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Ver-29 Nov 2007

SmartWood
Practical conservation through certified forestry

Validation Audit Report

For:

Provincial Government of Nanggroe Aceh Darussalam - Fauna & Flora International - Carbon Conservation

in

Ulu Masen Ecosystem, (Aceh Province, Indonesia)

Audit Standard: *Climate, Community and Biodiversity Project Design Standards (Climate, Community and Biodiversity Alliance) - First Edition, May 2005*

Audit Dates: November 27 - December 2, 2007

Audit Team: Jeffrey Hayward, Suraya Afiff

Report Finalized: January 17, 2008

Validation statement

Issue date: February 6, 2008

Validation validity period:
February 6, 2008 to February 5, 2013

Validation code: SW-VER-0015

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1. VALIDATION AUDIT FINDINGS AND CONCLUSIONS

1.1. Validation Audit Scope

Project Proponent (s) name:	Province of Aceh, Fauna and Flora International, Carbon Conservation Pty Ltd.
Type of organization (s)/ Project Proponents:	Carbon forest project consortia between government, environmental NGO, and carbon project developer.
Contact person, Title:	John O. Niles
Address:	1226 E Mason St Santa Barbara, CA 93101
Tel/Fax/Email:	tel. 805-252-6777, johno@carbonconservation.com
Audit Scope:	The scope of the audit is a validation of the initial project design for a Reduction of Emissions from Deforestation (RED) project type. The validation will cover the Ulu Masen Project, which refers to the connected forest ecosystem and nearby forests of about 750,000 hectares located in the four northernmost Kabupaten of Aceh Province: Aceh Besar, Aceh Jaya, Aceh Barat, and Pidie.
Standard used:	Climate, Community and Biodiversity Project Design Standards (Climate, Community and Biodiversity Alliance) - First Edition, May 2005
Additional details:	Other contacts for the project, representing the Government of Aceh and Fauna and Flora International are: The Provincial Government of Nanggroe Aceh Darussalam (Aceh)-- Contact: Teuku Pasya Rafli, rafly@uninet.net.id, +62 (0) 817 175377 Fauna & Flora International-- Contact: Graham Usher, graham.usher@ffi.or.id, +62 (0)812 669 0434

1.2. Audit findings

1.2.1 Analysis of Conformance with Standard

The CCB Standards are primarily project design standards and demonstrated conformance to the standard in this audit related to the planning, development, and design of the project in the inception or start-up phase. Conformance related to systems, design, and proposed activities in the process of development by the project. The standards were not used to measure project implementation, thus conformance to the standard was not meant to evaluate any delivery of emissions reductions, community or biodiversity benefits, or other results hoped to be achieved through future performance of the project. The CCB Standards were designed to be a tool to demonstrate high-

quality project design that should lead to multiple-benefits in addition to carbon sequestration and emissions reductions. Use of the standards may increase confidence in forestry carbon projects.

CCB 'validation' is the process whereby an independent third party assesses the design of an afforestation/reforestation, forest management, or reduction of emissions from deforestation or degradation (REDD) project against all CCB Standards' criteria. CCB 'verification' is the process whereby CCB projects are evaluated each five (5) years to determine whether the project is delivering net climate, community, and biodiversity benefits. It is important to aknowledge that the standard is intended to be applied up front in the design phase, often as a necessary assurance to catalyze financing, rather than to be used as a 'verification' standard that would verify and account for the carbon produced and other results achieved in the future.

The process of the pre-validation desk audit and the on-site field audit demonstrated an average level of compliance with the standards, although not complete compliance (see Appendix II below for full coverage of audit findings for all criteria and indicators). All 23 CCB Standards' criteria were evaluated in this audit.

The auditors determined that the project proponents had not fulfilled all indicators for the 15 mandatory CCB Standards' criteria. To reach their conclusion, the audit team reviewed the Project Design Document and supporting information and files prepared by the project proponents in support of the design. In addition, the auditors held several interviews with the managers, field staff, technicians, and workers of the partner organizations proposing this project, as well as with resource experts and some stakeholders.

The CCBA rules provide for three levels or tiers by which a project may be validated to the standards. These are:

- Approved: projects satisfying all fifteen mandatory criteria;

- Silver: projects that satisfy all fifteen mandatory criteria and receive at least 4 points with at least one point from optional criteria in each of the four sections (General, Climate, Community, and Biodiversity);

- Gold: projects that satisfy all fifteen manadatory criteria and receive at least 6 points, with at least one point from optional criteria in each of the four sections.

Within all criteria there are corresponding indicators evaluated through the audit. Indicators that were not met were considered 'non-conformances' with the standard. These are summarized and presented here in a scorecard of compliance. The following scorecard shows the level of compliance for the Ulu Masen project to the requirements of the CCB standards on December 17, 2007 (when the draft report was completed) and January 4, 2008 (when the final report was prepared). In order to receive the CCB validation from SmartWood, the project proponents had to address each of the corrective action requests issued on December 17th as discussed in section 1.2.2. below.

General Section	**Conformance Dec 17:**		**Conformance Jan 4:**		
G1. Original Conditions at Project Site	Yes ☐	No ☒	**Yes** ☒	**No** ☐	Required
G2. Baseline Projections	Yes ☐	No ☒	**Yes** ☒	**No** ☐	Required

G3. Project Design & Goals	Yes ☐	No ☒	**Yes** ☒	**No** ☐	Required
G4. Management Capacity	Yes ☒	No ☐	**Yes** ☒	**No** ☐	Required
G5. Land Tenure	Yes ☒	No ☐	**Yes** ☒	**No** ☐	Required
G6. Legal Status	Yes ☒	No ☐	**Yes** ☒	**No** ☐	Required
G7. Adaptive Management for Sustainability	Yes ☐	No ☒	**Yes** ☐	**No** ☒	Optional – 1 point
G8. Knowledge Dissemination	Yes ☒	No ☐	**Yes** ☒	**No** ☐	Optional – 1 point

Climate Section **Conformance Dec 17:** **Conformance Jan 4:**

CL1. Net Positive Climate Impacts	Yes ☐	No ☒	**Yes** ☒	**No** ☐	Required
CL2. Offsite Climate Impacts ("Leakage")	Yes ☒	No ☐	**Yes** ☒	**No** ☐	Required
CL3. Climate Impact Monitoring	Yes ☒	No ☐	**Yes** ☒	**No** ☐	Required
CL4. Adapting to Climate Change & Climate Variability	Yes ☒	No ☐	**Yes** ☒	**No** ☐	Optional – 1 point
CL5. Carbon Benefits Withheld from Regulatory Markets	Yes ☒	No ☐	**Yes** ☒	**No** ☐	Optional – 1 point

Community Section **Conformance Dec 17:** **Conformance Jan 4:**

CM1. Net Positive Community Impacts	Yes ☐	No ☒	**Yes** ☒	**No** ☐	Required
CM2. Offsite Community Impacts	Yes ☐	No ☒	**Yes** ☒	**No** ☐	Required
CM3. Community Impact Monitoring	Yes ☒	No ☐	**Yes** ☒	**No** ☐	Required
CM4. Capacity Building	Yes ☒	No ☐	**Yes** ☒	**No** ☐	Optional – 1 point
CM5. Best Practices in Community Involvement	Yes ☐	No ☒	**Yes** ☐	**No** ☒	Optional – 1 point

Biodiversity Section **Conformance Dec 17:** **Conformance Jan 4:**

B1. Net Positive Biodiversity Impacts	Yes ☒	No ☐	**Yes** ☒	**No** ☐	Required
B2. Offsite Biodiversity Impacts	Yes ☒	No ☐	**Yes** ☒	**No** ☐	Required
B3. Biodiversity Impact Monitoring	Yes ☒	No ☐	**Yes** ☒	**No** ☐	Required
B4. Native Species Use	Yes ☒	No ☐	**Yes** ☒	**No** ☐	Optional – 1 point
B5. Water & Soil Resource Enhancement	Yes ☐	No ☒	**Yes** ☐	**No** ☒	Optional – 1 point

CCBA Validation Level Attained:

Approved	Yes ☒	No ☐
Silver	Yes ☒	No ☐
Gold	Yes ☐	No ☒

1.2.2 Corrective Action Requests and Observations

1.2.2.1 Corrective Action Requests

Based on the non-conformances identified above, the following corrective actions have been issued by SmartWood. See appendix I for a description of types and descriptions of corrective actions used by SmartWood.

CAR #: 1/07	Reference Standard #: G2 (1)
Non-conformance: Major ☐ Minor ☒	[description of non-conformance] The PDDs of November 2 and December 13 did not include a map with defined forest boundaries.
Corrective Action Request: The PDD shall include a map with defined project boundaries.	
Timeline for conformance: Prior to project validation	
Evidence to close CAR:	A new map (#2) was included in section 1.0 of the December 29 PDD that included the project boundary.
CAR Status:	CLOSED

CAR #: 2/07	Reference Standard #: G2(4)
Non-conformance: Major ☒ Minor ☐	[description of non-conformance] The PDDs of November 2 and December 13 fell short of describing the communities with socio-economic demographic or quantified information that would evidence a clearer starting point for communities in the project area and from that basis to enable evaluation of the benefits the project seeks to catalyze.
Corrective Action Request: The PDD shall include more complete description of the social economic condition of the local communities, particularly those adjacent to the forest, in each of the districts in the project area. Descriptions should reflect similarity or differences found in the five districts. These should include: - history and degrees of community involvement in logging and the contribution of timber and non-timber products to income; - degree of contribution of the main crops and/or main non-agricultural activities; - estimation of which crops or forest-based activities are likely to be increased in the coming years.	
Timeline for conformance: Prior to project validation	
Evidence to close CAR:	A revised section 1.3.1 and 1.3.2 for "current conditions" regarding additional variables describing the project area communities was prepared in the December 29 PDD. More complete description of the basic household livelihoods for different areas, including variations and differences was made. More quantitative data from studies on the degree of importance of the logging and small wood-processing sector was included.
CAR Status:	CLOSED

CAR #: 3/07	Reference Standard #: G2 (1)
Non-conformance: Major ☒ Minor ☐	[description of non-conformance] The November 2 and December 13 PDDs' description of the methodology to assign percentages of forest predicted to be lost remained unclear. It was not sufficiently explained why other methods were not pursued, i.e., the reason for not using land cover loss observations from the past or recent past to set the rate. Nor was there a proposal for how the project may defend its probable baseline under different without project scenarios (low, moderate, or aggressive deforestation).
Corrective Action Request: The PDD shall describe the methodology used to build the deforestation rate from the land-class modeling and justify why other methods (i.e., based on observed land-cover change) were not used in favor of this approach, and propose alternative deforestation baseline scenarios.	
Timeline for conformance: Prior to project validation	
Evidence to close CAR:	A revised section 2.1.5 was prepared in the December 29 PDD, which provided a more thorough and defensible range of deforestation scenarios in the project area and rationale for the chosen deforestation rate and clearer explanation for how and when the project will improve the baseline.
CAR Status:	CLOSED

CAR #: 4/07	Reference Standard #: G2 (1)
Non-conformance: Major ☒ Minor ☐	[description of non-conformance] The PDDs of November 2 and December 13 did not provide sufficient justification that 1.28% is the conservative rate for this project area. The conservatism emphasized in setting the carbon stocks would be questioned if the range of variability in the deforestation rate could run from .85 to 2.0%, or higher.
Corrective Action Request: The PDD shall explain the methods and plan to refine (within the next two years) a deforestation baseline that includes the use of historic data of observed land-cover change.	
Timeline for conformance: Prior to project validation	
Evidence to close CAR:	A revised section 2.1.5 and 9 was prepared in the December 29 PDD, which provided a specific 18 month timeframe to improve upon the deforestation baseline following the latest methodologies.
CAR Status:	CLOSED

CAR #: 5/07	Reference Standard #: G2(4)
Non-conformance: Major ☐ Minor ☒	[description of non-conformance] The scenario in the PDDs of November 2 and December 13 were absent some of the basic projections of area in different habitat type that would likely be lost and some more detailed description of the ecosystems and species likely to be lost under the scenario.
Corrective Action Request: The PDD shall include a more well-developed description (qualitative/quantitative) of the potential affects of the 'without project' scenario on biodiversity (habitat/some species).	
Timeline for conformance: Prior to project validation	
Evidence to close CAR:	A revised section 2.4 was prepared in the December 29 PDD, which provided more explanation of how the project addresses the limitations to calculating 'biodiversity' in the Ulu Masen ecosystem, yet indicated loss would be greatest in habitat from sea level to 1,000m.
CAR Status:	CLOSED

CAR #: 6/07	Reference Standard #: G3(6)
Non-conformance: Major ☐ Minor ☒	[description of non-conformance] The description in the November 2 and December 13 PDDs did not clearly explain the processes and efforts to include and reach out to individual forest peoples and a wider cross-section of village members.
Corrective Action Request: The PDD shall give precise information on the main categories of local stakeholders, particularly community members, how they have been defined, and what are the mechanisms and guidance to be used during the project to allow their participation in the project decision making.	
Timeline for conformance: Prior to project validation	
Evidence to close CAR:	A revised section 7.1 was prepared in the December 29 PDD providing more description of the categories of stakeholder groups, process for engagement, and guiding principles for consultation during the project.
CAR Status:	CLOSED

CAR #: 7/07	Reference Standard #: G3(7)
Non-conformance: Major ☐ Minor ☒	[description of non-conformance] A Bahasa Indonesia version of the recent version of the PDD was not readily available.
Corrective Action Request: The PDD shall be posted and readily accessible at the proponents websites in Bahasa Indonesia or English.	
Timeline for conformance: Prior to project validation	
Evidence to close CAR:	A draft Bahasa version is available on Provincial government's website, http://www.nad.go.id/uploadims/. Section 3.6. of the PDD indicates that this will be regularly updated as the English version is updated. The proponents plan that as new versions of PDDs are released, they will be made available.
CAR Status:	CLOSED

CAR #: 8/07	Reference Standard #: CM1(3)
Non-conformance: Major ☐ Minor ☒	[description of non-conformance] In the November 2 and December 13 PDDs, the complaint mechanism was not described.
Corrective Action Request: The PDD shall describe the development of the complaint mechanism.	
Timeline for conformance: Prior to project validation	
Evidence to close CAR:	A revised section 7.6 was prepared for the December 29 PDD, which described the process for handling grievances and complaints.
CAR Status:	CLOSED

CAR #: 9/07	Reference Standard #: CM2(1)
Non-conformance: Major ☐ Minor ☒	[description of non-conformance] The November 2 and December 13 PDDs did not anticipate negative impacts.
Corrective Action Request: The PDD shall describe some of the potential impacts to communities who live offsite, such as those who work in the wood-based small-scale industries.	
Timeline for conformance: Prior to project validation	
Evidence to close CAR:	Revised sections 7.4 and 7.2.4 described offsite impacts and proposed project mitigation of these in the December 29 PDD.
CAR Status:	CLOSED

CAR #: 10/07	Reference Standard #: B5(2)
Non-conformance: Major ☐ Minor ☒	[description of non-conformance] The November 2 and December 13 PDDs did not set monitoring targets for measures of improved water and soil resource quality.
Corrective Action Request: The PPD shall describe planned studies to compare water or soil quality to the baseline.	
Timeline for conformance: Prior to project validation	
Evidence to close CAR:	A revised section 8.3 and a new addition in section of 9.5 set monitoring targets and measures for soil and water in the December 29 PDD.
CAR Status:	CLOSED

1.2.2.1 Observations

The following observations were documented by SmartWood reflecting areas of minor weakness which merits attention by the Project proponent.

