

# Certification Report


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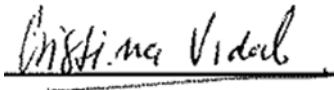
<b>Project Name</b>	Panama Canal Authority (ACP) Sustainable Forest Cover Establishment
<b>Project ID</b>	PA-ACP
<b>Province and Country</b>	Panama Province, Panama
<b>Project size</b>	2458 ha of planted eligible area. The developer intends to increase the planted area to 10,000 ha
<b>Project developer</b>	<b>Autoridad del Canal de Panamá</b> Edificio 705, Corozal Oeste, Calle Ñeque Panama, Panama <b>represented by</b> Angel Ureña Vargas
<b>Assessment Team Leader</b>	William Arreaga
<b>Internal Report ID</b>	ACP CFS initial certification 13
<b>CFS Version</b>	3.2
<b>Type of Certification</b>	Initial Certification
<b>Date of issuance: Final Report</b>	December 16, 2013
<b>Valid until</b>	Updated on 4 August 2014 due to error discovered in climateprojects.info site and associated clarifications during transition process to Gold Standard. The older version of this report is attached as Annex from page 103 ff. N/A
<b>CO2-certificates (ex-ante) from which are ex-post</b>	<b>264,996 tCO<sub>2</sub> ex-ante</b> <b>0 ex-post</b>
<b>Buffer CO2-certificats (ex-post &amp; ex-ante)</b>	113,570 tCO <sub>2</sub> ex-ante 0 ex-post



## About the certification body

<p><b>Assessment Team Leader</b></p>	<p>William Arreaga warreaga@ra.org</p> <p>Guatemalan; forester from San Carlos de Guatemala University, and M.Sc. from CATIE, Turrialba, Costa Rica. He is also involved in a MBA program on Financial Administration in Guatemala. William serves as a lead auditor for FSC Forest Management, and Chain-of-Custody. He has developed two biomass allometric equations in natural forests and plantations in Guatemala. Moreover, he had received formal training in Environmental Services at Winrock International; as well as he had developed a great experience with Carbon issues by his participation in the field for four CCB validations in Mexico, Nicaragua, Costa Rica, Panama, and Ecuador; VCS validations/verifications in Guatemala, Honduras, Panama, Mexico, Uruguay, United States, and Ecuador; CarbonFix verifications in Panama. He had received formal training as carbon validator in Vermont, and as lead auditor against ISO 14001 in Guatemala. Nowadays, he is the Verification Services Coordinator in Rainforest Alliance Mesoamerica Region.</p> <p>Signature: </p>	<p>Shortcut W.A.</p>
<p><b>Assessment Team Member</b></p>	<p>Campbell Moore cmoore@ra.org</p> <p>Tropical forestry and REDD+ expert with professional experience in Africa and Southeast Asia. He is Carbon Expert with Rainforest Alliance where he conducts audits against six forest carbon standards, supervises methodology assessments, and acts as technical expert on carbon for RA-Cert globally. Campbell has experience on both the technical and policy sides of REDD+. Previous professional experience includes consulting work for GIZ Philippines performing carbon stock assessments of different forest types including agroforestry and plantation systems, as well as work centered on reforestation in Sri Lanka for the Environmental Leadership and Training Initiative. He additionally has worked for Climate Focus on LULUCF policy issues. From 2009-2011 Campbell pursued his Master of Forestry from the Yale University School of Forestry and Environmental Studies. This period included a variety of forestry projects including developing a management plan for Connecticut forest preserve, planning timber sales in a New England hardwood forest, and designing and modelling carbon sequestration potential of agroforestry systems for the Nature Conservancy's Global Climate Team. Prior to his time at Yale, Campbell worked in The Gambia for over two years as a Peace Corps Volunteer designing and implementing a wide variety of forestry, agroforestry, and agricultural projects. In addition to his Master of Forestry degree, he holds a M.A. in Environmental Studies from St. Mary's College. Campbell is fluent in Pulaar and Wolof and has experience with Spanish</p>	<p>Shortcut C.M.</p>



	Signature: 	
<b>Assessment Team Member</b>	<p>Cristina Vidal cvidal@catie.ac.cr</p> <p>Paraguayan based in Costa Rica; Forestry Engineer; in 2005 she received a M.Sc. in Tropical Forest Management and Biodiversity Conservation from CATIE (Costa Rica). She has developed experience working in protected areas, ecosystem restoration, commercial plantations, silviculture, forestry production, ecology monitoring. She has received training as a lead auditor under ISO 14001:2004, and FSC formal training. Nowadays, she is involved in a formal carbon training (VCS and CFS) and Verification of Legal Compliance (VLC).</p> <p>Signature: </p>	C.V.

## Partner contracted for the certification process

<b>Partner organisation</b>	n/a	Shortcut
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History of this document	
<b>1. Draft send to project developer</b>	July 11, 2013
1. Feedback	September 9, 2013
<b>2. Draft send to project developer</b>	September 30, 2013
2. Feedback	October 7, 2013
<b>3. Draft send to project developer</b>	December 4, 2013
3. Feedback	December 5, 2013
<b>Date of issuance: Final Report</b>	December 16, 2013
<b>Updated as part of Gold Standard Review</b>	August 5, 2014



## 1. INTRODUCTION

### Objective

The purpose of this report is to document the conformance of “Panama Canal Authority (ACP) Sustainable Forest Cover Establishment Project” with the requirements of the CarbonFix Standard, V3.2. The project was developed by Panama Canal Authority (ACP), hereafter referred to as “Project Proponent”. The report presents the findings of qualified Rainforest Alliance auditors who have evaluated the Project Proponent’s systems and performance against the applicable standard.

### Scope

The scope of the audit is to assess the conformance of ACP Afforestation project in Panama against the CarbonFix Standard, V3.2 through an Initial Certification audit. The objectives of this audit included an assessment of the project’s conformance with the standard criteria. In addition, the audit assessed the project with respect to the baseline scenarios presented in the project design document. The project covers an area of 10,000 hectares with 2458 ha currently planted and generating CO<sub>2</sub> certificates. The land is a combination of privately owned silvopasture and agroforestry areas with commercial and conservation areas owned by the ACP. The information supporting the GHG assertion is projected in nature. The project has a lifetime of 30 years, and has calculated an *ex-ante* estimated GHG removal of 378,566 tCO<sub>2</sub>e over the course of the project lifetime.

### Level of assurance

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

### Materiality

All GHG sinks, sources and/or reservoirs (SSRs) and GHG emissions are evaluated equal to or greater than 5% of the total GHG assertion.



## 2. METHODOLOGY

The Initial Certification started on September 9, 2013 when the Project Proponent (PP) submitted the Project Description (PD) and supporting documents through the CFS Climateproject platform. This information was reviewed by the audit team on preparation for the field audit which took place from May 28 to June 1, 2013, and consisted of:

**Desk-audit:** Before starting the field visit an agenda that included interviews with stakeholders was designed; the audit team along with the PP selected key stakeholders. Some of the interviewees (local communities, government institution representatives) were visited by the audit team, while others were interviewed during the field visit (employees).

The auditors received all the documentation referenced in the PD and the information required by the standard in digital version. Also to start the field visit, the project proponent explained in detail some key topics of the project: eligibility, baseline, carbon calculations, additionality and leakage analysis.

**Field audit:** According to the audit plan, the auditors visited a sample of management units involving the four kinds of project activities –commercial, conservation, agroforestry and silvopasture: 1, 4, 5, 6, 7, 8, 9, 10, 19, 22, 25, 28, 31. In order to improve efficiency, the audit team split into two groups to visit more area, but got technical meetings during nights.

During the closing meeting, the auditors explained the preliminary findings which could result in non-conformances. The draft report was sent to the proponent with five Forward Action Requests (FAR) and nine Corrective Action Requests (CARs). The proponent sent complementary evidence of compliance which was analysed by the audit team to close all the CARs; three FARs remained opened.



