit Team 22. Sep 2008: The different capacity building measures as scheduled for 2008 have been specified per organisation.	☑
Clarification Request No. 30. The process and established guidelines for contracting personnel shall be clarified for the project activity and specifically reflect on contracting of project personnel by all partners involved. Questions CM5.3-5.8 remain to be covered and documented. (if the optional point of CM 5 wants to be achieved).	CM.5.2.	Project Team, 17. Sep 2008: All the procedures adopted to contract personnel is clarified on item CM5.2. Audit Team 22. Sep 2008: The process of contracting with a focus on local employess has been specifed in the PDD.	☑

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
Clarification Request No. 31. Summarize in the PDD how the data gathered through the ProBuc program will be analyzed and processed and which conclusions may be drawn from this data (i.e in regard to changes in biodiversity)	B.1.3.	Project Team, 17. Sep 2008: The main assumption of the program is that through scientific research on the Juma Reserve's biodiversity (e.g., ecology of species, dynamics of populations, etc.) the subsidies to improve the Management Plan of the reserve will be obtained, helping also to identify the needs and opportunities for the next research and monitoring activities. The knowledge about the conservation status of the threatened species in and around the reserve will be improved, which will lead to specific measures for protecting these species. Through the knowledge of these data, it is possible to have an overview of the availability of exploited species, generating information about the level of exploitation. These data can help to generate measures for instructing the communities about how to use the natural resources in a sustainable way, without affecting either their needs or the resources. Audit Team 22. Sep 2008: The impact / change focus through a locally and easily measurable approach as scheduled by ProBuc is considered appropriate for the project design. As summarized above, further scientific studies are scheduled. This is in line with the approach of initial monitoring as defined by CCBA.	☑

Industrie Service

Annex 2: Information Reference List

Reference No.	Document or Type of Information
1.	On-site audit carried out during the period August 1 to August 6, 2007: Validation team: Martin Schroeder — TÜV SÜD Industrie Service GmbH — Lead-Auditor Gabriel Medina — TÜV SÜD Industrie Service GmbH — Expert Persons interviewed during the on-site audits (Name, Institution, Position) Britaldo Soares Filho – Professor / UFMG Lucio Pedroni – Consultant / Carbon Decisions Mariano Cenamo – IDESAM Garbriel Ribenboim – Project Manager / FAS Virgilio Viana – Director General / FAS Luiz C. Viallares – Director Financial Dep. / FAS Raquel Luna – FAS João Tezza Neto - GIS unit / FAS Gabriel C. Carrero – IDESAM / INPA Gustavo A Reginato – IDESAM Mariana – Noguiera Pavan - IDESAM Romulo F. Batista – Consultant Domingos Macedo - CEUC / SDS Marina T Campos – CECCLIMA / SDS Nadia Ferreira – Director / SDS Denis Minev – Secretario / SEPLAN Philip M. Fernside – Researcher / INPA Niro Higuchi - Researcher / INPA Furthermore numerous local inhabitants of communities were interviewed. Due to the large number of participants, only the name of presidents of the community visited are given: Boa Frente – President / José Marlos Ajunar

Reference No.	Document or Type of Information
	Com. Primavera - President / Claudes Braga Paula San Francisco – community members were internviewed.
2.	Project Design Document (PDD) for the CCBA project: "The Juma Sustainable Development Reserve Project: Reducing Greenhouse Gas Emissions from Deforestation in the State of Amazonas, Brazil" GSP Version: Version 03, July 5, 2008 Final Version: Version 05 Sep 29, 2008
3.	Governo do Estado do Amazonas, 2005. Estudio de Criação de uma Unidade de Conservação de Uso Sustentável no Baixo Rio Aripuanã
4.	Radambrasil Project. 1978. Folha no. SB 20 Purus: geologia, pedologia, vegetação e uso potencial da terra. Departamento Nacional de Produção Mineral, rio de Janeiro, RJ, Brasil. 566p.
5.	Nogueira, E.M., P.M. Fearnside, B.W. Nelson, R.I. Barbosa & E.W.H. Keizer. 2008c. Estimates of forest biomass in the Brazilian Amazon: New allometric equations and adjustments to biomass from wood-volume inventories. Forest Ecology and Management
6.	Bolsa Floresta 2007, Information Inquiry Sheets on Communties, as used by the Bolsa Floresta Program,
7.	Bolsa Floresta 2007, Leaflet and Programme description,
8.	SEUC Sistema Estadual de Unidades de Conservação, Lei complementar No. 53, Assembléia legislativa do Estado do Amazonas. 2007.
9.	Lopes, 2007: letter by lawyer on access of carbon rigths from reserve
10.	SDS 2006, Monitor de Biodiversidade – ProBuc – Programa de Monitoramento da Biodiversidade e do Uso de Recursos Naturais em Unidades de Conservação Estaduais doAmazonas.
11.	Soares Filho 2008 (unpublished), Validação do modelo SimAmazonia 1 para Estaduais do Amazonas
12.	Houghton et al 2000, Annual Fluxes of carbon from deforestation and regrowth in the Brazilian Amazon. Letters to Nature, vol 403. 301 – 303.
13.	Fearnside, P.M. 1996. Amazonian deforestation and global warming: carbon stocks in vegetation replacing Brazil's Amazon forest. Forest Ecology and Management 80:21-34.
14.	Excel spreadsheets "Carbon Calculation Sheets" as delivered during the onsite visit, dated 31. July 2008
15.	Lei no. 3.135, de 05 de junho de 2007: "Institui a Política Estadual sobre Mudanças Climáticas, Conservação Ambiental e Desenvolvimento Sustentável do Amazonas". 16p.
16.	Governo do Estado. 2006. Decreto n° 26.010, de 03 de julho de 2006: "Cria a Reserva de Desenvolvimento Sustentável do Juma, no Município de Novo Aripuanã, e dá outras providências", published in the Diário Oficial do Estado do Amazonas in July 03rd, 2006.

Reference No.	Document or Type of Information
17.	GIS data set as provided during the onsite visit and unpdate delivered on the 15th of Sep 2008
18.	Participants lists on stakeholder events (2008)
19.	Bolsa Floresta description (hand out to communities), 2008
20.	Documemt on the legal insricption of FAS according to national requirements 2008
21.	Decreto n° 27.600, de 30 de abril de 2008: “Dispões sobre a doação do valor que especifica à Fundação Amazonas Sustentável-FAS, e dá outras providências”, published in the Diário Oficial do Estado do Amazonas in April 30th, 2008
22.	Contract with donor, FAS and Government on the Juma project (7 April 2008)
23.	State law on climate change policy PEMC-AM law 3135 (June 2007)
24.	Contextual analysis of legal setting as compiled by the audit team, 2008
25.	SNUC, Sistema Nacional de Unidades de Conservação, Federal Law no, 9,985 of July 18, 2000
26.	SDS 2006 Roteiro para elaboração de planos de gestão para Unidades de Conservação Estaduais do Amazonas: Secretaria de Estado do Meio Ambiente e Desenvolvimento Sustentável. Manaus, Brasil.
27.	ProBuc 2008, Monitoring sheets as applied in field visits
28.	CUEC 2008, confirmation of no state funding being pledged to JUMA reserve