Observation #	Observation	Reference Standard #
1/07	The PDD should suggest quantitative methods to determine / define intact and disturbed forest.	G2(2)
2/07	An annex to the PDD should list all relevant government laws, decrees, and Qanun, which are important to the legal foundation for this project.	G2(5)
3/07	The PDD should consider a similar economic valuation exercise as done in Leuser to design a more systematic baseline scenario for communities.	G2(3)
4/07	The PDD should elaborate strategies to mitigate a wider range of possible negative community risks.	G3(5)
5/07	Project proponents should provide more detail on detail on the staffing, expertise, infrastructure, resources, and roles of each organization, particularly to make clear which of these are at the local versus worldwide level.	G4(1)
6/07	The methodology should propose inclusion of measurement of coarse woody debris and understory vegetation carbon stocks during on-the-ground inventories if such stocks prove to be significant relative to aboveground total live tree carbon quantities (>10-15%).	CL3

1.2.3 Actions Taken by Project Proponents Prior to Report Finalization

After the draft report was submitted to the project proponents on December 17, 2007, they revised and improved upon the sections within the earlier PDD version for which there were non-conformances. A new PDD and supporting excel spreadsheet with calculations was submitted to SmartWood on December 29, 2007. The actions taken by the proponents were to revise sections within this version of the PDD. SmartWood reviewed this document and has since indicated how revisions addressed CARs within section "1.2.2.1 Corrective Action Requests" and in "Appendix II Checklist". (Note that where the term "the PDD" is used without a specific date this means any prior versions of the PDD evaluated by SmartWood, which remain consistent with the current December 29, 2008 PDD.

1.3. Conclusions

Based on an evaluation of Project proponent's management systems and performance in the field across the defined audit scope, the SmartWood Validation audit team concludes that Project proponent has:

☒ Demonstrated full conformance with the standard

☐ Demonstrated partial conformance with the standard. Corrective action requests (CARs) have been issued to address identified minor non-conformances.

☐ Not demonstrated acceptable conformance with the standard. Preconditions have been issued to address identified major non-conformances.

Additional conclusion: The project is both approved and validated to the SILVER CCBA level.

2. VALIDATION AUDIT PROCESS

Introduction

The Ulu Masen project is proposed to reduce emissions from deforestation and forest degradation, whilst maintaining significant biodiversity values and enhancing community development opportunities through reinvestment of the proceeds from carbon sales and small scale extraction and development of community managed enterprises within forests approved for such purposes. There are approximately 750,000 hectares of forests within the project design area, the majority of this forest area, nearly 700,000 hectares are within the contiguous Ulu Masen ecosystem. This represents one of the largest contiguous blocks of tropical forest in Sumatra and connected with the adjacent Leuser ecosystem forests amount to about 3 million hectares. The forest areas within the project include: 428,757 hectares unprotected state forest lands which were allocated to natural forest concessions (HPH) for industrial scale logging, but are currently not active or operational; state forest lands allocated to commercial and community conversion logging licenses (HTI or HPK); and 310,991 state forest lands that are zoned in various classes of protected status, yet for which actual protection is weak and ineffective.

The project is formed by three parties working together, which are the Provincial government of Aceh, Fauna & Flora International, and Carbon Conservation Pty Ltd. The project proponents intend for the incentive of carbon financing to make possible community livelihood and forest protection strategies, as well as spatial planning reforms to land-use that will reduce the threats from illegal logging and forest conversion. The project is planned to begin January 1, 2008 and to be in a development phase from 2008 – 2012, prior to post-Kyoto frameworks. It is then scheduled to run for 25 years after 2012, until 2038. The initial phase builds off of the Aceh Forest Environment Project (AFEP), which is a multi-year, donor-funded conservation program managed by FFI and the biggest of its kind to an NGO in Southeast Asia. As AFEP is a foundation upon which the carbon project is to be developed, this SmartWood audit was primarily a review of the Project Design Document, but also took into consideration the AFEP grant proposal, performance indicators, work plan, and supervisory reviews. These were instrumental in understanding the project design and are referred to in the PDD.

The auditors acknowledge that Aceh presents difficult framework conditions to operate within and therefore substantially difficult and with considerable uncertainty, yet there is also an opening for progressive change quite unlike what has been done before within the forestry sector. The project is thus taking a calculated risk that the opportunities to succeed can be managed effectively. It is also the potential legal or tenurial challenges posed by different interpretations of Autonomy law for Aceh and the legitimacy/authority between Central and Provincial government that poses somewhat of a barrier to development of the project and for which it would deliver some additionality.

The project estimates roughly 140 million tons of carbon stocks at the beginning of the project. Depending upon the deforestation baseline and that deforestation which the project can effectively reduce the amount of carbon emissions that may be avoided were currently estimated by the project at around 100 million tons CO2e over 30 years, or roughly 3.3 million tCO2e per year.

The validation audit process did not verify any emissions reductions, nor does the Rainforest Alliance make any assurances of projected future emissions. Rainforest Alliance is not liable for decisions made based on the opinion of this validation.

2.1. Audit team and qualifications

Field Team

Jeff Hayward, MSci.

Jeff Hayward is a SmartWood lead auditor and provides leadership in developing SmartWood's global portfolio of verification services. These services include: verification of legal origin or legal compliance; carbon forest projects; the SmartStep program for stepwise certification; the FSC Controlled Wood standard for forest managers; and verification of social and conservation standards, including High Conservation Value Forests. He is based in Washington, DC, though his work has a worldwide focus, primarily developing and assisting delivery of verification into Asia, Africa, Latin America, or wherever needed. For nearly six years he managed the SmartWood certification programs in the Asia-Pacific region from Jakarta, Indonesia. In FSC certification, he has conducted over 25 forest management assessments, scopings, and/or audits and over 60 chain-of-custody assessments and/or audits. He has led certification awareness training courses in Malaysia, Indonesia, Japan, Fiji, and China. Jeff earned an MSc in forestry, (Univ. of British Columbia, Canada); and a B.A. in Latin American development and forestry (Univ. of Washington, USA).

Suraya Afiff, Ph.D.

Suraya A. Afiff has a Ph.D. in environment and society studies from the Environmental Science, Policy and Management (ESPM) program from the University of California at Berkeley. Besides teaching political ecology for master and doctoral students at the Anthropology graduate program at the University of Indonesia, she had been involved in a number of consultancy works to evaluate projects pertaining to ways to improve the pro poor government policy, program to develop pro-poor conservation/ICDP projects, and community-based forest management projects. Her research interest has been regarding the local forest governance issues especially searching for ways to resolve the conflicting claim that often occurred between the state, corporation, and local communities in order to gain access to and control over land and forest resources.

PDD Desk Review

Bryan C. Foster, Ph.D

Bryan Foster has a Master of Forest Science from Yale University and Ph.D. in Natural Resources from University of Vermont. He is an FSC and ISO 14001 trained auditor and has worked professionally developing ISO 14001 environmental management systems. He is an independent forestry consultant specializing in forest carbon. He has recently researched and written a draft manual for Rainforest Alliance on developing, measuring, and verifying forest carbon sequestration projects.

Anne Gouyon, Ph.D

Anne Gouyon is an agricultural scientist with a PhD in social sciences, who researched the socio-economic aspects of agroforestry and plantation crops in Southeast Asia for ten years. She then became a consultant for various plantation and forestry companies as well as NGOs and International Agencies (World Bank, ADB, EU, etc.), performing social assessments of rural development and environmental protection projects. A trained FSC certification team leader, she conducted several audits of forest management units and community forestry projects, mostly in Indonesia. She is also a founder and partner of BeCitizen, a French consulting company providing strategic advice to corporations on environmental and carbon management issues.

2.2. Audit Methodology and Schedule

Pre-Validation

Prior to the field-based audit, SmartWood conducted a pre-validation audit to review the project design document and supporting information and quantitative data supplied by the project proponents. This audit was conducted between November 8 and 13, 2007 and was a US-based desk evaluation. SmartWood consultants with background in community and social science and measurement and modeling of carbon storage assisted with the review. A pre-validation report was provided to the project proponents, which was to serve to identify any missing information or weaknesses with the project design, so that these could be addressed prior to the on-site validation.

Validation

The validation audit was conducted through meeting with project proponents in Aceh Province, conducting interviews with resource persons and some stakeholders, and through review of project design documents. The team was in Aceh Province working on the audit between November 27 and December 2, 2007. After the on-site audit in Aceh, but prior to completion of the draft audit report, the project proponents submitted additional documents to the auditors consideration. This included a revised version of the PDD that was given to the audit team leader on December 13, 2007. That updated PDD provided more information, but some was insufficient for auditors to approve the design when the draft report was completed on December 17, 2007. A revised PDD was submitted by the project to SmartWood on December 29, 2007. This was reviewed during the first week of January 2008.

Date	Location /main sites	Main activities/Site description
27 Nov.	FFI Office, Banda Aceh	Meeting and interviews with FFI staff - Graham Usher, Mark Infield Document review
28 Nov.	FFI Office, Banda Aceh	Meeting and interviews with FFI staff - Sutisna Nando, Safyuddin, Graham Usher, and Frank Momberg. Meeting and interviews with members of Forestry Re-design Team Document review
29 Nov.	Badan Reconstruksi dan Rehabilitasi; Governor's office	Meeting and interviews with BRR spatial planning – Yakob. Meeting and interview with Aceh Governor Irwandi Yusuf. Interview with Carbon Conservation – John Niles Document review

30 Nov.	Calang, Aceh Village Desa Panggon Calang local government	Visit to FFI field site, community of Desa Panggung; meeting and interviews with village members; discussions with FFI Field Officers. Meeting and interviews with Serikat Mukim executive, meeting with Bappeda and Dinas Kehutanan, Calang. Document review
1 Dec.	Banda Aceh, Aceh	Meeting and interviews with FFI staff – Graham Usher and Helene Barnes. Meeting with Carbon Conservation – John Niles. Document review
2 Dec.	Banda Aceh, Aceh	Document review Preparation of SmartWood draft report
3 Dec.	Banda Aceh, Aceh	Closing meeting with FFI and Carbon Conservation. Completion of SmartWood draft report
13 Dec.	SmartWood Office	Project proponents submit revision of PDD for evaluation in the audit.
17 Dec.	SmartWood Office	1st Draft report sent to project proponents
29 Dec.	SmartWood Office	Project proponents submit revision of PDD to address CARs in the SmartWood draft report of December 17, 2007.
7 Jan.	SmartWood Office	2nd Draft report sent to project proponents
10 Jan.	SmartWood Office	Project proponents approve draft report
17 Jan.	SmartWood Office	Report Finalized.

2.3. Documents reviewed

(1) Reducing carbon emissions from deforestation in the Ulu Masen Ecosystem, Aceh, Indonesia: A triple-benefit project design note for CCBA Audit. November 2, 2007; December 13, 2007; December 29, 2007.

(2) Ulu Masen Carbon Calculations, Nov 1, 2007; December 27, 2007.

(3) Declaration of the Governors of Aceh, Papua and Papua Barat on Climate Change April 26, 2007, Nusa Dua, Bali.

(4) IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Prepared by the National Greenhouse Gas Inventories Programme, Eggleston H.S., Buendia L., Miwa K., Ngara T. and Tanabe K. (eds). Published: IGES, Japan.

(5) IPCC (2003). Good Practice Guidance for Land Use, Land-Use Change and Forestry. Penman J., Gytarsky M., Hiraishi T., Krug, T., Kruger D., Pipatti R., Buendia L., Miwa K., Ngara T., Tanabe K., Wagner F. (Eds).Intergovernmental Panel on Climate Change (IPCC), IPCC/IGES, Hayama, Japan.

(6) Gibbs, H., S. Brown, J. Niles and J Foley. 2007. Monitoring and Estimating Tropical Forest Carbon Stocks: Making REDD a Reality. Environmental Research Letters (2). www.iop.org/EJ/abstract/1748-9326/2/4/045023/

(7) Aceh Forest and Environment Project (P098052), Project Appraisal (November 18 – December 9, 2005), Draft Aide Memoir.

(8) Proposed Revisions to Logical Framework and Indicators for the Aceh Forest and Environment Project - AFEP August 2007.

(9) Lasco, R. D. 2002. Forest carbon budgets in Southeast Asia following harvesting and land cover change. Science in China, Vol. 45 Supp., October 2002.