## 3. SUMMARY OF ASSESSMENT

PDD assessment
<b>Documents</b>
PDD ACP CFS.pdf
Eligibility ACP CFS.pdf
Additionality ACP CFS.pdf
Forest Management ACP CFS.pdf
C02 Fixation ACP CFS.pdf
Project Emissions ACP CFS.pdf
Baseline ACP CFS.pdf
Leakage ACP CFS.pdf
GTC ACP CFS.pdf
Management-Units_ACP CFS.pdf



## Supporting documents assessment

ID	Date of publication	Title	Place, Author
	29 Sep 2013	Supporting Doc ACP CFS.zip	ACP
	09 Sep 2013	Eligibility ACP CFS.zip	ACP
	26 Apr 2013	Additionality ACP CFS.zip	ACP
	06 Sep 2013	Forest Management ACP CFS.zip	ACP
	09 Sep 2013	Project Emissions ACP CFS.zip	ACP
	29 Sep 2013	CO2 Fixation ACP CFS.zip	ACP
	29 Sep 2013	Baseline ACP CFS.zip	ACP



Assessment during field-visit			
Date	Location	Time spend	Auditor
May 29 <sup>th</sup> , 2013	ACP Administrative office	One full day	C.Vidal C.Moore W.Arreaga
May 29 <sup>th</sup> , 2013	Management Units 6-10	One full day	C.Vidal C.Moore W.Arreaga
May 30 <sup>th</sup> , 2013	Management Units 1, 4, 5	One full day	C.Vidal C.Moore W.Arreaga
May 31 <sup>st</sup> , 2013	Management Units 19, 22, 23, 28, 31	One full day	C.Vidal C.Moore W.Arreaga



Assessment during interviews			
Date	Person	Time spend	Auditor
May 29 <sup>th</sup> , 2013	Carlos Gómez, Departamento Forestal, point of contact UN-REDD, <a href="mailto:cgomez@anam.gob.pa">cgomez@anam.gob.pa</a>	1 hour	C.Vidal C.Moore W.Arreaga
May 29 <sup>th</sup> , 2013	Narciso Cubas, Departamento Forestal: Departamento de Plantaciones <a href="mailto:ncubas@anam.gob.pa">ncubas@anam.gob.pa</a>	1 hour	C.Vidal C.Moore W.Arreaga
May 29 <sup>th</sup> , 2013	Jorge Javino, Encargado Departamento Forestal <a href="mailto:jjavino@anam.gob.pa">jjavino@anam.gob.pa</a>	1 hour	C.Vidal C.Moore W.Arreaga



## Summary of Corrective Actions Requests (CARs)

**Corrective Action Request 01-01:** ACP shall exclude from the eligible area the Management Unit 6 Soberania 1. It also must be excluded from the ex-ante modeling of carbon stocks.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 01-02.

**Corrective Action Request 01-02:** ACP must provide evidence, in the form of remote sensing data, aerial photography, or another means, that the identified silvopasture farms actually were not forest 10 years before the planting date, or those MU's must be removed from the monitoring unit, or the boundaries must be redrawn to exclude the areas in the farms that are forest.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 01-02.

**Corrective Action Request 01-03:** ACP shall provide evidence to transparently demonstrate that the planting areas are –or not- on grassland, shrub land, secondary forest, or primary forest.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 01-02.

**Corrective Action Request 06-01:** ACP shall assess the present CO<sub>2</sub>-fixation by using the CarbonFix guideline “Forest Inventory” and report these findings in an updated Monitoring Report. The measurements shall be done in all the management units in which tree height exceeds 3 m.

The proponent showed partially compliance with the requirement after the field visit, as a result CAR 06-01 became the FAR 06-01. See detailed findings on Chapter 06-01.

**Corrective Action Request 06-02:** ACP shall review the calculations in the growth models in order to correct the errors identified and also include the baseline carbon stocks.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 06-02.

**Corrective Action Request 06-03:** ACP shall clarify the silvicultural method for all the management units in the PD. Additionally the model must be updated to accurately calculate carbon sequestration depending on the method selected.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 06-03.

**Corrective Action Request 06-04:** ACP shall use the correct equation to estimate the carbon stocks, in this case to use the equation to calculate mean stand volume under “Option 2” for the commercial plantation areas (rotation harvesting). The PDD must be updated with the final results.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 06-04.

**Corrective Action Request 09-01:** ACP shall apply correctly the default value (6.2tC/ha) to estimate tonnes of dry matter per hectare when determining the baseline.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 08-01.

**Corrective Action Request 09-02:** ACP shall include remnant trees besides the tropical moist grassland, to determine baseline carbon stocks in the management units.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 08-01.



## Summary of Forward Actions Requests (FARs)

**Forward Action Request 01-01:** ACP shall provide sufficient evidence to prove that wetlands do not exist in the planting areas.

The proponent addressed this by submitting more evidence of compliance. See detailed findings on Chapter 01-03.

**Forward Action Request 01-02:** ACP shall establish if the project participants are allowed to remove the litter (leaves and small branches) from the eligible planting area, and how this will be monitored during the project lifetime in order to provide sufficient evidence of the impact of the nutrient balance of the soil.

The proponent addressed this by submitting more evidence of compliance. See detailed findings on Chapter 01-06.

**Forward Action Request 03-01:** ACP shall elaborate more about the objectives and activities that will take place during the project lifetime, mainly clarifying in the PD and related documents which management units will be grown to harvest timber selectively vs via rotation harvesting.

The proponent addressed this by submitting more evidence of compliance. See detailed findings on Chapter 03-01.

**Forward Action Request 03-02:** ACP shall define the transitional sites on the ground where the forest and conservation MU were established. Additionally, on commercial plantation ACP shall make the demarcation of the boundaries visible taking into account the forest patches inside these MU's.

The proponent addressed this by submitting more evidence of compliance, however the FAR remains open. See detailed findings on Chapter 03-02.

**Forward Action Request 03-03:** ACP shall clarify the project area (in hectares) of all the management units in order to avoid conflicting information regarding the planting year, i.e. Polygon 10, in the Ciudad del Arbol Management Unit, in the Conservation portion of the project.

The proponent addressed this by submitting more evidence of compliance. See detailed findings on Chapter 03-03.

**Forward Action Request 06-01:** ACP shall assess the present CO<sub>2</sub>-fixation by using the CarbonFix guideline "Forest Inventory" and report these findings in an updated Monitoring Report. The measurements shall be done in all the management units in which tree height exceeds 3 m.

The proponent addressed CAR 06-01 by submitting more evidence of compliance and became FAR 06-01. See detailed findings on Chapter 06-01.

**Forward Action Request 001-01:** The project developer should review all maps in the PDD and supporting document and confirm that they meet the requirements of the CarbonFix Standard, cited above.

This requirement was issued after the draft report was submitted. See detailed findings on Chapter 001-03.



## Summary of Non Conformity Requests (NCRs)

N/A – No NCRs were issued during the present Initial Certification

## Summary of Observations (OBS) issued in August 2014

In August 2014, the ACP CarbonFix project underwent review as part of the transition process to the Gold Standard. Rainforest Alliance, the Certification Body was asked to clarify an apparent contradiction between the Management Units calculation output document on the Climate Projects web platform and the quantity of CO2 Certificates described in this certification report. After investigation by Campbell Moore, Carbon Specialist, with Rainforest Alliance, it became apparent that the Management Unit calculation document on the Climate Projects platform, that was originally approved by Rainforest Alliance on 27 September 2013, had been replaced by a new version dated from April 23, 2014, due to a failure in document control by the Climate Projects platform. As a result, the new Management Unit document (file name Management-Units\_ACP\_CFS.pdf) was assessed independently for accuracy, which led to the following observations (OBS) which the next certifier shall evaluate. However, Rainforest Alliance can still confirm that the quantification of CO2 Certificates is conservative and materially correct, noting that it is an *ex-ante* calculation.

### Observations

Observation 01: The CarbonFix Management Unit calculation document uses only whole integers, rather than decimals. As a result there are some minor contradictions between the Management-Units\_ACP\_CFS.pdf document and the *ex-ante* CO2 Fixation estimated in the ACP Growth Model CO2 (Ref 06-18). For example, for MU 1, Burunga, the future CO2 Fixation (not net, but total) is estimated at 262 tCO2/ha from the ACP Growth Model, yet the Management Unit report estimates this value as 260 tCO2/ha (again, total CO2 fixation, not net). This is because the actual annual CO2 fixation estimated in the growth model is 10.07tCO2/ha/year, yet this value can only be entered into the Management Unit report as the whole integer “10”. This rounding issue impacts nearly every management unit, yet taking the 5% materiality threshold into account it is not a material discrepancy and the CO2 Fixation remains conservative. However the next certification body should re-evaluate the issue.

Observation 02: PDD Chapter 06 CO2 Fixation, in the “Future CO2 Fixation” section of the template, for each Management Unit, reports the *ex-ante* estimated CO2 Fixation for each Management Unit over a 25 year time period. The crediting period is actually 30 years. However, some MUs are actually producing emissions reductions over 30 years, although for the majority it is actually less than 30 years as MUs were planted between 2006 and 2011. As a result, the “Future CO2 Fixation” values reported in Chapter 6 are less than those input into the Management Unit document which calculates the CO2 fixation for each MU based on the actual time period that MU is generating CO2 reductions, rather than the generic 25 year time period. The PDD would be improved by calculating the Future CO2 Fixation for each MU per the actual time period it is generating CO2 reductions, which is always between 25 and 30 years. This discrepancy is not material and does not impact the actual quantification of CO2 Certificates, which occurs in the Management Unit report and has been determined to be materially correct and conservative. However, the next certification body should re-evaluate the issue and ensure the PDD is updated so there is consistency between the ACP Growth Model (Ref 06-18), the PDD, and the Management Unit document to enable transparency for external stakeholders.

Observation 03: The project uses the Rotation Forestry approach for the commercial management units. The quantification has been determined to be materially correct and conservative by the certification body, after corrective actions were made by the project based on a Corrective Action Request Rainforest Alliance issued in its first report. However, given challenges the project experienced in accurate quantification of the long term average carbon stock, the next certification body should focus on this issue.



### 3. CERTIFICATION CONCLUSION & OPINION

Upon review of all documents submitted by the project proponent and internal audit team discussions, the Rainforest Alliance found the evidence sufficient to close the Corrective Action Requests. However, three Forward Action Requests remain open. Overall, the project was found to be in full conformance with the CarbonFix Standard Version 3.2 and the new management units are approved for Certification with the CarbonFix Standards. On the other hand, the open FARs shall be closed within six months of the issuance of the Initial Certification opinion to maintain conformance with the CarbonFix Standard.