(10) Annex 4. Process Framework for Complying with World Bank Policies on Indigenous Peoples and Involuntary Resettlement, “Integrating Environment and Forest Protection into the Recovery and Future Development of Aceh. Sumatra, Indonesia.

(11) The template used by FFI to carry out the livelihoods assesment survey in 2005.

(12) Governor decision No. 522.1/534/2007 regarding the team to provide the forest management strategy plan for Aceh.

(13) Governor instruction No. 05/INSTR/2007 regarding the mortorium of logging in Aceh.

(14) Law No. 18/2001 regarding the Special Autonomy for the Province o Aceh Special Region as the Province of Nanggroe Aceh Darussalam.

(15) Regional Regulation (or Qanun) of Province of Nanggroe Aceh Darrussalam No. 21/2002 regarding the Natural Resource Management.

(16) Regional Regulation (or Qanun) of Province of Nanggroe Aceh Darrussalam No. 4/2003 regarding the Mukim Government in the Province of Nanggroe Aceh Darussalam.

(17) Regional Regulation (or Qanun) of Province of Nanggroe Aceh Darrussalam No. 5/2003 regarding Village (or Gampong) government in the Province of Nanggroe Aceh Darussalam.

(18) Governo Irwandi's letter of Engagement with Carbon Conservation.

(19) Two-days REDD workshop report and attended lists in Banda Aceh, October 2007.

2.4. Stakeholder consultation process (if applicable)

The CCBA requirements for stakeholder consultation are that the project design document(s) describing how the project meets CCB criteria must be posted on the CCBA website 21 days prior to the on-site field visit. The Ulu Masen project prepared a project design note (referred throughout as "Project Design Document" (PDD), which was posted to the CCBA website on November 2, 2007. The CCBA invited comment on the PDD through emails sent to the Climate Change Info Mailing List.

In the comment period, which was left open through the duration of the audit, there were only 2 comments submitted to the CCBA. There was a comment from a scientist who had recently completed an orangutan survey for FFI who found that although the Ulu Masen forest is of great biodiversity value it does not represent critical habitat for orangutans and there were few populations found in the survey. The other comment was regarding the extent to which the project was cognizant of and managing for the unique aspects of traditional fire management practices. In both respects, the auditors talked with the FFI AFEP Director and learned that these issues are of importance and have been worked on through the project. In the first instance, FFI is increasing surveys of different species to understand population dynamics and habitat use. In the second instance, it is planned that through community based forest management and forest monitoring and protection that fire prevention and management practices will be enhanced.

In addition to this comment period, SmartWood auditors met with a small cross-section of Provincial, Kabupaten, Mukim, and Village government leaders and officials. Auditors also met with the project managers from the lead organizations, with some civil society organizations involved with or stakeholders to project, and with a few village members from a community working within the project. The purpose of these one on one and small group interviews was to to evaluate the level of project understanding, commitment, and issues of concern for the different stakeholders. The process also depended upon SmartWood review of the project's approach to and results so far with stakeholder consultation and evaluations/appraisals made by the World Bank concerning FFI performance with AFEP.

APPENDIX I: SmartWood System for Conformance Evaluation (public)

Non-conformance: A non-conformance is a discrepancy or gap identified during the audit between some aspect of the Project proponents' management system or project design and one or more of the requirements of the validation standard.

Non-conformance and corrective actions: Each identified non-conformance is addressed by the audit team by issuing a corrective action request (CAR). For CCBA validation auditing there is only one type of corrective action issued by SmartWood because CCBA validation audits are either pass/not pass.

- **Corrective Action Request (CAR):** required actions or improvements that address project proponents' non-conformances identified in assessments or audits. CARs include defined timetables or deadlines for completion.
- Note: CARs identified during validation assessment audits must be successfully closed out prior to issuance of a validation agreement or validation statement.

- **Observation:** A very minor problem or the early stages of a problem which does not of itself constitute a non-conformance, but which the auditor considers may lead to a future non-conformance if not addressed by the client. An observation may be a warning signal on a particular issue that, if not addressed, could turn into a CAR in the future.

APPENDIX II: Standard conformance checklist (public)

The following checklist was used in the SmartWood Validation and presents the audit findings of the project proponent's conformance with the defined standard. Based on the evaluation of each criterion through the applicable indicators, a conformance determination was assigned as either yes, no, or non-applicable. Conformance with indicators was determined by the audit team through a consensus process. Where non-conformance with the standard is documented by the team, corrective action requests (CARs) are outlined. Note: Where comments have been received from stakeholders about the client's conformance related to a defined criterion, a reference is made in the related finding section.

Climate, Community and Biodiversity Project Design Standards First Edition, May 2005

G1. Original Conditions at Project Site - Required

Concept

The original conditions at the project site before the project commences must be described. This description, along with projections (G2), will help determine the likely impacts of the project

Indicators

The original conditions at the project site before the project commences must be described. This description, along with projections (**G2**), will help determine the likely impacts of the project:

General Information

1) The location of the project and basic physical parameters (e.g. soil, geology, climate).

Findings	The project 'site' is a vast area of lowland and montane forestlands of approximately 750,000 hectares, occurring within the Ulu Masen ecosystem and surrounding forest blocks. This is a landscape level project, whereby the physical boundaries are not at the scale of individual forest stands and parcels, but an extensive forest system covering rugged mountainous terrain across 5 districts in Aceh. The project has classified the land cover based on several parameters (forest condition, elevation, land-use, threat of conversion, etc.) The location of the project area is demarcated on maps and activities that will enhance the level of protection for the forest are planned within the evolving spatial planning process in Aceh Province. The project area is geo-referenced on maps and clearly identifiable using project GIS and satellite imagery. While the maps in the PDD may be challenging to decipher at the size of a printed page, the digital mapping and GIS by the project is high quality. The maps and text in the PDD present the 'project' area as that of the Ulu Masen contiguous forest ecosystem and surrounding nearby forests, and the PDD text and tables reference the total (750,528 ha), which includes forest blocks near the Ulu

	Masen, but not part of the contiguous block. Many of these forests are also of high conservation value. In discussion with the project proponents, the project site was described as the forest area including the contiguous large tract of Ulu Masen forest and smaller blocks of forest nearby. The PDDs of November 2 and December 13 did not include a map with defined forest boundaries. The PDD describes the districts and mukims where the project has been most active to date. FFI information and staff indicate that most activity has been in Aceh Jaya District, where FFI had elephant projects and landscape planning underway before the Tsunami. The focus on Aceh Jaya increased after the Tsunami because of the tragic loss of life, property, agricultural lands and infrastructure. FFI has been most active to date, especially since AFEP's official launch in May 2006, in the villages and mukims of Lamno and Calang, both in Aceh Jaya. Other early and concentrated activities have been in Geumpang, in Pidie district, where work on Community Based Forest Management (in collaboration with Telepak) has been initiated and a field office is planned to open.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	CAR 01/07 issued in the 1st draft report of December 17, 2007 was closed by actions taken by the project proponents, i.e., inclusion of a map with defined project boundaries in the PDD of December 29, 2007.

2) The types and condition of vegetation at the project site.

Findings	The PDD indicates different forest community or habitat types for the project area, such as lowland broadleaf forest, pine forest, sub-montane broadleaf forest, montane broadleaf forest, and peat swamp forest. Other types of vegetation, such as mangrove, swamp forest, agricultural crops (including rice), plantations, and shrubs are described. FFI has conducted floral surveys and research and ground truthing of vegetative cover identified by remote sensing. The project has characterized the forests within the project site not based on habitat and/or soil type, but primarily as 'forest' either intact or disturbed. This differentiation of forest quality attributes is a fundamental part of the carbon estimates. The PDD included a working definition of intact and disturbed forest that project proponents used to classify forest. This is a qualitative description and the PDD does not quantify its definitions of intact forest or disturbed forest.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	OBS 1/07: The PDD should suggest quantitative methods to determine / define intact and disturbed forest.

Climate Information

3) Current carbon stocks at the Project site(s), using methodologies from the Intergovernmental on Panel on Climate Change´s Good Practice Guidance (IPCC GPG) or other internationally-approved methodologies (e.g. from the CDM Executive Board).

Findings	The PDD states the methodology used for carbon stocks determination, which is consistent or exceeds IPCC Tier 1 guidelines. The latest IPCC guidance for Agriculture, Forestry, and Other Land Uses (AFOLU) was used. Tier 1 is considered acceptable good practice for national carbon stocks, when country-specific estimates of activity data and emission/removal factors are not available (IPCC 2006). The landscape scale of this project, sub-national in scope, supports the rationale for using

	estimates rather than inventory measurements, in the design phase. Project proponents argue that to produce a statistically valid inventory with higher certainty would be prohibitive in the design phase. The PDD describes the plan to conduct direct measurement. To verify emissions reductions in the future a greater level of certainty through direct forest measurement would be necessary. The project used the correct Tier 1 default values of the above-ground biomass for Tropical rainforest (TAr) for Asia as a starting point in the estimate. They decided not to apply the IPCC default value for the forests over 1000m, Tropical montane (TM), due to the wide range and uncertainty with the figures provided in the IPCC tables, which was justified. Five models were compared to develop an average biomass and carbon estimate for the forests from 500m and 1000m in elevation of 200 tC/ha. The PDD explains the approach to use the five models which include: 1. IPCC 2006 tables; 2. Olson high-medium-low ranges from literature; 3. Houghton regional literature estimates; 4. Achard specific land-area weighted figures; and, 5. Gibbs and Brown GIS-specific figures based on climate, soils, topography, population and land use. The project estimated that disturbed forests hold 75% of the carbon stocks of an intact forest, based on the professional understanding of the working team during a meeting in Aceh. The estimate is rough, though presented as a conservative one, but the assumption should be defended. The project makes another rough, but perceived conservative, estimate of a 10 t/ha decline in carbon stocks for every 500 m in elevation gained from 1000 m to above 1500 m. And a 10 t/ha increase from 500 m down to sea level. Tables within the PDD and excel spreadsheets explicitly describe the forest land areas classified as intact or disturbed within different land-use types, and where these occur at different elevational classes. These demonstrate an area-weighted average of 188 tC/ha (80% aboveground, 20% belowground) for standing live trees, which is below the IPCC estimate of 225 tC/ha. These were used to develop area-weighted averages of 188 tC/ha, which would be approximately 16% below IPCC estimates of 225 tC/ha for the biome. During the audit, proponents explained the research or scientific rationale they used to support the weighting assumptions for intact and disturbed forests and altitudinal variation.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	See section on climate baseline.

Community Information

4) A description of communities located in and around the project area, including basic socio-economic information (using appropriate methodologies such as the livelihoods framework).

Findings	The PDD describes Aceh Province - over 4 million people; resource-rich and 15-20% of Indonesia's oil and gas output; deprived of the benefits of natural resources

exploitation. Importantly, it reminds that Aceh suffered extensive physical and human damage due to the 2004 tsunami and violent conflict existing for years before a peace agreement in 2006 between the Indonesian government and the GAM (Free Acehnese Movement). For these reasons, nearly 50% of its population live below the poverty line, much more than 10 years ago (10% in 1996). About 36% of children under 5 are undernourished. The strong need to find new sources of livelihoods underscores a likely strong driver of future deforestation and unsustainable or illegal logging practices.

The PDD states that the Province is divided into 21 districts, 5 of which fall partly within the project area, and estimates that approximately 130,000 people live in communities (61 *mukim*) adjacent to forest areas in the Ulu Masen ecosystem. The document estimates that 2000 to 3000 people may participate in illegal logging, a number which seems low for the typical situation in forest areas in Indonesia, but based on an AFEP review in 2006. Reconstruction of Tsunami-affected areas increased pressures on timber resources in the coastal areas of Aceh.

The PDD describes the main agricultural land uses as coconut groves and rice paddies, rubber gardens, smallholder coffee and cocoa gardens, complex agroforests with fruit trees and nutmeg trees, as well as annual upland crops. This is a general description comparable to most parts of Sumatra. The PDD does not break down the contribution of these crops to the income of the farmers and the communities. Nor is data provided on the income derived from timber or non timber products.

The PDD describes the potential for licenses to oil palm, timber plantations, and industrial logging companies as main drivers of deforestation, but there is limited discussion of the community dynamics. Thus it is not exact what the specific drivers of deforestation are at the village level, yet with such complex, integrated issues, the general trends are critical, too. AFEP documents identify these succinctly as:

- "the absence of livelihood options and equitable access to land leading to uncontrolled agricultural encroachment"

- "illegal logging…because of demand for reconstruction and few alternative sources of income exist in the villages"

During interviews with FFI staff, auditors received more information on the socio-economic surveys undertaken and those to be done in the future to provide more livelihoods data. In 2000, the CAP (Conservation Awareness Program) survey was undertaken in Aceh Barat, Pidie, Aceh Besar, and Aceh Timur interviewing 1200 respondents, including 17 policy makers, using semi-structured interviews. When the tsunami hit Aceh, FFI shifted activities to relief for six months, particularly in Aceh Jaya district. Since then FFI has developed a more solid livelihood project in addition to their strong technical conservation work.

In 2005, FFI conducted a social economic survey to assist UNDP on better disbursement in their cash-for-work program in 21 targeted communities in Aceh Jaya. Moreover, in 2006, another CAP survey was conducted for Aceh Jaya involving 800 respondents. The CAP survey was largely about people perceptions and awareness related to conservation, but not specifically about socio-economic data and information.

Under AFEP, FFI is strengthening their livelihoods program, particularly in Aceh Jaya and Pidie districts. In Aceh Jaya, for example, FFI plan to carry out a livelihood assessment in several *mukims*.

With the revised PDD of December 13, 2007 additional information was provided and mostly the description of social economic conditions of the local communities in Aceh Jaya district. However, the revision fell short of describing the communities with demographic or quantified information that would evidence a clearer starting point for communities in the project area. In particular, there is not a clear distinction of the

	similarities or differences of communities between the five districts. Anecdotal description was not been supported by studies or government statistics, which seemed possible based on discussions with FFI. In the November 2 and December 13 versions of the PDD, the description of the livelihoods, particularly those forest-based and timber-driven, was not supported by data. The December 29 version of the PDD provided more detail, by district, related to the local timber economy and the impact this may have on the communities surrounding the Ulu Masen project area. Also, there was more complete description of variations and differences between different areas across the five kabupaten.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	CAR 2/07 issued in the 1st draft report of December 17, 2007 was closed by actions taken by the project proponents, i.e. revised sections 1.3.1 and 1.3.2 of the December 29 PDD included additional description of the project area communities. There was more complete description of the basic household livelihoods for different areas, including variations and differences between districts. More quantitative data from studies on the degree of importance of the logging and small wood-processing sector was included.

5) A description of current land use and land tenure at the project site. (See also **G5**).

Findings	On land use: At the village level, as above G1-4, the description of the current land uses is general. At the landscape level, for the province and districts, FFI do maintain maps with government land uses. Spatial planning for Aceh Jaya includes the mukim and desa boundaries, which can be compared to these land uses. The map of Aceh Jaya land uses from the first spatial planning process was provided in the PDD as an example of the work that has been done so far in a priority region and offered evidence of how the project will proceed with other Kabupaten (district). Plans to develop spatial planning in other districts underway. The original PDD referred to agreements with all the district governments for spatial planning. However, this was found to be in progress and that formal agreements had not been reached between the government and FFI. On land tenure: The PDD underlines that past policies deprived the people of Aceh of most of the benefits from natural resources use. This was made possible by a land tenure system which overrode customary rights to facilitate external investment. The PDD states that the new Autonomy Law of Aceh recognizes the role of the Mukim, a traditional local government institution (one Mukim comprising around 3 to 8 villages), as a key structure to regulate land access in the rural areas of Aceh in the future, especially in and around forest areas. The PDD references Qanun No. 4/2003 establishing the mukim's role in forest management. Within this framework, the new Aceh provincial Government is said by the PDD to have moved strongly towards recognizing customary forest and land rights. Interviews with the Governor and supporting letters re-state this intention. The PDD and supporting documents indicate the existing legal tenures. The PDD does not describe the tenure and rights over forests that prevail under customary claims. It is not entirely possible to predict how existing land tenure will be allocated or designed (i.e. in favor of community rights), however the Governor's decree of October 31, 2007, number 522.1/534/2007 commits a forestry re-design team to work towards such results before the end of 2008. In the Ulu Masen area, around 428,000 ha of land are classified as either under

	existing logging concessions or allowed for logging and/or conversion. A number of companies held licenses in the area, but these are all currently inactive and a moratorium on logging was issued by the Aceh Governor in June 2007. The PDD indicates the intention for production forest, and other tenures, to be changed into protected forest. It is stated that the process to determine the rights for re-classified tenures, and the arrangements and mechanisms to identify the tenures and rights holders is to be established through the forestry re-design for Aceh province and through AFEP. The project area includes 310,000 ha of protected areas, which are described a having protection on paper only and under various levels of threat. The PDD does raise the issue of the potential of conflicts over state land tenure and community rights. A process of participatory spatial planning, followed by final public consultations and district parliament approval, has been started to arbitrate these conflicts and define boundaries and land use patterns. The PDD is not definitive about how the project has evaluated the potential legal contradictions of land tenure issues which may emerge through the forestry re-design, and what the risk is that the Central Government may be able to challenge or prevent tenure re-classification, even as the Special Autonomy Law for Aceh provides such an opening. For example, the District level authorities may view the federal authority as legitimate or what recognition is given mukim boundaries that overlap state forest boundaries based on the existing paduserasi planning of 2003. The PDD does indicate that the project has retained legal counsel and will continue to do so through the duration of the project to provide advice on dimensions of legal risk inherent with the project.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	OBS 2/07: An annex to the PDD should list all relevant government laws, decrees, and Qanun, which are important to the legal foundation for this project. OBS 3/07: The PDD should refer to the existing signed agreements for project activities that are public and make these available.

Biodiversity Information

6) A description of current biodiversity in the project area and threats to that biodiversity, using appropriate methodologies (e.g., key species habitat analysis, connectivity analysis), substantiated where possible with appropriate reference material

Findings	See also G2. (4) The PDD discusses the state of biodiversity information that has been collected and is under research by the project. It is important to recognize that the significant biodiversity value of these forests has only been partially studied, which is common in the tropics and underscores their vulnerability and importance. There is much more data and understanding afforded by study in the Leuser Ecosystem, which can function as a surrogate for Ulu Masen baseline data. In addition, FFI and partners have been conducting more scientific surveys to build upon the existing information.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	See G2.(4)

7) A list of all IUCN Red List threatened species (which encompasses endangered and vulnerable species) and species on nationally recognized list (where applicable) found within the project boundary. (See also **B1**).

Findings	The PDD itself includes a list of many, but not all IUCN Red List threatened species or those on the national list. In addition, FFI maintain extensive IUCN and other red lists, research, and books from the Leuser National Park and these lists serve in the absence of replicated data sets for Ulu Masen. It is not practical, nor possible, to know all the species that exist within the forest area, but the extent of knowledge from Leuser is acceptable and precautionary. FFI has qualified scientists on staff to lead or manage future surveys. It is important to note that the project aims to conserve biodiversity through forest protection.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

G2. Baseline Projections

Concept

An analysis of projected land-use trends is necessary to predict likely on-site changes without implementation of a project. This "without-project" future land-use scenario enables comparison of the project's likely impacts with what would otherwise have occurred.

Indicators

The project proponents must develop a defensible and well-documented "without-project" future land-use scenario and baseline projections.

1) Description of the most likely land-use scenario in the absence of the project, identifying whether the scenario assumes that existing laws or regulations would have required that project activities be undertaken anyway.[1]

Findings	The PDD presents the land-use scenario in the absence of the project in written narrative (pages 15 to 21) and in the worksheet supporting the PDD. The land use scenario detailed in the spreadsheet includes an analysis of data on forest land use type, current forest condition (intact or disturbed), and then a proposed threat level by estimated percent area that will be lost (0-25% low risk, 25-75% threatened, or 75-100% most threatened). The PDD estimates the future trajectory of land uses into oil palm, scrub, and mixed forest. The drivers for ranking or prioritizing the level of threat are based on accessibility, legal protective status, and estimates of current human disturbances. The AFEP documents further support the case that the legal protections afforded to protected tenures in Aceh are weak. This 'additionality' case was improved through successive iterations of the PDD.

[1]This is important for justifying whether the benefits being claimed by the project are truly "additional", i.e., the climate, community, and biodiversity impacts that would not be likely to occur without the project. For example, actions implemented by the project must not be required by law, or project proponents must make a compelling case demonstrating that the pertinent laws are not being enforced. The project proponents must provide credible and well-documented analyses (poverty assessments, farming knowledge assessments, remote sensing analysis, etc) showing that without the project, improved land-use practices would be unlikely to materialize.

	The calculations using the land-class / threat model lead to a projected amount of forest lost over 30 years, estimated at 288,907 hectares, which reflects a possible deforestation rate of 1.28% per year. The project asserts that the calculations under their assumptions are conservative compared to 2% (and higher) rates for Sumatra or Indonesia. They also assert that their estimates are probably closer to current circumstances than the historic wall to wall deforestation rates prepared by Conservation International for Aceh from 1990 to 2000 were about 86%. The relationship of the CI data to current deforestation is difficult to correlate, since the civil conflict produced a reduction in deforestation during the period of most violence (2002 - Tsunami). A historic baseline developed from spatial analysis of land cover change that can address these dynamics has not been produced. There was not a historic rate developed based on data analysis to determine deforestation against a reference year, because, as the project explains, the civil conflict produced such dislocation of people and interruption of logging activity that this would likely be unrealistic with current trends. FFI provided the auditors a detailed and in-depth demonstration of the GIS functionality, spatial data, imagery, and analyses used to prepare the land-class model. FFI were able to demonstrate which qualified experts did the analysis, how the percentages of forest areas were ranked as low risk, threatened, and most threatened; how these were spatially linked to specific forest areas and there land uses; why proximity to roads, rivers, or sites of existing illegal logging, and other variables would determine the proportion of forest area that will be lost to oil palm, scrub, or mixed forest was determined. The PDD defined the terms mixed forest and scrub qualitatively. In the November 2 and December 13 PDDs the rationale for the methods and assumptions to use the land class model to set the deforestation rate and not opt for other methods, i.e., the reason for not using land cover loss observations from the past or recent past to set the rate, was not defended. Missing, also, was clearer representation of the baseline as the most probable one through comparison to different scenarios without the project (i.e., low, moderate, or aggressive deforestation), which could be revised with better information. Nor was there explanation why a linear rate of deforestation was accepted instead of a hyperbolic deforestation rate, i.e., one that doesn't follow a linear pattern. The December 29 PDD clarified why the project initiated with its predictive model of the deforestation rate and justified that this was a starting point that reflected a mid-point from some of the highest and lowest deforestation estimates for Aceh. In addition this PDD indicated that within 18 months more complete analysis to establish a more precise deforestation baseline using the most recent technology and methodologies would be undertaken.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	CAR 3/07 issued in the 1st draft report of December 17, 2007 was closed by actions taken by the project proponents, i.e., a revised section 2.1.5 was prepared in the December 29 PDD. This provided a more thorough and defensible range of deforestation scenarios in the project area and rationale for the chosen deforestation rate, as well as discussing more completely the limitations with data or analysis of baseline reference scenarios. CAR 4/07 issued in the 1st draft report of December 17, 2007 was closed by actions taken by the project proponents, i.e. a revised section 2.1.5. This provided for an 18 month timeframe to improve upon the deforestation baseline following the latest methodologies.

2) A projection of future carbon stock changes in the absence of the project, based on the land-use scenario described above. The timeframe for this analysis can be either the project lifetime (see G3) or the project accounting period, whichever is more appropriate[2]. If there is evidence that non-CO_2 greenhouse gas (GHG) emissions such as CH_4 or N_2O are more than 15% of the baseline GHG fluxes at the project site (in terms of CO_2 equivalents), they must be estimated.

Findings	Estimated carbon storage for each without-project land use scenario (oil palm, scrub, mixed forest) is quantified based on the opinion of the project proponents and review of some existing literature (75 t/ha palm, 65 t/ha scrub, 85 t/ha mixed). These values are multiplied by that percentage of area that is likely to be converted or degraded for such uses over the next 30 years. This amount is then added to residual forest land to develop baseline emission levels. The PDD justifies the use of the same carbon values for these three without project land-use types at all elevations, as there could be more variation between the different cropping systems than elevation. Total baseline carbon stock over 30 year period is estimated as 108,364,096 tons. The PDD does not estimate any non-CO2 gas emissions as these are all estimated to be less than 15%. Carbon estimates are made for the fossil fuel combustion projected for the community based forestry, agroforestry, and other livelihoods projects planned.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

3) Description of how the "without-project" scenario would affect local communities in the project area.

Findings	The without-project scenario for communities in the November 2, 2007 PDD was very vague and weak. Some of those weaknesses and ambiguities persisted in the December 13, 2007 PDD. However, many were addressed by using a study on economic valuation at nearby Leuser ecosystem to model the comparable 'conservation' versus 'deforestation' scenario as related to the total economic value of the ecosystem. Such a methodology could be done by the project in the near-term to make a more quantifiable, measurable, and verifiable with and without-project scenarios. The without-project scenario should be strengthened to fit the Ulu Masen project area with additional community information as mentioned in G2(4).
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	OBS: 3/07: The PDD should consider a similar economic valuation exercise as done in Leuser to design a more systematic baseline scenario for communities.

4) Description of how the "without-project" land-use scenario would affect biodiversity in the project area.

Findings	The PDD succinctly describes the loss of biodiversity that would accompany the loss of forest in Ulu Masen. This section is brief and generalized, presenting a without project scenario that recognizes a widely accepted understanding that biodiversity loss follows habitat loss. The scenario predicts that deforestation will increase fragmentation and habitat loss affecting the charismatic mega-fauna, such as the Sumatran tiger and

[2] In some cases, the project lifetime and the project accounting period may be different.

	elephant. The PPD provided some comparative information that exists on biodiversity loss in Leuser. The PDD explained the challenge with making quantitative predictions of biodiversity loss, due to the lack of individual and population data for species, as well as their abundance and distribution, etc., in the Ulu Masen ecosystem. The project expects that the greatest loss in biodiversity would occur between sea level and 1,000 meters.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	CAR 5/07 issued in the 1st draft report of December 17, 2007 was closed by actions taken by the project proponents, i.e. in the PDD of December 29, 2007 there was more explanation of how to address the limitations to calculating 'biodiversity' and indication loss would be greatest in habitat from sea level to 1,000m.

5) Description of how the "without-project" land-use scenario would affect water and soil resources. (See also **B5**).

Findings	The project has detailed soil and geography maps. The PDD discusses that without the project the level of deforestation predicted will significantly reduce the water and soil retention and protection functions offered by the forest. The PDD briefly explains the likely impacts on water and soil as environmental services that would be impaired and lost in the absence of the project, drawing on studies by the World Bank on damages from flooding. The PDD also indicates that soil productivity would likely decline without the project and effect the livelihoods of communities adjacent to the forest. The with-project assumptions are that the forest cover reduces run-off, flow volumes and intensity, soil erosion, and the risk of landslides. The PDD refers to instances of hydrological disturbances and serious erosion events elsewhere in Aceh to describe the without-project scenario. The direct relationship between specific watersheds, watercourses, or hydrological models and the project areas was not established in the PDD of November 2, 2007, however the next versions provided description of two example watersheds as indicative cases for the without-project scenario.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

G3. Project Design & Goals - Required

Concept

The project must be described in sufficient detail so that a third-party can adequately evaluate it. Projects that operate in a transparent manner enable stakeholders and outside parties to contribute more effectively to the project.