1. A description of the historical and the current situation of the project area must be given for the last 50 years. This description must include the development of its socioeconomic situation, its changes in land-uses and changes of property rights.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

PDD describes the current situation of land tenure and socioeconomic context of the Panama Canal Watershed (PCW). A historical description of the PCW was elaborated upon, although it is noted that there was little available information before 1999 when the PCW was returned to Panamanian control by the US government. . In addition, a multi temporal satellite analysis was carried out to study the past situation related to forest cover and deforestation rates along the PCW. The audit team verified the methods and results of the satellite imagery analysis through interview and observation of the remote sensing technicians at the ACP offices during the field. Audit. PDD notes that ANAM (Autoridad Nacional del Ambiente) along with the Ministry of Agriculture, Registration office and ACP started a program to clarify the land use by supporting the PCW inhabitants to issue land titles. According to ACP technical advisors, land title is one of the most important requirements in order to be accepted in the Environmental Economics Incentives Program (PIEA, is the acronym in Spanish). Nowadays, about 12,000 individuals have been registered under this program and have land tenure. Land use in the watershed was mainly agriculture for “cash” crops (i.e. banana) in the past but, due to the poor soil quality, many agricultural areas have converted to degraded pasture. During the field visit, different land use scenarios were observed (degraded pasture, cash crop agriculture, secondary forest), and considered likely to represent a temporal land use transition, supporting the historical land use analysis. The audit team interviewed the project participants visited and other stakeholders and which revealed that crop cultivation and cattle production on degraded pasture have happened for many years which have constituted the business as usual scenario for the project.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



2. Planting area is ONLY eligible, if the land:
- is planted with trees during the initial certification AND
  - is not a forest at the date of the project start AND
  - will result in the creation of a forest AND
  - has not been a forest for at least 10 years prior to the planting start OR has been a forest in the last 10 years prior to the planting start, but evidence is given that absolutely no relation between the project participants and the cause of deforestation exists (e.g. that the forest destruction was caused by force majeure)

Criterion 2d. must be proven by the interpretation of satellite images, aerial photographs, official maps or land-use records.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The audit team visited a sample of the polygons in a sample of the Management Units for each Project activity including Commercial forestry, Conservation forest, Agroforestry areas, and Silvopasture areas. Although some polygons had small areas where the trees had died, generally the polygons were planted. However, there was one notable exception. In the Conservation management Units, in MU6 Soberania I, planted in 2008, appeared to be a failed planting area. It is the audit team's understanding that the contractor hired for the planting failed to control the *Saccharum spontaneum* effectively and as a result, as the audit team was traveling through the planting area it appeared that 90% or more of the trees had died. In addition, in silvopasture plots visited it is not clear if the scarce native trees planted will result on the creation of a forest. Lack of commitment from contractors could be the main reason for the area to have few trees alive after at least one replanting event. (NCR 01-01). These Management Units are not eligible, but could be added in a later Management Unit certification.

The shapefiles for the Silvopastoril areas have been reviewed by the audit team overlain on Google Earth imagery from 4/16/2003. Some areas appear to have substantial tree cover in these images, possibly greater than the 30% threshold, which would make these areas legally forest in Panama. For these areas to be eligible they must not have been forest for at least 10 years before the planting date. The farms that may be ineligible include:

Nombre: Fundación la vida en Rosa/Adelaida Arias

Area: 41387 m<sup>2</sup>

Nombre: Erasmo Gomez Rodrigues

Area: 46626 m<sup>2</sup>

Nombre: José Abel Herrera

Area: 24541 m<sup>2</sup>

Nombre: Miguel Gonzáles

Area: 50937 m<sup>2</sup>

The proponent must provide evidence, in the form of remote sensing data, aerial photography, or another means, that the identified silvopastoril farms actually were not forest 10 years before the planting date, or they must be removed from the monitoring unit, or the boundaries must be redrawn to exclude the areas in the farms that are forest. (NCR 01-02)

Related to this analysis, the audit team is awaiting documentation of the remote sensing analysis, including



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Criterion 2d. must be proven by the interpretation of satellite images, aerial photographs, official maps or land-use records.

evidence of the accuracy assessment that was performed, to determine the eligibility of the planting areas of the entire project area. Specifically, the proponent should provide JPEG or other similar file types showing the land classification with the polygon boundaries of all planting areas in all Management Units so that the audit team can confirm that the planting areas were all not forest at the time of the Project start and 10 years before the planting date.

In the PDD Section 01 Eligibility, Images 01-00 through 01-05 fail to demonstrate that the planting areas were deforested 10 years before the project start date. The date of this analysis is from 2008. Additionally, the polygons that show the planting areas are not transparent so it is impossible to see if the planting areas are on grassland, shrub land, secondary forest, or primary forest. The proponent should resubmit these Images with the polygons transparent so the audit team can assess this. NCR 01-03

Most of the Commercial plots inspected were obviously eligible. However, there are some forest patches across the plots which shall be identified in the maps and excluded from the eligible area. It was unclear on the ground whether they were officially included or excluded. By a review of the imagery at the ACP GIS Department, it was verified that large patches of forest were excluded, but not the small ones. In addition, it is not clear if the small patches achieve the 30% crown cover, requested by the National Forest Definition.

### CARs / FARs / NCRs

**Corrective Action Request 01-01\*:** ACP shall exclude from the eligible area the Management Unit 6 Soberania 1. It also must be excluded from the ex-ante modeling of carbon stocks.

**Feedback project developer** (09 September 2013):

**Clarification:** the area is still eligible but not applicable to include it for this certification! No lack of commitment from the contractor is the reason. Instead is a natural fight between the planted trees and the existing vegetation. In this area it was not possible yet to kill *Saccharum spontaneum* and substitute the area with native trees. The area will be replanted and later included in the project.

2. All the areas from all the MUs that present growth problems due to difficulties of fighting *Saccharum spontaneum* were excluded from the ex-ante modeling of carbon stocks. See also MUs: 7,9,11,14 and ex12

3. Not all the area from MU6 present problems. Therefore this area was not excluded.

4. After flying the region; ACP identified some areas with limitations in the following MUs: 6, 7, 9, 11, ex12 and 14. The mentioned areas were excluded from the ex-ante modeling of carbon stocks. Once the areas are replanted, this areas will be in the future included in the project(See table 01-01, in page 6, under the Column: Eligible areas with limitations)

5. Additional for the case of MU6, Aerial photography with geo-references and a map showing the location of the Aerial photography is presented as Supporting documentation. This probes that there are areas inside MU 6 that the trees survived.

Supporting documentation

Ref. 06-30

Ref. 06-31

New maps with transparent MUs are presented. It is possible to distinguish where the forest and planting area is located.

An additional Eligibility analysis was conducted using Landsat images from 1996 to probe that the 4 polygons are eligible. See the maps in pages 20 to 22. The same vegetation classification was applied for all the polygons



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Criterion 2d. must be proven by the interpretation of satellite images, aerial photographs, official maps or land-use records.

that for part of the MUs of agroforestry and silvopasture activities. Ref 07-08 contains the Landsat images that were used for the eligible study

Landsat images were used with multispectral bands. The scenes used show medium and close infrared bands. By combining these bands it was possible to determinate the zones with grassland and shrubs (matorrales, pastizal, rastrojo)

During this analysis Land sat images from 1996, 1998 and 2000 were used depending on the planting start date (Ref. 07-08). It was possible to classified the eligible area according to more specific existing vegetation. The result of this classification determinate a mix of grassland and schrubland and they have some specific native names: matorrales, pasto and rastrojo. However, in all the cases the area is eligible. This means that in all the cases the area contains less than 30% of forest vegetation. Since the project contains more than 700 Polygons with an average size of 3 hectares, only four examples of different planting areas are provided in the PDD. For a further analisis of all the other 700 polygons it is possible to use the Landsat images provided in ref 07-08.

#### **Conclusion of the certifier (27. September 2013):**

The audit team agrees that it is likely that not all areas of the Soberania MU and (and other MUs) should be excluded due to low survival rates in the planted areas. The CAR was issued in the spirit of conservativeness, a foundational principle of carbon validation and verification. The evidence the proponent has submitted, in the form of aerial photography demonstrating areas that were planted and unplanted areas, is appropriate. The georeferenced aerial photography presented in reference 06-30 does establish that there are indeed areas within Soberania MU that have surviving trees. Upon review it is clear that the trees in these areas are distinct from surrounding remnant patches of forest, which have a much greater canopy height. Reference 06-31 provides a simplistic, but helpful overview of the location of the photos in reference 06-30 within the entire MU. The audit team has reviewed table 01-01 in the PDD and determined that the original estimated planting area of management units that experienced failures in seedling survival, has been reduced. These areas could be later integrated into the project if they are replanted. This enables greater accuracy and is in conformance.

#### **CAR closed**

**Corrective Action Request 01-02:** ACP must provide evidence, in the form of remote sensing data, aerial photography, or another means, that the identified silvopasture farms actually were not forest 10 years before the planting date, or those MU's must be removed from the monitoring unit, or the boundaries must be redrawn to exclude the areas in the farms that are forest.