Indicators

The Project proponents must:

1) Provide a description of the scope of the project and a summary of the major climate, community and biodiversity goals.

Findings	The project proponents have provided a landscape level project at the scope of the dominant forest ecosystem with Aceh Province in Sumatra. This is a sub-national REDD project which seeks to leverage carbon financing to induce government reclassification of production forest tenures to protection forest and to enable community development that may provide enhanced alternatives for rural villagers than

	conversion-led activities. Some of the project activities are untested and thus the project is proposing a design which is based on many pilot endeavors. On its own, the PDD would be insufficient design for such a large project. However, the project in its start up and design phase is nested within the AFEP. The PDD does clearly indicate the relationship of AFEP and the project. The PDD references the key information and sources that are publicly available on AFEP project activities, log frame, indicators of success, and supervision by donors. There is reference to AFEP in the executive summary. There is adequate introductory information in the project design outline and goals section that explains the AFEP program. It is evident that carbon financing is one of the deliverables of AFEP, and exploration and development of this project, including carbon payments, is being launched within the first phase as part of AFEP, or that the resources and capacity of AFEP catalyze this project.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

2) Describe each major project activity (if more than one) and its relevance to achieving the project's goals.

Findings	The project describes each major project activity. The most significant of these is the proposed re-classification of land tenures, which is significant because of the potential foregone revenues generated for the province from the rents normally captured from logging licenses. The project hopes to re-classify 85% of the legally licensed logging concessions. These are not explicitly referred to by name or location in the project design. Also, and probably as an initial safeguard, the PDD does not indicate what percentage of which production tenures are planned to be re-classified. The project describes a wide range of activities in the PDD and in the AFEP project proposal covering such areas as development of low-impact, community-managed forestry, and also agro-forestry, reforestation, and plantation crops establishment within areas zoned for such activities done in conjunction with communities. The multiple project activities and goals elaborated through AFEP and the additional ones intended through carbon financing are to be further planned and developed over the next few years. However, the AFEP performance indicators relate activities to the project goals.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

3) Provide a map identifying the project location, where the major project activities will occur, and geo-referenced boundaries of the project site(s).

Findings	The project proponents possess relatively state of the art geo-spatial data to support the project and to generate maps of various scales and for different purposes. FFI staff and consultants hired to assist with the project have the technical expertise and aptitude to manage this spatial information. The Badan Reconstruksi dan Rehabilitasi (BRR) Spatial Information Management Center (SIMC) in Banda, Aceh has provided many of the map layers, GIS services, and also has qualified technical personal to perform complex geo-spatial planning, which is particularly critical for the forest re-design and re-classification processes related to the project. The Provincial Government has established the Aceh Geospatial Data Center (AGDC), which is based in the planning department (Bappeda) office and funded by the provincial government with a mandate to support BRR in mapping, web-delivery of spatial information, and training/capacity building of local government.

	The project has plans to increase the quality and coverage of the geo-spatial data in the future, i.e., through acquisition of new SPOT satellite images and aerial photography. At the time of the audit, FFI had ARCGIS 9 software in use and maintained shape files for map layers such as towns, districts, roads, rivers, forest cover, land classification, geology, soils, etc. An open access digital elevation model (DEM) has been used to represent elevation and slope (relevant to the land class model to calculate threats). Under AFEP, the project has purchased Landsat images from 2006, Spot 5 images from 2006, and had acquired Landsat scenes from 2000 and 2002. Due to this being a landscape level project, printed maps need to be very large to be effective, and printed maps (i.e. those presented in the PDD) are often difficult to discern. The maps in the PDD (and many others viewed on-site) were more user friendly when viewed on a computer. Powerpoint presentations developed for awareness building and stakeholder meetings on REDD conducted in the districts used a wide range of computer generated maps that present an overview of the activities proposed by the project. One significant map, which wasn't included in the PDD, but of significance to the project, would be indication of the existing (but inactive) licenses for HPH and HTI. An example of this included in the PDD was the Aceh Jaya spatial planning map which show mukim boundaries and land uses, including concessions. Another map that helps to illustrate project activities, the so-called "rainbow map", shows some potential community management zones and other use areas. The PDD of December 13 did not present maps with the complete 'project' boundary. This done in the PDD of December 27, 2007.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	See discussion for CAR 1/07

4) Provide a timeframe for the project's duration and the rationale used for determining the project lifetime. If the accounting period for carbon credits differs from the project lifetime, explain.

Findings	Three time periods are established for the REDD project: 1. 2008-2012 project start-up; 2. 2012-2042 project implementation for a 30-year period of REDD carbon credits; 3. 2042-2112 extended project to maintain sequestered carbon for century of atmospheric benefits. The project proponents provided a budget to the auditors for review to indicate how the mix of financing from ODA and early sales of future VER credits would provide the financing to support the initial project development during start up period and to carry project forward as contingency if regulatory REDD approval is delayed. During the on-site audit, it was made clearer that AFEP, already underway and well-funded, is a major factor in providing the institutional framework and capacity needed to launch such a large scale project. The PDD discusses the engagement of a global reinsurance company to help estimate risks to carbon storage in the project area and to insure these credits for 100 years. During the audit, Carbon Conservation presented proprietary information on the steps taken to set up risk management and insurance mechanisms through large financial institutions. The specific details of the risk review, management, and monitoring - and insurance - programs have not been finalized, but are considerably advanced. Section

	3.5 describes the scheme for credit reserves that will be set-aside as a buffer for credits during the project period.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

5) Identify likely risks to climate, community and biodiversity benefits during the project lifetime. Outline measures that the project plans to undertake to mitigate these risks.

Findings	Both short term risk (baseline and leakage, measurement) and long-term risk (sovereign, natural disturbance, and climate change) have been considered within the project design to achieve various carbon credit retirement programs. First, the project involves credit reserves of 20% to account and cover carbon benefits due to potential changes in baseline, leakage, and measurement. Second, an additional 20% reserve is to be used to fund local carbon projects to promote alternative livelihoods to avert leakage. Third, a final 10% reserve will be kept permanently out of market exchange to account for unmitigated risk in terms of enforcement, natural disaster, and climate change impacts. There was mention of the risks to community benefits in the PDD. There are risks as the project will attempt to help communities develop forms of livelihoods based on new or alternative practices, such as community forestry, agroforestry, reforestation, plantations, which may preclude their participation in unsustainable logging practices. Another risk, not stated so forwardly in the PDD is that the project could prevent farmers from converting forest land into farm land, for example, but without providing them with adequate alternative livelihood, thus resulting in either additional poverty or failure to prevent deforestation.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	OBS: 4/07: The PDD should elaborate strategies to mitigate a wider range of possible negative community risks.

6) Document and defend how local stakeholders have been or will be defined.

Findings	The PDD mentions that all Aceh Jaya Mukims in the project area have taken part in participatory spatial planning, and that others have taken part in spatial planning workshops (Aceh Besar, Pidie) or in mitigating human-wildlife conflicts (Aceh Barat). The PDD states that where there is potential for conflict over forest resources, communities and Mukim leaders will be involved in a participatory land use planning process, developing a multi-stakeholder management structure. From the interview with proponent staff, it seems most of the consultation process have been undertaken at the Mukim and District levels. The PDD refers to processes for consultation under AFEP. A list of stakeholders so far engaged is within the PDD. In the November 2 and December 13 PDDs, there was not sufficient definition of stakeholders and detail regarding the stakeholder process. The PDD of December 29, 2007 included more definition of stakeholders and stakeholder categories, as well as more description on how stakeholder consultation will be done in practice.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	CAR 6/07 issued in the 1st draft report of December 17, 2007 was closed by actions

	taken by the project proponents, i.e. in the PDD of December 29, 2007 there was more description of the main categories of local stakeholders, processes for engagement, and guidance to be used during the project.

7) Demonstrate transparency by: making all project documentation publicly accessible at, or near, the project site; only withholding information when the need for confidentiality is clearly justified; informing local stakeholders how they can access the project documentation; and by making key project documents available in local or regional languages, where applicable.

Findings	The PDD states that "all non-proprietary documents will be publicly available and in Bahasa language at the offices of Fauna and Flora International, as well as at the Climate, Community and Biodiversity website, the governor's office and posted on these two offices' websites." During the audit it was found that the November 2nd PDD was not posted Some key staff at FFI had not seen or new very little about the PDD during the field visit. At the audit the auditors could not find the PDD on the FFI or Aceh government websites, but it was translated to Bahasa Indonesia and uploaded shortly after the field visit. Some key staff at FFI had not seen or new very little about the PDD during the field visit, although wider distribution was reported after the audit. A link from the PDD to the website makes it possible to find these documents, although some were challenging to locate without knowing the url. The PDD of December 29, 2007 states more definitively the procedures for maintaining and updating versions of the PDD. The PDD of December 29, 2007 clarifies what constitutes a 'proprietary document'. It mentions what type of documents actually will be accessible to the general public. The PDD explains what the needs for confidentiality are or will be with project documents. The PDD includes contact information for those responsible for it.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	CAR 7/07 issued in the 1st draft report of December 17, 2007 was closed by actions taken by the project proponents, i.e. in the PDD of December 29, 2007 there was a more definitive statement of procedures for maintaining and updating versions of the PDD in Bahasa Indonesia and English.

G4. Management Capacity - **Required**

Concept

The success of a Project depends upon the competent of the implementing management team.

Indicators

The project proponents must:

1) Document the management team's experience implementing land management projects. If relevant experience is lacking, the proponents must demonstrate how other organizations will be partnered with to support the project.

Findings	The PDD, in section 4.1 and 4.2 provides summary description of the primary organizations involved and their experience. The information relating to FFI's experience is more convincing and demonstrates greater depth, especially in the area

	of their expertise - large scale multi-agency conservation activities. The information on Carbon Conservation is limited, due to the organization's emerging role in an emerging field. The information on the Aceh government does not elaborate upon it's strengths or the scale of its involvement. (Although it is frequently mentioned in the document that the project depends upon and has the commitment of the Aceh governor's office and other Aceh provincial and district office government support.) A provisional budget for the next 5 years of the project has been laid out and during the audit SmartWood reviewed this with respects to the relative contributions of the three organizations. Each is expected to allocate different levels of staffing, staff expertise, financial resources, and physical infrastructure and resources.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	OBS 5/07: Project proponents should provide more detail on detail on the staffing, expertise, infrastructure, resources, and roles of each organization, particularly to make clear which of these are at the local versus worldwide level.

2) Demonstrate that management capacity is appropriate to the scale of the project.

Findings	This is a significant and ambitious project. The organizations involved, particularly FFI and the Aceh government have large staff presence at the local level. They have operating systems to handle large budgets. Carbon Conservation is based in Australia and it is not evident what local presence they will maintain or if this will increase during the life of the project. There is some description in the PDD on who is leading the project, which staff currently is assigned to it, what positions/job descriptions need to be recruited for, but this could be improved. However, auditors were satisfied after reviewing the AFEP documents and meeting with the three organizations that the each is committed at this initial design phase. The log frame of AFEP provides a provisional work plan for many of the project activities. Less apparent are those to be undertaken by Carbon Conservation or the Aceh Government. A budget for the first five years has been developed and shared with the auditors and was made part of the public PDD.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

3) Document key technical skills that will be required to successfully implement the project and identify members of the management team or project partners who possess the appropriate skills.

Findings	The AFEP project appraisal document provides the basis for the fundamental management positions within FFI as the implementing NGO of the project.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

4) Document the financial health of the implementing organization(s).

Findings	The financial resources of FFI are explicit. The resources that the Aceh Government and Carbon Conservation bring to the implementing and start-up phase of the project were not explicit in the PDD. However, the provisional budget shown to the auditors indicates the operating expenses and sources of funding/financing necessary for the start up phase. The amount estimated to be generated through carbon financing in the future, based on projections of emissions reductions, if achieved, should be sufficient

	to sustain the project, although this can not be evaluated in the design phase.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

G5. Land Tenure - **Required**

Concept

There should be no significant land tenure disputes in the project area, or the project should fundamentally help to resolve these tenure issues.

Indicators

Based on information about current land tenure provided in **G3**, the project proponents must:

1) Guarantee that the project will not encroach uninvited on private property, community property, or government property.

Findings	All forest tenures within the project area are state forest, not private. The participatory spatial planning as described in the PDD offers confidence that the project will not encroach uninvited on community property or private community members property. The spatial planning process at the mukim level will be conducted and all the possible overlapping land tenure systems (state, customary, and including HPH holders) will be mapped. For HPH, HTI, or HGU license holders there may be some dispute with the government. There may be potential disputes in the attempt to delineate mukim boundaries since some of these boundaries are not matched with the state forest boundaries based on the Paduserasi process. However, it is the very nature of the project to seek to resolve these tenure disputes.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

2) Guarantee that the project does not require the relocation of people, or any relocation is 100% voluntary and fundamentally helps resolve land tenure problems in the area.

Findings	The review team confirmed that in the AFEP proposal it was clearly mentioned that proponents do not have any plan to relocate or move people out from the project management areas.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

3) Describe potential “in-migration” of people from surrounding areas, if relevant, and explain how the project will respond.

Findings	The PDD expects a low risk of “in-migration” of people to the project management areas. However, the assumption is that there will be time for the project to monitor and develop mitigation programs for this potential, even if thought to be small, once the project is running.
Conformance	Yes ☒ No ☐ N/A ☐

CAR/OBS	

G6. Legal Status - Required

Concept

The project must be based on a solid legal framework (e.g., appropriate contracts are likely to be in place) and the project must seek to satisfy applicable planning and regulatory requirements.

During the project design phase, the project proponents should communicate early on with relevant local, regional and national authorities and allow adequate time to earn necessary approvals. The project design should be flexible to accommodate potential modifications that may arise to secure regulatory approval.

Indicators

The project proponents must:

1) Guarantee that no laws will be broken by the project.

Findings	The risk appears low as the Project proponent is the Provincial Government, and the project includes a mechanism to review land tenure through participatory planning and have the spatial plans approved by district parliament. There is, however, risk to project success due to potential conflict between authority of existing laws and between Central, Provincial, and Regional levels of government.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	See above under G1 (5)

2) Document that the project has, or expects to secure, approval from the appropriate authorities.

Findings	The project proponent is the appropriate authorities.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

G7. Adaptative Management for Sustainability - 1 Point, Optional

Concept

Adaptive management is a formal, systematic, and rigorous approach to learning from the outcomes of management actions, accommodating change and improving management. It involves synthesizing existing knowledge, exploring alternative actions and making forecasts about their outcomes. [3]

Adaptive management is based upon the premise that ecosystems and social systems are complex and inherently unpredictable. Adaptive management views land management actions as

[3] The definition of Adaptive Management and several of the indicators were based on Nyberg (1999). *An Introductory Guide to Adaptive Management*.

learning opportunities and as potential experiments for systematically testing assumptions and identifying adjustments that could benefit the project. It enables a project to evolve to meet changing or unanticipated needs, and can help ensure that the project realizes its goals over the long term.

Indicators

The project proponents must:

1) Demonstrate how management actions and monitoring programs are designed to generate reliable feedback that is used to improve project outcomes.

Findings	The PDD does not discuss this criteria in detail, instead referring to future details to be provided. However the AFEP appraisal document indicates resources and plans for monitoring and evaluation.		
Conformance	Yes ☒	No ☐	N/A ☐
CAR/OBS			

2) Have a management plan for documenting decisions, actions and outcomes and sharing this information with others within the project team, so experience is passed on rather than being lost when individuals leave the project.

Findings	The PDD does not discuss this criteria in detail, instead referring to future details to be provided. However the AFEP appraisal document indicates resources and plans for monitoring and evaluation. A management plan has not been developed.		
Conformance	Yes ☐	No ☒	N/A ☐
CAR/OBS	Not required for validation.		

3) Demonstrate how the project design is sufficiently flexible to accommodate potential changes and that the project has a defined process in place to adjust project activities as needed.

Findings	The PDD does not discuss this indicator in detail, instead referring to future details to be provided. However the AFEP appraisal document indicates resources and plans for monitoring and evaluation, external supervision and review, and potential for project revision and improvement of performance indicators.		
Conformance	Yes ☐	No ☒	N/A ☐
CAR/OBS	Not required for validation.		

4) Demonstrate an early commitment to the long-term sustainability of project benefits once initial project funding expires. Potential activities may include: designing a new project that builds on initial project outcomes; securing payments for ecosystem services; promoting micro-enterprise; and establishing alliances with organizations or companies to continue sustainable land management.

Findings	The PDD discusses that a 20% stream of revenues from future VERs will be used for investment in other 'sustainable' development projects in Aceh, which would be for generation of further emissions reductions. These are proposed as: - micro hydro projects; - sustainable biofuels or biomass; - renewable energy projects;

	- reforestation; - community based agroforestry; The PDD indicates several types of deposition accounts, whereby funds attributable to activities that reduce emissions will be available to communities where there is successful forest protection to support village based development projects, many of which are similar to those listed above. Community Based Forestry Funds are of note, as these will be used to stimulate the development of reduced impact logging operations managed by communities with a goal of future FSC certification.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

G8. Knowledge Dissemination - 1 Point, Optional

Concept

Field-based knowledge can be of value to other projects. If actively disseminated, this information can accelerate the adoption of innovative practices that bring benefits both globally and locally.

Indicators

The project proponents must:

1) Describe how they will document the relevant or applicable lessons learned.

Findings	The project will probably be of great value to the understanding of REDD projects in Indonesia and elsewhere in the world. The PDD is developed as a test of carbon financing mechanisms to avoid deforestation and degradation. The anticipation is that the project will be an instrument for wider knowledge dissemination. This is noted within the PDD with reference to training, capacity building and community development, and stakeholder outreach. AFEP has multiple targets aimed at raising awareness. Such as: analysis and publication of information on forest and timber conditions, quality and trends to ensure transparency and accountability, and to promote proactive responses to reports of forest degradation and illegal activities, and provision of support to local CSO monitoring and accountability networks and communication forums to promote transparency.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

2) Describe how they will disseminate this information in order to encourage replication of successful practices. Examples include: undertaking and disseminating research that has wide-reaching applications; holding training workshops for community members from other locales; promoting “farmer to farmer” knowledge-transfer activities; linking to regional databases; and working with interested academic, corporate, governmental or non-governmental organizations to replicate successful project activities.

Findings	The AFEP logframe sets a number of performance indicators to meet objectives for raising conservation awareness, such as:

	* number of press articles/yr in local and/or national media (print and/or electronic) on environmental management and forest protection issues attributable to AFEP. * monthly project bulletins delivered to forest conservation agencies, targeted district governments and schools with 2 weeks of publication; * 500 teachers trained and provided with environmental and conservation curriculum materials; * Completion of two conservation education and awareness facilities (1 in Lhoong, 1 in Banda Aceh)
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

CL1. Net Positive Climate Impacts - **Required**

Concept

The project must generate net positive impacts on atmospheric concentrations of greenhouse gases (GHGs) within the project boundaries and over the project lifetime.

Indicators

The project proponents must:

1) Use the methodologies of the Intergovernmental Panel on Climate Change's Good Practice Guidance (IPCC GPG) to estimate the net change in carbon stocks due to the project activities. The net change is equal to carbon stock changes *with* the project minus carbon stock changes *without* the project (the latter having been estimated in **G2**). Alternatively, any methodology approved by the CDM Executive Board may be used. This estimate must be based on clearly defined and defendable assumptions about how project activities will alter carbon stocks and non-CO_2 GHG emissions over the duration of the project or the project accounting period.

Findings	Current stocks and predicted losses over 30 year period are documented based on live tree carbon estimates. The averted emissions from reduced deforestation and degradation reported in the project design document amount to over 100 million tCO2e over a thirty year projection, although this amount depends upon the deforestation baseline used. The PDD provides detailed description on its assumptions to predict for deforestation/degradation through palm oil, agriculture, or degraded forest over next 30 years. The rate of deforestation is regarded by the project as conservative. As these predictions are imprecise and uncertain, the project rationalized in the December 29, 2007 PDD the prediction of deforestation within the perspective of alternative projections of deforestation and outlined plans to update and improve upon projections.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	See discussion of CARs 3/07 and 4/07

2) Factor in the non-CO_2 gases CH_4 and N_2O to the net change calculations (above) if they are likely to account for more than 15% (in terms of CO_2 equivalents) of the project's overall GHG impact.

Findings	The project plans to calculate Nitrous oxide (N2O) emissions from fertilizer use in palm oil plantations through future studies to ensure these are fewer than 15%. Other non-CO2 gases, such as methane are not expected to be high enough to warrant measure.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

3) Demonstrate that the net climate impact of the project (including changes in carbon stocks, and non-CO_2 gases where appropriate) will give a positive result in terms of overall GHG benefits delivered.

Findings	The PDD documents estimated net positive impact planned for in reduced carbon emissions relative to baseline conditions. Both baseline and project impact monitoring must continue over duration of the project, and to conduct more measurements with greater certainty (Tier 2, Tier 1) to confirm net positive impacts as they are generated. The project assumes a linear rate of deforestation. Future continuous monitoring of the baseline is important to test the assumption of a linear (rather than hyperbolic) rate of deforestation and ensure that the project continues to have a net positive carbon impact relative to the baseline. The PDD estimates that the project should combat 85% of deforestation. The PDD does not specifically show (i.e., on a map) where these reductions are most likely to occur. However, the land-class model forecasts the relative degree of threat where and how deforestation without the project would, estimating trends to other land uses. It is not possible to evaluate at present whether or not the project will be able to arrest 85% of deforestation or some figure less than that. This level of carbon accounting would take place during verification of emissions reductions as they are produced. However, the planned for quantity of carbon conserved through avoiding deforestation would be significant, estimated at over 3 million tCO2e per year. The PDD plans to do regular monitoring of baseline emissions over the length of the project.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

CL2. Offsite Climate Impacts ("Leakage") - Required

Concept

The project proponents must quantify and mitigate likely negative offsite climate impacts; namely, decreased carbon stocks or increased emissions of non-CO_2 GHGs outside the project boundary, resulting from project activities (referred to as "leakage" in climate change policy).

Indicators

The project proponents must:

1) Estimate potential offsite decreases in carbon stocks (increases in emissions or decreases in sequestration) due to project activities.

Findings	The project proponents anticipate that leakage will be minimal due to provincial government commitments to reduce legal logging licenses, an extensive remote sensing and direct monitoring program, and multiple financial mechanisms to reduce activity-shifting primary leakage - such as: community development funds, alternative livelihood funds, and sustainable forestry funds. In addition, a short-term retirement of 20% of carbon credits will mitigate leakage where detected through the life of the project. Aukland et al. (Aukland, L, P.M. Costa and S. Brown. 2003. A conceptual framework and its application for addressing leakage on avoided deforestation projects. Climate Policy 3:123-136) identify two major categories of leakage—primary on a stand to regional spatial scale and secondary on a regional to international spatial scale. They identify minor categories of leakage—activity-shifting primary and outsourcing primary and market effects secondary and super-acceptance secondary. The PDD emphasizes the project concern with activity shifting and market effects leakage. Outsourcing involves producers at a local to regional scale seeking supplies from alternative sources (due to undiminished consumer demand). Market effects leakage involves producers at a global scale seeking supplies from alternate sources. Super-acceptance refers to the potential positive influence of this project on stimulating other carbon projects. Super-acceptance is likely to be a positive outcome in terms of additional carbon storage and should be discussed if there are concrete examples of other REDD projects in the area. Super-acceptance is most likely in areas considering carbon projects where potential carbon benefits are large but potentially displaced market value is small. The other negative types of leakage, outsourcing and market effects should be quantified. In terms of mitigation, locating the project in inaccessible unproductive areas is not feasible for a 750,000 ha project nor is it useful in achieving biodiversity and community goals. Other mitigation measures that are being considered include portfolio balancing by establishment of reforestation plantations.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

2) Document how negative offsite impacts resulting from project activities will be mitigated, and estimate the extent to which such impacts will be reduced.

Findings	The PDD proposes an extensive monitoring system that would be used to detect activity-shifting primary leakage. This system would involve aerial photography, radar, community member observations, and community organization monitoring. In addition, three major projects have been proposed to reduce primary leakage, including expansion of designated protected areas to reduce logging, and creation of community development programs to develop alternative livelihoods and integrate carbon sequestration into existing agricultural operations such as coffee plantations.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

3) Subtract any likely project-related unmitigated negative offsite climate impacts from the climate benefits being claimed by the project. The total net effect, equal to the net increase in onsite carbon stocks (calculated in the third indicator in **CL1**) minus negative offsite climate impacts, must be positive.

Findings	Primary activity-shifting leakage is not foreseen to be larger than the 20% to be held in short-term reserves. The project also assumes 15% forest loss.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

CL3. Climate Impact Monitoring - **Required**

Concept

Before a project begins, the project proponents must have an initial monitoring plan in place to quantify and document changes in project-related carbon pools, and non-CO_2 GHG emissions if appropriate, (within and outside the project boundaries). The monitoring plan should state which measurements will be taken and which sampling strategy will be used.

Since developing a full carbon-monitoring plan can be costly, it is accepted that some of the plan details may not be fully defined at the design stage, when projects are being evaluated by the CCB Standards. This will be especially true for small-scale projects.

Indicators

The project proponents must:

1) Have an initial plan for how they will select carbon pools and non-CO_2 GHGs to be monitored, and the frequency of monitoring. Potential pools include aboveground biomass, litter, dead wood, belowground biomass and soil carbon. Pools to monitor must include any pools expected to decrease as a result of project activities. Relevant non-CO_2 gases must be monitored if they account for more than 15% of the project's net climate impact expressed in terms of CO_2 equivalents.

Findings	Estimates of carbon stocks based on forest type and remote sensing data have been calculated with acceptable methods for development of the project. However, there are uncertainties to IPCC tier 1 estimates, which are based on gross biome level estimates, which must be addressed through measurement and monitoring of carbon pools. The project proponents have outlined a plan for how future inventory will be conducted to directly measure forest carbon stocks. The PDD explains the plan to enhance carbon inventory methodologies to move to Tier 2 and then Tier 3.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	OBS 6/07: The methodology should propose inclusion of measurement of coarse woody debris and understory vegetation carbon stocks during on-the-ground inventories if such stocks prove to be significant relative to aboveground total live tree carbon quantities (>10-15%).

CL4. Adapting to Climate Change and Climate Variability - Required

Concept

Projects designed to anticipate and adapt to probable impacts of climate change and climate variability are more likely to sustain the benefits generated by the project over the long term.

Indicators

The project proponents must:

1) Identify likely regional climate change and climate variability impacts, using available studies.

Findings	The PDD identifies climate change as a long-term risk. Potential climate change impact has been identified in terms of increase in mean temperatures by approximately 0.4C over the next 12 years, likely causing shifts in favorable habitat for climate-sensitive species. Climate variation is likely to be greater than that over the 30 years of the project. Fire is the one critical threat climate change that project proponents emphasized intent to plan for.		
Conformance	Yes ☒	No ☐	N/A ☐
CAR/OBS			

2) Demonstrate that the project has anticipated such potential impacts and that appropriate measures will be taken to minimize these negative impacts.

Findings	The project intends to include fire prevention, management, and monitoring to minimize the potential negative impacts of fire, which is the primary climate related impact the project can address through specific measures. However, the project is mostly founded on the assumption that the conservation of a large landscape level forest block is in itself the most important measure to address climate impacts. Amidst the backdrop of a without project scenario of a dynamically changing Aceh, where conversion and loss of most lowland tropical rainforest and important connectivity will likely increase, the protection of such a large forested block, especially as it is connected to the Leuser Ecosystem (together totaling over 3 million hectares), would offer potential refugia for climate-sensitive species and thus have a positive impact on climate change adaptation.		
Conformance	Yes ☒	No ☐	N/A ☐
CAR/OBS			

CL5. Carbon Benefits Withheld from Regulatory Markets - 1 Point, Optional

Concept

When some carbon benefits generated by a project are not sold to satisfy regulatory requirements, additional mitigation action will be required elsewhere to meet these requirements. Therefore, withholding a portion of the project's carbon benefits from being used in capped markets will result in greater overall climate change mitigation.