#### **Feedback project developer (09 September 2013):**

Landsat images were used with multispectral bands. The scenes used show medium and close infrared bands. By combining these bands it was possible to determinate the zones with grassland and shrubs (matorrales, pastizal, rastrojo)

**1. Clarification:** ACP used a Landsat image of 1986 to probe that all the planting areas are eligible (see map and details in page 8 and 9). ACP did not used only a 1998 Landsat image for the eligibility analysis; as the auditors stated in this report. This image was only used to compare the existing vegetation.

**2.** ACP also used Landsat images from 1996, 1998 and 2000 to draw the polygons selected as eligible planting areas. See the new maps in the PD. This images are at least 10 years before the planting date.( Ref 07-08)

#### **Supporting documentation**

- 07-08: Landsat images from 1996,1998,2000
- MU maps using Landsat images that are at least 10 years older than the planting start date. (Pages 9-



2. Planting area is ONLY eligible, if the land:
- is planted with trees during the initial certification AND
  - is not a forest at the date of the project start AND
  - will result in the creation of a forest AND
  - has not been a forest for at least 10 years prior to the planting start OR has been a forest in the last 10 years prior to the planting start, but evidence is given that absolutely no relation between the project participants and the cause of deforestation exists (e.g. that the forest destruction was caused by force majeure)

Criterion 2d. must be proven by the interpretation of satellite images, aerial photographs, official maps or land-use records.

26)

- 01-10: Examples of the how the polygons were classified according to the existing vegetation. The same concept was applied for all the other polygons of agroforestry and silvopasture activities.

**Conclusion of the certifier** (27. September 2013):

As required, the developer has provided sufficient evidence to demonstrate that land cover type of the silvopastoral areas that were of concern. The land cover is acceptably determined as pastureland or scrubland and is therefore eligible under the CarbonFix Standard.

**CAR closed**

**Corrective Action Request 01-03:** ACP shall provide evidence to transparently demonstrate that the planting areas are –or not- on grassland, shrub land, secondary forest, or primary forest.

**Feedback project developer** (09 September 2013):

1. The new maps provided show the boundaries between forest and non forest ( planting areas)

**2. Clarification:** For the agroforestry and silvo-pastoral activities is important to clarify that only the planting area is included to the project. This means that some farms of the stakeholders have also other areas with other land uses such as forest conservation. However only the eligible planting (more than 700 polygons) are part of the program PIEA. **“The auditors visited all the farm”**

In the case of the commercial and conservation MUs, all the areas with forest ( protection areas) are visible in the new maps ( see PD pages 9 to 15)

3. To complement the transparency of the remote sensing analysis that was performed for the polygons of silvopasture and agroforestry activities, the PD provides 4 examples of the type of vegetation existing inside the planting area ( PD, page 20 to 22)). The Land sat images are part of the supporting documentation ( Ref 07-08)

**Conclusion of the certifier** (27. September 2013):

The project developer has provided appropriate evidence for the audit team to conclude with reasonable assurance that there is no material error in the demonstrate of the eligibility of the planting areas, noting that some planting areas in the Conservation MUs have been reduced in area to account for areas with little to no seedling survival. To facilitate greater transparency, the developer has added additional aerial photography into the PD that transparently demonstrates the eligible planting areas. The audit team accepts this evidence to close the CAR.

**CAR closed**

## Final Conclusion

- Accepted  
 Accepted with FAR  
 Not accepted with NCR

\* refers to ID of chapter + ID of the CAR for the chapter



3. Planting area is NOT eligible, if the land:
- was deforested and thereafter replanted in order to generate CO<sub>2</sub>-certificates OR
  - is wetland OR
  - is situated on ground that is permafrost OR
  - is agriculture farming land and threatens the food security of the local population through the conversion to forest.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

- There is no evidence in the documentation or from the field audit to indicate that the planting area was deforested and later replanted to generate CO<sub>2</sub> certificates. Deforestation, as verified through the remote sensing analysis and through stakeholder interviews typically occurred in the 1960-1980s. Additionally, most all Management Units contain remnant trees from before the planting began.
- In the Eligibility section of the PD, the proponent does not provide sufficient demonstration that the planting areas do not contain wetlands. The proponent only provides a map of the RAMSAR recognized wetlands of Panama. RAMSAR wetlands are those officially recognized as having global importance (FAR 01-01).
- The project is in the tropics and clearly permafrost is not an issue. The proponent documents this.
- The Conservation and Commercial Management Units occur on areas predominantly covered with Paja canalera (*Saccharum spontaneum*), an invasive grass which is very hard to remove. Hence no agriculture occurs on these lands. The agroforestry and silvopasture systems occur on either low productivity agricultural land and/or cattle pasture. The proponent cites scientific literature sources providing support that these activities will increase the productivity of the areas, possibly enhancing food security.

**CARs / FARs / NCRs**

**Forward Action Request 01-01:** ACP shall provide sufficient evidence to prove that wetlands do not exist in the planting areas.

**Feedback project developer** (09 September 2013):

Specific maps from the ACP watershed were provided to probe that no wetlands are inside the watershed, therefore, not inside the planting area. The ACP main objective is to protect the water bodies to guaranty enough water for the ships that cross the Panama Channel and drinking water for inhabitants of the cities of Colon, Panama and San Miguelito. (See page 24 in the PDD)

Images as Supporting documentation:

Ref 01-06-Humedales Fincas PIEA

Ref 01-07-Humedales ACP watershed

**Conclusion of the certifier** (27. September 2013):

The audit team reviewed the two maps provided by the PP in the PDD (Eligibility Chapter). One showing the geographical location of the eligible area and the wetlands in the watershed Corridor Region (conservation and commercial management units), and the other in the watershed Cri-Trinidad (silvopastoril and agroforestry



3. Planting area is NOT eligible, if the land:
- a. was deforested and thereafter replanted in order to generate CO<sub>2</sub>-certificates OR
  - b. is wetland OR
  - c. is situated on ground that is permafrost OR
  - d. is agriculture farming land and threatens the food security of the local population through the conversion to forest.

management units). In both cases it is evident that wetlands (as defined by CFS) are not part of the eligible area.  
**FAR closed**

### Final Conclusion

- Accepted
- Accepted with FAR
- Not accepted with NCR



4. Evidence must be given, that in case any agricultural, agroforestry or silvopasture activities are taking place on the planting area, they contribute to the aim of creating a forest.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

All of the project planting types (agroforestry, silvopasture, commercial, and conservation plantings) were visited during the field visit. In agroforestry systems (i.e. MU 22) there is no doubt that the planting will lead to the creation of a forest according to the national definition of forest of Panama. These systems were mostly comprised of coffee (old plantations), cassava and plantain. The trees planted were: Inga (*Inga* sp.), Roble (*Tabebuia* sp), Maria (*Callophylum brasiliense*) and Laurel (*Cordia* sp). Some trees (around 50/ha) were left from the previous land use system. It is predicted that the site will be converted into a forest by the end of the project.

For silvopastoral systems (i.e. MU 31), the situation is different due to the history of these landscapes: degraded pasture with few isolated trees left. Trees are planted in a spacing of 20x20m. In one of the farm visited, there were only Nance trees planted (*Byrsonima crassifolia*), a fruit tree. Further monitoring will determine whether the growth and survival of these trees are subject to animal damage. As such, the creation of a forest here is not clear; the priority at the moment of the field visit it is to maintain a fruit tree plantation. If the planting experiences high survival rates a forest, as defined in Panamanian law, will be created.

More diversity of species (Roble, Caoba, Gliricidia and Espave) was found in other farm, but arranged in a living fence. The farmer reported that he did not receive any indication (from contractors or project proponent) about how to plant those trees, thus, he decided to plant them as living fences (perimeter of the plot).

In contrast, in other MU visited (silvopasture) it is not clear if the scarce native trees planted will result in the creation of a forest. Lack of commitment from contractors could be the main reason for the area to have few trees after at least one replanting event. Future monitoring certifications will evaluate the success of these plantings and whether they create a forest.

**CARs / FARs / NCRs**

See NCR 01-01

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



5. Evidence must be given that project activities will NOT lead to a long-term increase of greenhouse gas emissions in the carbon pool 'soil' on the project area.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

Irrigation, drainage, ploughing, planting operations, and forest operations are identified in the PD as potential project activities that could impact soil carbon in the project area. These activities are evaluated and considered unlikely to lead to a long-term increase in GHG emissions.

Irrigation activities are anticipated in the agroforestry and silvopasture lands, however no concrete evidence of this was found by the audit team in the field visit. It is unlikely that the scale of irrigation activities that may be implemented, would lead to increase in soil GHG emissions.

Regarding drainage activities, the audit team verified that no such activity took place in the project area.