Moreover, projects that do not sell all their carbon benefits in regulated regimes have the opportunity to experiment with climate change mitigation activities other than the ones eligible under these regimes (such as avoided deforestation, which is not currently creditable under the Clean Development Mechanism). Such experimentation may generate new knowledge that is of value to carbon rule makers and other project developers.

Indicators

The project proponents must:

1. Not sell at least 10% of the total carbon benefits generated by the project[4] into regulated GHG markets (e.g., CDM, New South Wales GHG Abatement Scheme, Oregon Standard). Projects can sell these carbon benefits in a voluntary market or retire them.

Findings	In addition to retiring 10% of carbon credits for long-term unmitigated risk, an additional 10% of carbon credits will be sold in voluntary marketplace to promote REDD credits.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

CM1. Net Positive Community Impacts - **Required**

Concept

The project must generate net positive impacts on the social and economic wellbeing of communities within the project boundaries and within the project lifetime. In addition, local communities and other stakeholders should be engaged early on so that the project design can be revised based on their input. Finally, projects should ensure that stakeholders can express concerns and grievances to project proponents and that these concerns are responded to in a timely manner.

Indicators

The project proponents must:

1) Use appropriate methodologies (e.g. the livelihoods framework) to estimate the net benefits to communities resulting from planned project activities. A credible estimate of net benefits must include changes in community wellbeing given project activities. This estimate must be based on clearly defined and defendable assumptions about how project activities will alter social and economic wellbeing over the duration of the project. The "with project" scenario must then be compared with the baseline scenario of social and economic wellbeing in the absence of the project (completed in **G2**). The difference (i.e., the net community benefit) must be positive.

Findings	The PDD indicates that the project has commenced with community surveys and livelihood surveys. The PDD describes the over-arching goal for "the equitable and effective sharing of benefits from carbon finance such that the communities living in

[4] Total carbon benefits generated by the project can include those coming from activities that are currently not eligible for crediting under existing regulatory regimes (e.g., avoided deforestation).

	and around the forests can improve and sustain their livelihoods". Further, the PDD outlines the major project activities that are intended to improve the well-being of local communities. The project will provide financial support to villages in exchange for the stewardship and activities that will conserve forest through deposition accounts that are planned to support community development (for example, small infrastructure, agroforestry, and agriculture projects), as well as funds aimed at promoting alternative livelihoods and community-based forestry. By working directly with communities and fostering conservation with carbon finance, the project is predicting overall net-positive benefits. In the PDD of November 2, this section of was very qualitative and did not relate the with-project benefits to the without-project scenario. The PDD of November 2 did not provide a quantified estimate of net benefits to communities. This also did not indicate the specific measures to be used to calculate net benefit to communities resulting from planned project activities. In the PDD of December 13 and that of December 29, 2007, there was improvement to the PDD in a number of ways. The PDD provided more emprical economic valuation research from the adjacent Leuser Ecosystem, which is similar enough to provide input as a predictive model for future community benefits. There was presentation of FFI research on the level of direct benefits from logging (of which those from unsustainable logging would be reduced, but those from community forestry would increase.) There was further description of the basic types of communities the project works with in different districts and a more complete description of a few case districts. Such things as comparing the income of a farmer in a "with" and "without" project situation or predicting their sense of personal satisfaction or household quality of life - and other variables of well being were not within the PDD and it would not be realistic to expect these from the project in its design phase. The PDD aknowledges that this would be educated guesswork, but also that it will depend upon the growth of the project to develop indicators to monitor community benefits over time and through the life of the project, which is planned.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	As the determination of net community benefits would depend on the baseline, see also findings and discussion for G2.

2) Document local stakeholder participation in the project's planning. If the project occurs in an area with significant local stakeholders, the project must engage a diversity of stakeholders, including appropriate sub-groups, underrepresented groups and women living in the project vicinity. Stakeholders in the project's area of influence must have an opportunity before the project design is finalized, to raise concerns about potential negative impacts, express desired outcomes and provide input on the project design. Project developers must document stakeholder dialogues and indicate if and how the project proposal was revised based on such input.[5]

Findings	The information provided in the PDDs of November 2 and December 13 on stakeholder involvement to date were general, although there was a substantial budget line item for carrying out consultation. The stated plan for widespread stakeholder consultation as a main element in project activities was repeated frequently in the PDD and AFEP documents. Based on the information collected during the audit field visits to Aceh,

[5] 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. (Such a cautious approach is warranted when there is evidence that raising community expectations prematurely could lead to frustration).

	there was information available on the participatory spatial planning process, and stakeholder consultation, followed in Aceh Jaya, which is presented as evidence of how the project plans to develop in other districts. The first stage of the participatory planning process at the mukim level had participants that were representatives from villages within mukim boundaries. There would be about 5 to 8 people, consisting of men and women, who came to the mukim meeting as representatives from each village. The FFI field officers would usually let the head of village (the Keucik) decide who should be the representatives. The information that was generated from the mukim level planning was then discussed in an inter-mukim meeting. People in the mukim level meeting decided who should be the representatives from their mukim to attend the inter-mukim meeting. The third type of meeting was district level meeting with other stakeholders such as the government officials and other relevant institutions invited to the meeting. During the audit, the auditors found that it was not possible to confirm whether the poorest segment within the communities at the village level was properly consulted, since in some of villages the Keucik might select those closest and loyal to him. Proponents recognized some challenges they faced in providing appropriate consultation with women in their project sites. One of the problems is due to the lack of women field staff for FFI, although new women field officers were recently hired. The project proponents are working to deal with this through training and placing more women as FFI field staff. The project hadn't sought participation of some affected stakeholders, such as the forestry business sector. The December 29, 2007 PDD provides more clarity on how the stakeholder processes of the project are defined, such as the definition and inclusion of stakeholders, categories of stakeholders already considered legitimate and important, as well as recognizing the need to reinforce the engagement of groups that may be minority or marginalized, typically, from such processes.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	See discussion for CAR 6/07

3) Formalize a clear process for handling unresolved conflicts and grievances that arise during project planning and implementation. The project design must include a process for hearing, responding to and resolving community grievances within a reasonable time period. This grievance process must be publicized to local stakeholders. Project management must attempt to resolve all reasonable grievances raised, and provide a written response to grievances within 30 days. Grievances and project responses must be documented.

Findings	The PDDs of November 2 and December 13 referred to AFEP documents on grievance procedures, but these were not discussed in early versions of the PDD. Under the AFEP project, FFI is to develop the mechanisms to ensure complaints and grievances are addressed. At the moment of the audit, only a web-based complaint mechanism was available. In the PDD of December 29, 2007 there was written description of the grievances process for the project.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	CAR 8/07 issued in the 1st draft report of December 17, 2007 was closed by actions taken by the project proponents, i.e. in the PDD of December 29, 2007 there was clarification of the grievance and complaints process and commitment of the project to resolution of conflicts should they arise.

CM2. Offsite Community Impacts - Required

Concept

The project proponents must quantify and mitigate likely negative social and economic offsite impacts; namely, the decreased social and economic wellbeing of communities or people living outside the project boundary, resulting from project activities.

Indicators

The project proponents must:

1) Identify potential negative offsite community impacts that the project is likely to cause.

Findings	In the PDDs of November 2 and December 13, it only said that the project did not anticipate any negative offsite impacts, but this needed to be more clearly established. Auditors observed that offsite impacts are likely to be low. However, there are always risks when introducing land management changes at this scale. For example, workers in sawmills outside the project area could be affected by reduced input of timber from the project area due to reduced illegal logging. The price of timber in reconstruction areas of the tsunami could rise. Based on audit interviews with the local forestry office in Aceh Jaya, since the Aceh Governor announced the moratorium on logging there has been seven sawmills that hold a government license and five other illegal sawmills no longer operated. This example indicated that there are probably some risks when introducing land management changes at this scale that need to be considered. For example, how to mitigate the workers in sawmills or other wood-based industries outside the project area that might be affected by reduced input of timber from the project area due to reduced illegal logging. The December 29 PDD indicated that lost incomes and livelihoods from a reduction in logging (legal/illegal) and poaching would be the possible off-site community impact. Some amount of small-scale enterprise loans to support responsible wood-working or other resource based activities would be pursued.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	CAR 9/07 issued in the 1st draft report of December 17, 2007 was closed by actions taken by the project proponents, i.e. in the PDD of December 29, 2007 there was description of negative off-site impacts from the project to certain livelihoods (legal/illegal logging and wildlife poaching) that would likely occur as more responsible and conservation based scenarios were promoted by the project.

2) Describe how the project plans to mitigate these negative offsite social and economic impacts.

Findings	The PDD plans to monitor the negative impacts by research within and outside the project area and develop plans to mitigate these as or if encountered. Auditors heard anecdotal references to negative offsite impacts resulting from the current government moratorium on logging that affected those who worked in wood-based industries. The team did not acquire substantiated data about the more specific impact of this policy.
Conformance	Yes ☒ No ☐ N/A ☐

CAR/OBS	

3) Evaluate likely unmitigated negative offsite social and economic impacts against the social and economic benefits of the project within the project boundaries. Justify and demonstrate that the net social and economic effect of the project is positive.

Findings	There would be some unmitigated negative impacts likely from the project. For example, those wealthy business owners who will lose profit from extracting timber, or government agencies that capture rents from industry, or medium-scale sawmills reliant on local timber supply. However, the project proposes net community benefits across 4 - 5 kabupaten, potentially effecting 130,000 people. The project activities described through carbon financing and alternative livelihoods strategies present a wider reaching potential for the communities effected, which should be net positive. If they are not, then it is likely that the project will not be successful.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

CM3. Community Impact Monitoring - **Required**

Concept

The project proponents must have an initial monitoring plan to quantify and document changes in social and economic wellbeing resulting from the project activities (within and outside the project boundaries). The monitoring plan should indicate which measurements will likely be taken and which sampling strategy will be used to determine how the project affects social and economic wellbeing.

Since developing a full community-monitoring plan can be costly, it is accepted that some of the plan details may not be fully defined at the design stage, when projects are being evaluated by the CCB Standards. This will especially be true for small-scale projects.

Indicators

The project proponents must:

1) Have an initial plan for how they will select community variables to be monitored, and the frequency of monitoring. Potential variables include income, health, roads, schools, food security, education and inequality. Community variables at risk of being negatively impacted by project activities should be monitored.

Findings	The PDD itself did not provide a detailed monitoring plan pertaining to the social economic and other impacts upon the affected communities within the project area. However FFI has identified key roles, basic variables and indicators for future monitoring and for the establishment of a monitoring plan under AFEP. This may be used as the basis for developing a detailed monitoring plan for this carbon project.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

CM4. Capacity Building - 1 Point, Optional

Concept

Projects that include a significant capacity-building (training, skill building, etc) component are more likely to sustain the positive outcomes generated by the project and have them replicated elsewhere. The project proponents must include a plan to provide orientation and training for the project's employees and relevant community members with an eye to building locally relevant skills and knowledge over time.

Indicators

The project proponents must show that capacity building is:

1) Structured to accommodate the needs of communities, not only of the project;

Findings	The majority of the project activities focus on the needs of the community. The training efforts in this area relate to training of forest guards and monitors, training in agroforestry and community forestry techniques, and environmental education.		
Conformance	Yes ☒	No ☐	N/A ☐
CAR/OBS			

2) Targeted to a wide range of groups, not just elites;

Findings	Emphasis is on communities, though it will remain to be seen how the inclusion of different members of society turns out.		
Conformance	Yes ☒	No ☐	N/A ☐
CAR/OBS			

3) Targeted to women to increase their participation; and

Findings	The project intends to work with women's groups and for stakeholder consultation to be targeted to women to improve upon meetings and project implementation that would more traditionally be emphasizing male participation.		
Conformance	Yes ☒	No ☐	N/A ☐
CAR/OBS			

4) Aimed to increase community participation in project implementation.

Findings	The project has a strong component towards increasing a range of community interests and stakeholders in the project implementation.		
Conformance	Yes ☒	No ☐	N/A ☐
CAR/OBS			

CM5. Best Practices in Community Involvement - 1 Point, Optional

Concept

Projects that use best practices for community involvement are more likely to benefit communities. Best practices include: respect for local customs, local stakeholder employment, worker rights and worker safety.

Indicators

Project proponents must:

1) Demonstrate that the project was developed with a strong knowledge of local customs and that, where relevant, project activities are compatible with local customs.

Findings	The PDD (and AFEP documents) as well as discussions with staff, visits to field offices, and discussions with stakeholders demonstrated a solid foundation of local knowledge and presence, however local stakeholder consultation needs to be improved.		
Conformance	Yes ☐	No ☒	N/A ☐
CAR/OBS	Not required for validation.		

2) Show that local stakeholders will fill all employment positions (including management) if the job requirements are met. Project proponents must explain how stakeholders will be selected for positions and where relevant, must indicate how traditionally underrepresented stakeholders and women, will be given a fair chance to fill positions for which they can be trained.

Findings	The project is not set up as an employer, per se.		
Conformance	Yes ☐	No ☐	N/A ☒
CAR/OBS			

3) Show that the project will inform workers about their rights, and that the project complies with international rules on worker rights.

Findings	Not mentioned in the PDD, but probably not applicable as the project is not an employer, per se.		
Conformance	Yes ☐	No ☐	N/A ☒
CAR/OBS			

4) Comprehensively assess situations and occupations that pose a substantial risk to worker safety. A plan must be in place to inform workers of risks and to explain how to minimize such risks. Where worker safety cannot be guaranteed, project proponents must show how the risks will be minimized using best work practices.