In the management units visited, the audit team confirmed that ploughing was done according to the PD, which considers minimum impacts to the soil. Conservation, Agroforestry and Silvopastoral plots are predominantly native species, and the high observed and projected survival rates indicates it is unlikely that ploughing will be required in the future except on new planting areas. Commercial plots consist mostly of teak plantations which do not require activities considered likely to significantly impact soil carbon.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



6. If litter (leaves and small branches) is extracted from the eligible planting area, it must be limited to the extent of not harming the nutrient balance of the soil.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

Although the audit team confirmed that litter is not extracted from the eligible planting area, the PD does not accurately mention if the project participants are allowed to use litter for example as fire wood. (FAR 01-02)

**CARs / FARs / NCRs**

**Forward Action Request 01-02:** ACP shall establish if the project participants are allowed to remove the litter (leaves and small branches) from the eligible planting area, and how this will be monitored during the project lifetime in order to provide sufficient evidence of the impact of the nutrient balance of the soil.

**Feedback project developer** (09 September 2013):

One of the main objectives of the project is to protect the region from soil erosion. Controlling soil erosion will help ACP to reduce the amount of sedimentations in the existing Dams. Rainfall erosion is the first cause of landslides and loose of soil nutrients. Due to this reason the project protects litter and it will not be removed it from the planting area. Instead it is expected that it will increase during the life cycle of the project. Notice that 50% of the trees planted in the agroforestry and silvopasture activities are classified as Services trees. This means that they will help to fix nitrogen, prevent erosion and increase the existing organic layer (ref 06-29,page 5, paragraph 1). For the conservation and commercial forestry polygons it is a must to keep the organic layer. This is indispensable to control the propagation of *saccarum spontaneum*.

Specific Supporting documentation:

- Ref 03-09-Manejo de la capa organica PIEA
- Ref 03-10-Manejo de la sombra PIEA
- Ref 06-29-Plan de monitoreo Forestal

**Conclusion of the certifier** (27. September 2013):

The audit team reviewed the first two documents (Plan de monitoreo forestal was not found). These two apparently correspond to internal documentation written by ACP and accepted by the project participants of the PIEA. Both documents clarify the objectives of the forest projects regarding the runoff, protection of the soils and the convenience for the ecosystem of letting the organic matter increase as a result of the management of the plantations. Although removal of litter is not explicitly prohibited, both documents remark the importance of it in reaching the objectives and combating the propagation of *Saccarum spontaneum*.

**FAR closed**

**Final Conclusion**

- Accepted
- Accepted with FAR



6. If litter (leaves and small branches) is extracted from the eligible planting area, it must be limited to the extent of not harming the nutrient balance of the soil.

Not accepted with NCR



1. Evidence must be given that the project is not business as usual. Therefore, the additionality analysis must be executed according to the latest version A/R CDM 'Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities'.

Link: <http://cdm.unfccc.int/methodologies/ARmethodologies/tools/>

Hereby, the first Point of STEP 0 can be omitted.

Note that some terms in this tool (e.g. CERs, A/R CDM project) differ from the terms defined by the CFS and shall be interpreted accordingly.

#### PDD check

- sufficient / satisfactory information provided
- consistent information provided

#### Supporting documents check

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

#### Evidence found during field-visit

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

## Findings

### Step 0

Evidence that sale of carbon credits was seriously considered in the decision to proceed with the project activity. The developer provides a range of pieces of evidence to support this idea.

It is clear that carbon sequestration is now considered a significant goal of the management of the Panama Canal watershed, with the ACP establishing baseline carbon dioxide emissions of ACP operations and ships transiting the Panama Canal in order to understand the role offsets can play in mitigation.

Additionally, the project has recently (March 2012) achieved validation of the Panama Canal Watershed reforestation project against another major carbon standard (CCB), demonstrating strong interest in carbon credits. The evidence provided is mostly dated after the project start date and demonstrates that carbon credits are considered important for the later plantations but not necessarily the earliest plantation (2007).

However, the ACP also submits a document (Reference 02-07, Convenio de Cooperación ANAM-ACP, Monitoreo de la Cuenca Hidrográfica del Canal de Panama), dated January 2006 (before the project start date), which does emphasize in its objectives the importance of monitoring vegetation growth and watershed management in the Panama Canal Zone in order to facilitate carbon projects. As such, this meets this requirement of the tool.

### Step 1

The proponent identifies four alternative baseline scenarios including continuation of the pre-project land use (degraded land covered with Paja canalera (*S. spontaneum*)). Based on the audit team's analysis of the land cover in Panama during the field visit as well as interviews with multiple farmers the audit team concludes that the alternative land use scenarios have been appropriately selected.

### Step 1b

The proponent demonstrates that all selected land use scenarios i) exist in the region, and ii) are legal. The audit team confirmed this through field observation in which several of these alternative scenarios were actually adjacent to the project planting sites, as well as through confirmation of legality through targeted interviews.

### Step 2

The proponent demonstrates technical and financial barriers appropriately for the alternative baseline scenarios:



1. Evidence must be given that the project is not business as usual. Therefore, the additionality analysis must be executed according to the latest version A/R CDM 'Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities'.

Link: <http://cdm.unfccc.int/methodologies/ARmethodologies/tools/>

Hereby, the first Point of STEP 0 can be omitted.

Note that some terms in this tool (e.g. CERs, A/R CDM project) differ from the terms defined by the CFS and shall be interpreted accordingly.

**Pre-project land use:** There are effectively no barriers to this scenario. *S. spontaneum* is a globally renowned invasive grass species and there are well documented challenges to its restoration in many areas including Panama. It is very unlikely that without human intervention, that these areas would be reforested naturally given the likelihood of fire and the state of degradation.

**Reforestation activities in the absence of carbon finance:** There are reforestation projects in Panama but it is well documented that they do tend to happen in areas with better soil that are less dominated by *Saccharum*. The project had some clear MUs that failed to be reforested because the implementing people did not have the technical ability to successfully manage the invasive grass. There are clear investment and technical barriers. Interviews with local farmer confirmed in the agroforestry and silvopasture areas that the farmers did not have the capacity to reforest the land, or the technical knowledge.

**Cattle ranching:** There are technological barriers to silvopasture system implementation in cattle raising areas. This was confirmed through interviews with farmers during the field audit.

#### Step 3:

The project confronts many of the typical challenges of smallholder based PES programs. Project costs are high as they require training and coordination of hundreds of smallholder members as well as experimental eradication of an invasive grass. Project benefits are primarily ecosystem services which are non monetized other than through carbon finance. The project will earn some money from timber harvesting in the Commercial plantation areas (other areas will not generate revenue for the project).

The additionality assessment compares the revenue earned only from the commercial plantation (other planting areas do not generate revenue) to the IRR of a Panamanian government bond and the interest rate of a saving account in Panama. Appropriate references are provided for these alternatives. Without the carbon revenue the ACP project is less financially attractive (IRR is lower) than the two alternative options. With the assumption of sales of carbon credits, the project becomes either more attractive than the government bond, or more attractive than both the government bond and the savings account, depending on the hypothetical carbon credit price. Carbon credit prices (Table 02-01) are credible given credit prices for CarbonFix projects cited in recent reports. For example the 2013 State of the Voluntary Carbon Market report (Ecosystem Marketplace) cited a 2011 CarbonFix average offset price of \$10.7/tCO<sub>2</sub>e. It is clear from the analysis that the project activity without carbon credits is less profitable than alternative options because i) the IRR is less than the expected IRR of a Panamanian Savings Account or a Government Bond, and ii) the IRR only becomes higher than these in the assumption of well priced carbon credits. Further, this assessment only evaluates the revenue earned from the Commercial planting area. The agroforestry, silvopasture, and conservation Management Units have substantial up front costs and are in effect subsidized by the future revenue that may be earned from the commercial area. There will be no revenue earned from these other three project activities.

#### Step 4:

The proponent appropriately lists similar project activities by different actors in the country with and without carbon finance. There are other similar plantation projects in the country that do not use carbon finance, however, these project are either 80% or 100% Teak (*Tectona grandis*) plantations and none of them include the substantial Conservation Management Units, Silvopastoral Management Units, and Agroforestry Management Units that are a core part of the ACP project. The Commercial Management Units are the only part of ACP that is comparable. Additionally, there are projects developed by Forest Finance that are similar to the commercial Management Units of ACP, but these areas are also certified to CCB, a carbon standard.



1. Evidence must be given that the project is not business as usual. Therefore, the additionality analysis must be executed according to the latest version A/R CDM 'Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities'.

Link: <http://cdm.unfccc.int/methodologies/ARmethodologies/tools/>

Hereby, the first Point of STEP 0 can be omitted.

Note that some terms in this tool (e.g. CERs, A/R CDM project) differ from the terms defined by the CFS and shall be interpreted accordingly.

There are similarities between the proposed ACP project and the other identified projects, yet there are substantial and meaningful differences that make the ACP project fundamentally different and contribute to its additionality.

### CARs / FARs / NCRs

N/A

### Final Conclusion

- Accepted
- Accepted with FAR
- Not accepted with NCR



2. Evidence must be given that the most likely without-project-scenario would not lead to an increase of 'woody biomass' on the eligible planting area.

If this is not the case, the baseline must refer to the biomass that would have been on the area in the long-term.

#### PDD check

- sufficient / satisfactory information provided
- consistent information provided

#### Supporting documents check

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

#### Evidence found during field-visit

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

### Findings

The most likely without project scenario is a continuation of the pre project scenario, which is domination of the planting sites by invasive *Saccharum spontaneum* grasslands. Based on interviews and literature review the audit team concludes that this baseline scenario would not lead to an increase in wood biomass in the eligible project area of any meaningful amount. It is hypothetically possible that some areas would regenerate to forest over a long time period, however given the likelihood of fire and the catastrophic fires that occur in *Saccharum spontaneum* areas, as well as the high population density in the project zone it is unlikely that there would be an increase in woody biomass.

### CARs / FARs / NCRs

N/A

### Final Conclusion

- Accepted
- Accepted with FAR
- Not accepted with NCR



3. Evidence must be given that the project contributes to a more sustainable development than the most likely without-project scenario, short-, mid- and long-term.

**PDD check**

- sufficient / satisfactory information provided  
 consistent information provided

**Supporting documents check**

- up-to-dateness of information  
 reference integrity to the content in the PDD  
 accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit  
 confirmed by interview(s)  
 confirmed by general impression

**Findings**

The baseline scenario is clearly the continuation of the pre project activities, which in all the management unit scenarios is the continuation of cattle on degraded lands predominantly covered by aggressive grass and related degradation of unproductive agricultural land to pasture. To the contrary, the implementation of the project pursues conservation and commercial purposes generating local benefits to the environment and project participants from short to the long-term. The project scenario is considered by the audit team to be more likely to lead to sustainable development than the baseline scenario.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted  
 Accepted with FAR  
 Not accepted with NCR



1. A description of the project's general forest management objectives must be given.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The PDD states the general objectives of forest management, describing the different activities that are taking place during the development of the project. However, the forest management objectives differ depending on the MU planting activity planting activity (commercial, agroforestry, silvopasture or conservation objectives). These objectives are not well described in this section. (FAR 03-01)

In the field, the audit team evaluated some of the activities presented in this section, such as land preparation, and planting. There are some inconsistencies with the data provided on the PDD, such as spacing for silvopastoral systems, which in the field were observed at 20x20m while the PDD states 10x10m.

The nursery was not visited but the technical advisor of the project described a nursery ran by the women of the surrounding of Chagres National Park. Women collect the seeds from the forest for the native species. On the other hand, the farmers from Capira sector that participate in the project received the seedling from contractors, there were no local nurseries established yet.

According to the description of activities for commercial plots which will comprise thinning and pruning and a final cut at 25 years, it will not correspond to the Selective Harvesting method as mentioned in the PD. The rotation harvesting approach will be used. During the visit, a technical advisor in charge of the agroforestry systems mentioned that timber species in the farms will be harvested upon farmer's convenience. They expressed that about 20% of the trees will be harvested. (FAR 03-01)

**CARs / FARs / NCRs**

**Forward Action Request 03-01:** ACP shall elaborate more about the objectives and activities that will take place during the project lifetime, mainly clarifying in the PD and related documents which management units will be grown to harvest timber selectively vs via rotation harvesting.

**Feedback project developer** (09 September 2013):

1. The PD was updated with more specific information from the objectives.

Additional supporting documentation regarding the management plan objectives of all the activities is provided

- Agro-forestry: Ref 03-11- TDR Licitacion manejo agroforestal y silvopastoril, Ref 03-14-Plan de manejo fincas agroforestales

- Silvo-pasture: Ref 03-11- TDR Licitacion manejo agroforestal Ref 03-15-Plan de manejo fincas silvopastoril

- Commercial: Ref.03-17-Plan de manejo reforestacion comercial

- Conservation: Ref 03-12-TDR-Plan de manejo conservacion -Soberania

2.The PD was corrected and specifies the harvesting model that will be used for each activity as following:

- Conservation forestry: conservation for 50 years

- Commercial: rotation period of 25 years

- Silvo-pasture: Selective; Frutal trees and services trees ( total 80%) are conservation for a period of 50 years and the commercial trees ( 20%) will be logged after 25 years.

- Agroforestry: Selective; trees and services trees ( total 80%) are conservation for a period of 50 years and the commercial trees ( 20%) will be logged after 25 years.



1. A description of the project's general forest management objectives must be given.

\*In the PD for agro-forestry and silvo-pasture activities selective logging is used as harvesting model.

**Conclusion of the certifier (27. September 2013):**

From the new supporting documents submitted, it is now clear that only the conservation management units will not be harvested. The commercial, silvopasture and agroforestry MUs will be harvested according to the harvesting model explained in the PD but also in the legal documents signed by the ACP as the project developer, and the land owners as the project participants. These documents establish that 20% of the commercial trees used in the agroforestry and silvopasture management units will be logged after year 25. Selective harvest is defined to happen in the agroforestry and silvopasture management units. It has been clarified that the commercial MUs will be harvested according to rotation forestry approach.

**FAR closed**

### Final Conclusion

- Accepted
- Accepted with FAR
- Not accepted with NCR



2. Evidence must be given that the boundaries of the project area, planting area (eligible and non-eligible), management units and nature conservation area are clearly defined and visible in the field.

**PDD check**

- sufficient / satisfactory information provided  
 consistent information provided

**Supporting documents check**

- up-to-dateness of information  
 reference integrity to the content in the PDD  
 accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit  
 confirmed by interview(s)  
 confirmed by general impression

**Findings**

Commercial plantations are clearly defined in the maps. The audit team verified with the GPS unit the boundaries of the sampled polygons and these coincided with the information provided in the PDD. On the ground, there is no clear evidence of the boundaries among different management units. There are also some transitional sites in conservation MUs where is not visible where plantations were established due to the lack of demarcation of the limits. In commercial MUs, there were detected some forest remnants which are very small and are not excluded from the project demarcation. There are some questions regarding eligibility (see this section). FAR 03-02

For agroforestry and silvopastoral MUs, there were no nonconformities observed for the boundaries demarcated on the ground due to the monitoring of cadastral/mapping system in place, which is one of the requirements to be eligible in the PIEA. The relevant government agency monitors the MU boundaries as part of the process of the landowners receiving land tenure.

**CARs / FARs / NCRs**

**Forward Action Request 03-02:** ACP shall define the transitional sites on the ground where the forest and conservation MU were established. Additionally, on commercial plantations ACP shall make the demarcation of the boundaries clear taking into account the forest patches inside these MU's.

**Feedback project developer** (09 September 2013):

The demarcation was done in the maps and in the field the use of living fences and also barbed wire to protect the planting areas.

For the commercial and conservation MUs all the small forest patches inside the polygons were excluded from the planting eligible area (See maps in the PD, pages 9-15).

For the agroforestry and silvo-pastoral activities is important to clarify that only the planting area is included to the project. This means that some farms of the stakeholders have also other areas with other land uses such as forest conservation. However only the eligible planting (more than 700 polygons located in different districts) are part of the PD.

Example: Finca Juan Benitez with a total area of 26 hectares, the polygons included to the PIEA are only 7,3 hectares ( Ref. 03-14, page 4, point 3.1.1)

All the Fincas have a management plan and it is possible to see with a map how the activities are distributed (see maps in ref. 03-14, pages 13-14).

**Conclusion of the certifier** (27. September 2013):

The FAR 03-02 will remain open since observations from the field are necessary to make sure of the compliance.

**FAR 03-02 remains open**

**Final Conclusion**



2. Evidence must be given that the boundaries of the project area, planting area (eligible and non-eligible), management units and nature conservation area are clearly defined and visible in the field.

- Accepted
- Accepted with FAR (03-02)
- Not accepted with NCR



3. A description of the following tree species characteristics must be given:
- a. Origin and distribution of the tree species (indicate if the species are native or not)
  - b. Provenance of the seeds
  - c. Main purpose / Use of trees
  - d. Possible pests and diseases
  - e. Time when forest products are foreseen to be used

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

ACP reports in the PD a total of 30 species planted. A table was provided including all the tree species and characteristics of the tree species. The audit team has reviewed this information and confirmed that the information in the PDD is sufficient and matches observations made in the field.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



4. Evidence must be given that at least 10% of the project area is managed  
 a. as a nature conservation area OR  
 b. to meet a national or sub-national HCV area definition.

Criterion 4. does not have to be fulfilled in case more than 30% of the project area is managed according to chapter '06 CO<sub>2</sub>-fixation - Option 1b) Conservation forest'.

**PDD check**

- sufficient / satisfactory information provided  
 consistent information provided

**Supporting documents check**

- up-to-dateness of information  
 reference integrity to the content in the PDD  
 accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit  
 confirmed by interview(s)  
 confirmed by general impression

**Findings**

According to the PDD, 1770 ha out of 2985 ha of eligible planting area (note that following the audit, the eligible planting area currently planted was revised downward to 2458 ha) were selected for Conservation purposes. It means that 30.49% of it will be managed as a nature conservation area. Considering the eventual maximum project area (10,000 ha), this guarantees that at least 17.7% will be maintained for conservation.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted  
 Accepted with FAR  
 Not accepted with NCR



5. Evidence must be given that the nature conservation area is managed in order to establish, maintain or restore the natural ecosystem of the landscape the project is integrated in.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

There is sufficient evidence provided that ACP is seeking to restore the natural landscape along the watershed. The project utilizes several native species in the conservation area and includes a rigorous monitoring and research program in collaboration with the Smithsonian Tropical Resources Institute (STRI). During the field visit some MUs of Soberania National Park and Ciudad del árbol were inspected. These sites showed elements of initial secondary forest succession such as: 1) pioneer tree species detected, which were not planted by the project, but were natural regeneration; 2) soil composition by the presence of forest litter showed the recovery of the ecosystem. According to the interview held with the technical expert, wildlife animals' footprints were spotted by the workers, which help to spread the seeds from the adjacent rainforest to the conservation MUs proposed.