Findings	Not applicable for the reasons mentioned above.		
Conformance	Yes ☐	No ☐	N/A ☒
CAR/OBS			

B1. Net Positive Biodiversity Impacts - **Required**

Concept

The project must generate net positive impacts on biodiversity within the project boundaries and within the project lifetime, measured against the baseline conditions.

Projects should have no negative effects on species included in the IUCN Red List of threatened species (which encompasses endangered and vulnerable species) or species on a nationally recognized list (where applicable). Invasive species must not be planted by the project.

Genetically Modified Organisms (GMOs), as a relatively new form of technology, raise a host of ethical, scientific and socio-economic issues. Some GMO attributes may result in invasive genes or species. In the future, certain GMOs may be proven safe. However, given the currently unresolved issues surrounding GMOs, projects cannot use genetically modified organisms to generate carbon credits.

Indicators

The project proponents must:

1) Use appropriate methodologies (e.g., key species habitat analysis, connectivity analysis) to estimate changes in biodiversity as a result of the project. This estimate must be based on clearly defined and defendable assumptions. The "with project" scenario should then be compared with the baseline "without project" biodiversity scenario completed in **G2**. The difference (i.e., the net biodiversity benefit) must be positive.

Findings	The conservation of forests within the Ulu Masen ecosystem can be expected to generate a significant benefit to the conservation of biological diversity. While more is known about the Leuser ecosystem, and surveys in Ulu Masen are recent, there is expected to be a net biodiversity benefit through the protection of Ulu Masen forests by extending the contiguous forest of the Leuser ecosystem. There is far more existing floral and faunal data for Leuser, well recognized as the repository of globally and nationally significant concentrations of rare, threatened, and endangered species. The maintenance of habitat in Ulu Masen would make for one of the largest contiguous forest blocks of tropical rainforest in Indonesia (approximately 3.3 million hectares). The project is designed to conserve habitat of High Conservation Value forests within the project boundaries and maintain connectivity around the Bukit Barisan range. Through the threat analysis posed to intact and disturbed forests at low, mid, and high elevations the project has identified the areas most susceptible to forest loss, which can be used to target priorities for the forestry re-design and reclassification process. The project is using habitat and connectivity as a proxy for biodiversity, even while species' surveys within Ulu Masen are taking place and add to the knowledge that may already be written about for Leuser. The PDD distinction between intact and disturbed forest does not value either classification, in general, as being more or less critical habitat. If without the project the deforestation rate trends over 30 years at 1.28%, there will be approximately 288,703 hectares lost and about 461, 297 ha remaining.

	The with-project scenario estimates that it will address 85% of deforestation. The net positive benefit to biodiversity from the project is forecast as a reduction of forest loss by an amount of 85% of 288,703 ha, or 43, 305 ha. With this project scenario, the estimate net benefit would be 706, 695 ha remaining in 30 years. As the baseline scenario of deforestation at 1.28% is strengthened through improved analysis of recent conditions and trends, the more readily future net benefits (in terms of forest retained) can be evaluated in the future.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

2) Describe possible adverse effects of non-native species on the area's environment, including impacts on native species and disease introduction or facilitation. If these impacts have a substantial bearing on biodiversity or other environmental outcomes, the project proponents must justify the necessity of using non-native species over native species.

Findings	The project does not intend to use non-native species (see B.4 below).
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

3) Identify all IUCN Red List threatened species and species deemed threatened on nationally recognized lists that may be found within the project boundary. Project proponents must document how project activities will not be detrimental in any way to these species.

Findings	The project is collecting new information from surveys begun and planned within the Ulu Masen ecosystem. The project maintains the species lists from Leuser and most of the data on IUCN Red List species for Ulu Masen is generated from comparable information from Leuser. Considering the vast number of taxa for which there is only a paucity of data, the many additional species to be identified and catalogued, and research programs that are studying the behavior, abundance, and population dynamics of key species, the project presents a great opportunity for the betterment of rare, threatened, and endangered species.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

4) Identify all species to be used by the project and show that no known invasive species will be used.

Findings	This is a conservation of natural forest, avoided deforestation, project and will not be using non-native or invasive species (except as otherwise discussed below under B.4). Species used in reforestation projects as part of the community development and alternative development have not been specified yet.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

5) Guarantee that no genetically modified organisms will be used to generate carbon credits.

Findings	The project will not use genetically modified organisms.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

B2. Offsite Biodiversity Impacts - **Required**

Concept

The project proponents must quantify and mitigate likely negative offsite biodiversity impacts; namely, decreased biodiversity outside the project boundary resulting from project activities.

Indicators

The project proponents must:

1) Identify potential negative offsite biodiversity impacts that the project is likely to cause.

Findings	All indications would be that the conservation of the Ulu Masen ecosystem will only result in positive biodiversity impacts. The PPD does not project there being any negative off-site impacts. Discussions with project proponents emphasized the favorable contribution to biodiversity at a landscape level through the maintenance of high conservation values by reduction of deforestation or degradation. Perhaps one of the unintended, but possible consequences of conservation as designed would be continued potential wildlife human interactions, such as those of elephant or tiger.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

2) Describe how the project plans to mitigate these negative offsite biodiversity impacts.

Findings	As the project does not anticipate negative biodiversity impacts through conservation, only positive ones. FFI has begun work on elephant - human conflict in Aceh Barat and reports that this is an important and valued entry point with the communities there.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

3) Evaluate likely unmitigated negative offsite biodiversity impacts against the biodiversity benefits of the project within the project boundaries. Justify and demonstrate that the net effect of the project on biodiversity is positive.

Findings	There would not be likely unmitigated negative offsite biodiversity impacts. The overall net effect of the retention of large areas of forest and habitat should be far more positive than a baseline scenario.
Conformance	Yes ☐ No ☐ N/A ☒
CAR/OBS	

B3. Biodiversity Impact Monitoring - Required

Concept

The project proponents must have an initial monitoring plan to quantify and document the changes in biodiversity resulting from the project activities (within and outside the project boundaries). The monitoring plan should state which measurements will likely be taken and which sampling strategy used.

Since developing a full biodiversity-monitoring plan can be costly, it is accepted that some of the plan details may not be fully defined at the design stage, when projects are being evaluated by the CCB Standards. This will especially be true for small-scale projects.

Indicators

The project proponents must:

1) Have an initial plan for how they will select biodiversity variables to be monitored, and the frequency of monitoring. Potential variables include species abundance and diversity, landscape connectivity, forest fragmentation, habitat area and diversity, etc. Biodiversity variables at risk of being negatively impacted by project activities should be monitored.

Findings	FFI has core competency in biodiversity conservation, including surveys and monitoring, species and habitat management. The proponents state that they are still determining which biodiversity variables should be monitored and at what frequency. The biodiversity monitoring plan is expected to build off of existing FFI research and monitoring programs. There are a number of species and habitat surveys referenced in section 1.4 of the PDD. For example, a survey programme to determine the range and abundance of the endangered Sumatran elephant (Elephas maximus). A survey programme has also begun to determine the range and abundance of the endangered Sumatran elephant (Elephas maximus). A camera trapping program to obtain more complete mammal and ground bird species lists. A recent survey of orang - utan found that there are few individuals in the Ulu Masen forest, which does not decrease the biodiversity significance of the forest, yet helps increase understanding of the area. AFEP plans for the FFI "to collaborate with the Aceh Nature Conservation Agency (BKSDA), the Provincial University and the National Institute of Sciences (LIPI) to compile field assessments and secondary data on the natural resources and biodiversity of proposed conservation areas to provide supporting documents for proposals. Base line surveys and monitoring are planned for Ulu Masen, and expected to be important compliments to the conservation objectives of the program, because there is so little data existing for the Ulu Masen (as compared to the Leuser ecosystem, for example). In discussions with FFI staff, it was evident that the intention to build a wider understanding of the species' within the forest - and all their uses of the forest - is an important goal, but that there is difficulty in monitoring the very complex subject of 'biodiversity', and this may not be accomplished through species or taxa surveys alone. The program managers expressed to auditors the concern they have in making sure monitoring of biodiversity yields meaningful results that help to demonstrate the variability of taxa between sites, especially where this may inform about species response to different levels of forest disturbance. Vegetative cover will be monitored through acquisition of spatial imagery (subsequent SPOT scenes) and through the

	intended ultra-light aircraft monitoring program that has not yet begun.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

B4. Native Species Use - 1 Point, Optional

Concept

In most cases, species that are native to a region will have a higher biodiversity benefit than non-native species. In other cases, non-native species can be more effective than native species for rehabilitating degraded areas or providing fast growing biomass, timber, fruits and other beneficial products. For instance a project may need to use non-native species on severely degraded land to achieve ecological restoration before native species can be reintroduced.

Indicators

The project proponents must:

- Show that the project will only use species that are native to the region.

Or

- Justify that any non-native species used by the project are 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)

Findings	The project has stated that it will not use any non-native species. There is the potential for agroforestry fruit and tree species (i.e., coffee, cacao, or rubber) to be of exotic origin, however these have long since become incorporated within the traditional and accepted into smallholder agroforestry schemes. It is considered justifiable to use widely naturalized fruit or multiple use tree species that are not native to Indonesia, especially where these are customarily accepted and desirable for local farmers to establish kebun.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

B5. Water and Soil Resource Enhancement - 1 Point, Optional

Concept

Climate change and other factors may stress and degrade water and soil resources at the project site over time. Projects should enhance the quality and quantity of water and soil resources.

Indicators

The project proponents must:

1) Identify project activities that are likely to enhance water and soil resources

Findings	The protection of water and soil through retention of Ulu Masen forests is intended to play a significant role in the protection of critical environmental services offered by these forests. The PDD refers to the hydrological functions performed by the Ulu Masen forests and that their maintenance will help regulate water quality, and reduce run-off, sedimentation, soil erosion, and probably reduce the risks of landslides. FFI staff mentioned that they have found water protection and quality to be an extremely important, and resonant issue, when speaking with local communities, who are quick to identify the problems associated with forest loss, such as: loss of fisheries, stream sedimentation, and destruction of homes and lives from landslides. AFEP has set protection of environmental services as a project development objective with performance indicators for hydrological services, such as "50% increase of respondents in target areas (Teunom, Ulu Masen) agree that there is a positive correlation between forest cover and hydrological function by end of 2008". AFEP uses forest cover as a proxy for the delivery of environmental services related to soil and water, which is justified.
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	

2) Credibly demonstrate that these activities are likely to improve water and soil resource compared to the baseline, using justifiable assumptions about cause and effect, and relevant studies.

Findings	The November 2 and December 13 PDDs had not set monitoring targets for measures of improved water and soil resource quality. The AFEP logframe of performance indicators states that direct measurement of environmental services over the timeframe of the project is unrealistic. .
Conformance	Yes ☒ No ☐ N/A ☐
CAR/OBS	CAR 10/07 issued in the 1st draft report of December 17, 2007 was closed by actions taken by the project proponents, i.e. in the PDD of December 29, 2007 there was additional description of plans to survey water quality and soil erosion.

APPENDIX III: Stakeholder lists (public)

List of Project Proponent Staff Consulted during Validation Audit

Name	Title	Contact	Type of Participation
Usher, Graham	FFI, AFEP Protected Areas Manager	Graham.usher@fauna-flora.org	Interview
Infield, Mark	FFI, Asia Pacific Regional Director	Mark.infield@fauna-flora.org	Interview
Momberg, Frank	FFI, Asia Program Director	Frank.momberg@ffi.org	Interview
Niles, John O	Carbon Conservation, Science Director	jniles@carbonconservation.com	Interview
Yusuf, Dr. Irwandi	Aceh Province, Governor		Interview
Syaifuddin	FFI, Senior Coordinator Planning	syaifuddin@ffi.or.id	Interview
Nando, Sutisna	FFI, Communication Deputy Manager	tisna.nando@ffi.or.id	Interview
Siahaan, Bakti	FFI consultant Head of Aceh Forest Redesigned Team	0811683796	Interview
Asmaruddin	FFI Regional Coordinator	Calang, Aceh Jaya	Interview
Barnes, Helene	FFI CBC and Operation Manager	helene.barnes@ffi.org.id	Interview
Hayat, Zikri	FFI Field Officer	Calang, Aceh Jaya	Interview
Mahyuzar	FFI Field Officer	Calang, Aceh Jaya	Interview

List of other Stakeholders Consulted

Name	Organization	Contact	Type of Participation
Leroy Hollenbeck	Chemonics	lhollenbeck@chemonics.com	Interview
Yakob Ishadamy	BRR Nad-Nias	yakob@indo.net.id	Interview
Namal, Nurul	Aceh Institute	0811687043	Interview
Harun, Fauzi	INEF & secretary of Aceh Forest Redesign Team	Banda Aceh	Interview
Dahlan	Aceh Forest Redesigned Team	Banda Aceh	Interview
Hasyimi	Desa Panggong, Secretary Desa		Interview
Nurdin PN	Desa Panggong, Kepala Tuha Deut		Interview
Gayo, Abdullah	Desa Panggong, KaDes		Interview
Yusman, Teungku Yusman	Desa Panggong, Keucik		Interview
Samsuar LD	Desa Panggong		Interview
Idrus	Desa Panggong		Interview
Cut Hajjah	Desa Panggong		
Suheri	Department of Forestry, Jakarta	08161386920	Interview
Raharjo, Diah	Dewan Nasional Kehutanan (the National Forestry Advisor Board)	08129360417	Interview
Budi	Jaringan Kerja Masyarakat Adat (JKMA) Aceh	Jkma.budi@gmail.com 0813 6072 6611	Interview
Ruddin, Muchtar	Bappeda Aceh Jaya District	08116801907	Interview
Baihaqi	Forest and Plantation Office, Aceh Jaya District	08136060634333	Interview
Ismailis	The Secretary of Mukim Association in Aceh Jaya	Aceh Jaya District	Interview
Eldi, Samsuar	Local assistance of FFI	Setia Bakti	Interview