The audit team has confirmed through interviews, field observations and document review that the nature conservation area is managed for natural ecosystem restoration.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



6. Evidence must be provided that the protection or management of the nature conservation area enhances habitat connectivity.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

Two national parks were visited along the audit visit: Chagres and Soberania NP, which are extremely important for the project due to the extension of the effective protected area and buffer functions for flooding control. The Panama Canal Watershed forest represents 80% of the total forest in Panamá and just Chagres NP represents 55% of forest cover along PCW. In their adjacent areas, reforestation with native species was established to reinforce these protected areas and create a continuous mass of vegetation that could connect with these core areas simulating a corridor for wildlife protection, assuring the preservation of the forest integrity. There are also other conservation areas into the project that are connected by reforestation projects and documented in the PDD like Camino de las Cruces National Park, Gatun Lake and Natural Metropolitan Park. Within the management units, it is also evident that riparian forests for instance, or patches of natural forest or even sparse trees are left standing in order to promote the connectivity with native species plantation plots. The project design and management has demonstrated a clear dedication and ability to enhance habitat connectivity.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



7. Key figures on the following areas must be provided:
- Project area
  - Planting area(s)
  - Eligible planting area(s)
  - Nature conservation area(s)

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

- Image 01-01 clearly depicts the total project area.
- The planting areas cited in the PDD Section 03 match with the planting areas reported in associated supporting documents. However, there is one exception. There is conflicting information in project documents regarding the planting date of Polygon 10 of the Ciudad del Arbol Management Unit, in the Conservation portion of the project. File 06-21-ACP in the folder 06, CO2 Fixation states that the planting date of this polygon was 2006, while the "Certificates and Management Units" document reports the planting year for that polygon as 2007, as does Section 03 of the PDD. (FAR 03-03).
- Image 01-01 clearly depicts the total project zone as well as the eligible planting areas.
- The Nature Conservation area currently makes up 30.5% of the area that has been planted thus far. Evidence demonstrating this area is provided in the PDD under the Forest Management Section as well as in supporting documentation that has been provided to the audit team. The audit team independently verified the planting of the Nature Conservation area. However, as noted above, it appears that one of the Management Units in the Conservation area is unplanted. However, even if this area is removed, the Nature Conservation area will still be greater than 10%.

**CARs / FARs / NCRs**

**Forward Action Request 03-03:** ACP shall clarify the project area (in hectares) of all the management units in order to avoid conflicting information regarding the planting year, i.e. Polygon 10, in the Ciudad del Arbol Management Unit, in the Conservation portion of the project.

**Feedback project developer** (09 September 2013):

The PD was reviewed and proved that the information is the same in all the supporting documentation and the PD. The main changes Ciudad del arbol are mentioned below:

- Ciudad del arbol changed from 3 MUs to 2MUs: EX MU12 has tree growth limitations
- MU 10 was planted in 2006 with 50 hectares
- MU 11 was planted in 2007 with 70 hectares
- EX MU12: The planted are establish in 1998 with 86 hectares has limitations due to *saccarum spontaneum*. Therefore it was excluded from this initial certification ( see page 14, map MU10-11 Ciudad del arbol).

**Conclusion of the certifier** (27. September 2013):

The audit team reviewed the following report as well as the updated PDD and confirmed that the areas for MU 10 and MU 11 now are the same.

<http://www.climateprojects.info/chameleon/outbox//6f15ea186eab22e0bf46877cd6e7e5ec/Manage>



7. Key figures on the following areas must be provided:
- Project area
  - Planting area(s)
  - Eligible planting area(s)
  - Nature conservation area(s)

[ment-Units\\_ACP\\_CFS.pdf](#)

Here, MU 010 eligible area is 48 ha while MU 011 eligible area is 44 ha. The original discrepancy was a result of differences between the total MU area and the MU area with limitations (areas have been removed from the MU due to small patches of remnant forest not planted by the project).

**FAR 03-03 is CLOSED**

### Final Conclusion

- Accepted  
 Accepted with FAR  
 Not accepted with NCR



8. Shapefiles with the following information must be submitted through ClimateProjects:
- Project area(s)
  - Management Units

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The developer has provided shapefiles of the project area to the Climate Projects site, along with accompanying information including roads, lakes, towns, etc. Additionally the developer has provided shapefiles with each Management Unit and the distinct polygons that make up each Management Unit (for example some Agroforestry Management Units contain several farms that are clustered close together). The requirement has been fulfilled.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

9. The certification body may require the submission of shapefiles with the following information:
- Land-use classes of the project area 10 years prior to planting start for '01 Eligibility'
  - Wetland areas within the project area for '01 Eligibility'
  - Nature conservation area(s) for '04 Environmental Aspects'
  - Neighbours of the project (individuals, villages, towns, etc.) for '05 Socio-economic Aspects'
  - Eligible planting area and non-eligible planting area for '06 CO<sub>2</sub>-fixation'
  - Land-use classes of the project area just before the planting start for '08 Baseline'
  - Infrastructure of the project (roads, rivers, houses, etc.) for '11 Capacities'

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression



9. The certification body may require the submission of shapefiles with the following information:
- |   |                                    |
|---|------------------------------------|
| a. Land-use classes of the project area 10 years prior to planting start      | for '01 Eligibility'               |
| b. Wetland areas within the project area                                      | for '01 Eligibility'               |
| c. <u>Nature conservation area(s)</u>   | for '04 Environmental Aspects'     |
| d. <u>Neighbours of the project</u> (individuals, villages, towns, etc.)      | for '05 Socio-economic Aspects'    |
| e. <u>Eligible planting area and non-eligible planting area</u>               | for '06 CO <sub>2</sub> -fixation' |
| f. <u>Land-use classes of the project area just before the planting start</u> | for '08 Baseline'                  |
| g. Infrastructure of the project (roads, rivers, houses, etc.)                | for '11 Capacities'                |

### Findings

- a. Image 01-01 has been submitted to demonstrate the land classes 10 years prior to the planting start, however this image does not show the specific project area polygons of the planting areas. Additionally, there is no legend describing the actual land cover types in the image. Please see NCR 01-02, in Section 01, Eligibility of this report.
- b. Please see FAR 01-01 under Section 01 Eligibility of this report.
- c. The proponent has submitted the requested shapefiles
- d. The shapefiles in the folder specified in the PDD include roads, population centers, etc.
- e. Image 01-01 depicts the eligible planting area and the total project zone, which is larger than the eligible planting area.
- f. Image 01-02 depicts the land-use classes of the project area and project zone in 2008, prior to the planting start. This is not a shapefile, but is acceptable.
- g. Shapefiles of project infrastructure has been submitted in the specified folder.

### CARs / FARs / NCRs

N/A

### Final Conclusion

- Accepted
- Accepted with FAR
- Not accepted with NCR



1. The project developer must provide a description of the different land-use classes of the project area.

If significantly different land-use classes are bordering the project area, they must also be described.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Cover Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



2. Evidence must be given that the project has net-positive ecological impacts.

Therefore,

- a. positive ecological impacts of the projects must be enhanced AND
- b. negative or potential negative ecological impacts must be mitigated.

Descriptions of the following project characteristics must be given in regard to criteria 2a. and 2b.:

- Soil                      Nutrients, Erosion
- Water                    Quality, Quantity
- Biodiversity          Flora, Fauna
- Climate                Temperatures, Precipitation

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Cover Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



3. All endangered and critically endangered species of the IUCN Red List must be identified and evidence must be provided that appropriate measures are put in place to protect them.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



4. Evidence must be given that the use of chemical products is
- a. justified AND
  - b. documented AND
  - c. minimized

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



5. Evidence must be given that waste is disposed in an environmentally appropriate way.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11.  
<http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



6. Evidence must be given that 15 meter wide buffer strips along permanent or temporary water courses (streams, rivers, wetlands) are implemented. These buffer strips must be
- part of the nature conservation area, OR
  - must be managed according to '06 CO<sub>2</sub>-fixation - Option 1b) Conservation forest'.

In both cases only native tree species are allowed to be planted.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



7. Evidence must be given that no genetically modified species are being used.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



8. The project management shall plant native species in mixed stands and in case the timber of the forest is being used, selective harvesting management shall be applied.

If this criterion is not met, the project developer must justify its

- choice of tree species
- silvicultural system
- harvesting method

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



9. Evidence must be given that all species planted are site-adapted under changing climate conditions.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



1. Evidence must be given that the project has net-positive socio-economic impacts.

Therefore,

- a. positive socio-economic impacts of the projects must be enhanced AND
- b. negative or potentially negative socio-economic impacts must be mitigated.

For criterion 1a. descriptions of the following aspects must be given:

- Creation of employment
- Capacity building of project workforce
- Welfare activities

For criterion 1b. descriptions of the following aspects must be given:

- Displacement of people
- Spiritual, religious, or other socially important places influenced by the project activities

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



2. Stakeholders must be subject to free, prior, and informed consent on project activities that may have an influence on them.

With all stakeholders groups an agreement on the continuous dialog shall be established from the project start. In this agreement the following topics shall be addressed:

- Contact person that represents the stakeholder group
- Means, frequency and contents of information exchange
- Standard procedure to address and solve concerns

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11.

<http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



3. Evidence must be given that the working staff is able to organize themselves and negotiate with their employers on a voluntary basis.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



4. Evidence must be given that the working staff's working environment is kept safe and risk free.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



5. Evidence must be given that no children under the age of 16 are working for the project.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



6. Evidence must be given that contracts are clearly defined and include the following aspects:
- |  |  |
|--|--|
| <p><b>For employees</b></p> <ul style="list-style-type: none"> <li>a. working hours and leave days</li> <li>b. duties</li> <li>c. salary</li> <li>d. modalities on health insurance</li> <li>e. modalities on the termination of the contract</li> </ul> | <p><b>For contractors</b></p> <ul style="list-style-type: none"> <li>a. tasks (quantity, quality, time)</li> <li>b. payment</li> <li>c. modalities on the termination of the contract</li> </ul> |
|--|--|

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11.

<http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



7. Evidence must be provided that preference is given to working staff from neighbouring areas.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



1. The present CO<sub>2</sub>-fixation must be assessed, once the average tree height within a management unit exceeds 3 meters. Hereby, the CarbonFix guideline 'Forest Inventory' must be followed.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The audit team observed in the field that the majority of trees in the Conservation Management Units were over 3m tall. The majority of Tectona trees in the Commercial Management units were also over 3m tall. Management units focused on other species in the Commercial Management Units (for example, *Terminalia amazonia*) were not 3m tall.

The project developer has not demonstrated compliance with this requirement as the developer has not evaluated the present CO<sub>2</sub> Fixation in these Management Units where the average tree height is greater than 3m. The project developer must use the CarbonFix guideline "Forest Inventory" to assess the present CO<sub>2</sub> Fixation and report these findings in an updated Monitoring Report to be submitted to the audit team for review. (NCR 06-01)

**CARs / FARs / NCRs**

**Corrective Action Request 06-01:** ACP shall assess the present CO<sub>2</sub>-fixation by using the CarbonFix guideline "Forest Inventory" and report these findings in an updated Monitoring Report. The measurements shall be done in all the management units in which tree height exceeds 3 m.

**Feedback project developer** (09 September 2013):

1. ACP is developing a complete monitoring system for 2014. All the MUs with a tree high that exceeds 3 meters will be measure.
2. Until 2013, ACP has developed an initial Monitoring system guide that is presented ( Ref.06-29)
3. A Forest Inventory is presented as supporting documentation for the MUs that have tress with an average high that exceeds 3 meters. The MUs are: 1,3,12,10,11. See Ref ( 06-33,34,35,36)

**Conclusion of the certifier** (27 September 2013):

The audit team has reviewed the supporting references. The developer has made substantial progress towards meeting the requirements of the CarbonFix Standard, that Management Units where the tree height has attained 3m should be subject to a forest inventory (following the guidance of the CarbonFix Standard) and growth models should be updated accordingly. However, the project is not yet in full compliance with this requirement. The developer must take additional actions.

**CAR 06-01 converted to FAR 06-01**

**Final Conclusion**

- Accepted
- Accepted with FAR (06-01)
- Not accepted with NCR



2. The future CO<sub>2</sub>-fixation is determined by a management unit specific growth-model.

Evidence must be given, that growth-models are based on credible scientific sources and site-adapted factors.

Evidence must be given that before any monitoring certification, the management unit specific growth-models are adjusted according to the latest actual monitoring data gained through the assessment of the present CO<sub>2</sub>-fixation.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The Forest Finance model that the developer uses estimates the CO<sub>2</sub>-fixation by each project activity (Commercial, Conservation, Agroforestry, and Silvopastoral) and then multiplies this estimated CO<sub>2</sub> fixation per hectare by the area of each specific Management Unit. This meets the CarbonFix requirements. The developer provides all sources for the model. The audit team has reviewed the source data, including wood density, root to shoot, and Biomass Expansion Factor (BEF) values. All values reviewed and used in the model have been cited accurately from the literature source they are derived from. Input values are primarily from published literature, or for less common species, IPCC default data is used (for example for the Mean Annual Increment for native species in the Conservation Management Units.) Acceptable sources are used for the growth models.

This is the initial certification, so the growth models will be adjusted based on tree growth at the first Monitoring Certification in the future.

However, although all sources for the growth models are acceptable, there appears to be some errors in the calculations in the model. First, the baseline carbon stocks are calculated incorrectly (see the Baseline section of this report). (NCR 06-02)

**CARs / FARs / NCRs**

**Corrective Action Request 06-02:** ACP shall review the calculations in the growth models in order to correct the errors identified and also include the baseline carbon stocks.

**Feedback project developer** (09 September 2013):

For the eligible planting area we are using a higher average baseline considering that in some areas it was possible to find only grassland, but in some other areas it was possible to find a mix of Rastrojo and/or sparse trees (shrubland). The complex distribution and the size of the polygons that comprehend the MUs is the reason to choose a higher baseline and avoid possible uncertainties of possible existing shrubland inside the MUs( following the CFS conservative approach). Some of the polygons are smaller than two hectares, and therefore it was better to keep a higher average baseline. The value 11,7 tons/ha for commercial and conservation forestry and the value 17,2 t/ha for agroforestry and silvopasture of dry biomass was selected based in the study from Oregon and del Valle ( 2001). The study was done in a similar tropical region with the same existing shrubland vegetation (rastrojo). (ref 08-04, 08-05)

**Conclusion of the certifier** (27. September 2013):

The project developer has addressed the primary concern of the nonconformity—that the baseline stocks were underestimated given the significant amount of individual trees and shrubs within the project areas, rather than just pasture/grassland. The project developer has chosen a new suitable baseline carbon stock value for



2. The future CO<sub>2</sub>-fixation is determined by a management unit specific growth-model.

Evidence must be given, that growth-models are based on credible scientific sources and site-adapted factors.

Evidence must be given that before any monitoring certification, the management unit specific growth-models are adjusted according to the latest actual monitoring data gained through the assessment of the present CO<sub>2</sub>-fixation.

commercial and conservation areas, as well as a new suitable value for agroforestry and silvopasture areas. These values come from an appropriate reference. The CAR is closed.

**CAR closed**

### Final Conclusion

- Accepted
- Accepted with FAR
- Not accepted with NCR



3. In case of 'selective harvesting' or 'conservation forest', the future CO<sub>2</sub>-fixation is based on the equilibrium stand volume during the crediting period of the project.

If the equilibrium stand volume is not yet reached by the end of the project's crediting period, the future CO<sub>2</sub>-fixation is determined by the 'stand volume' of the year the crediting period ends.

Evidence must be given through the project characteristics (tree species, project participants, etc.) and its silvicultural objectives that the forests will be used in a 'selective harvesting' regime or will be 'conserved' (no use of timber).

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The PDD claims that the Conservation, Agroforestry, and Silviculture Management Units either will not be harvested (Conservation Forest, some Agroforestry and Silviculture areas), or will be selectively harvested. For these Management Units, the model estimates the CO<sub>2</sub>-fixation based on the stand volume at the end of the crediting period (30 years) and is in conformance with the requirement.

However, the PDD mistakenly reports that the Commercial Management Units will be subject to selective harvesting when in fact they will actually be subject to rotation harvesting, based on observation and interviews in the field. As a result, this part of the PDD must be updated to be accurate. Additionally the model must be updated to accurately calculate carbon sequestration. Finally, per Clarification Request ID030 from the CarbonFix technical board (<http://www.carbonfix.info/CarbonFix-Standard/CarbonFix-Standard-v32/Clarification-Requests.html>), the modeling must be updated to calculate carbon sequestration over a minimum 30 year time period. Currently it is modeled only over a 25 year time period. The CarbonFix has clarified that project lifetime and crediting time period should not differ. (NCR 06-03).

**CARs / FARs / NCRs**

**Corrective Action Request 06-03:** ACP shall clarify the silvicultural method for all the management units in the PD. Additionally the model must be updated to accurately calculate carbon sequestration depending on the method selected.

**Feedback project developer** (09 September 2013):

The commercial management units have a rotation period of 25 years. The PDD was corrected and also the climateprojects web page was updated to calculate carbon sequestration over a minimum 30 year time period (as the standard requires).

**Conclusion of the certifier** (27. September 2013):

The audit team has confirmed that the PDD has been updated such that Section h of Section 03 Forest Management now identifies the harvesting regime for the commercial areas as rotation forestry with a 25 year rotation period, rather than the original erroneous assertion of selective harvesting. The audit team has reviewed the climateprojects web page (output file: Management-Units\_ACP\_CFS.pdf) and confirmed that the ex-ante carbon modelling is now projected over 30 years. This is in conformance with the CarbonFix Standard. The CAR is closed.

**CAR closed**

**Conclusion of the certifier (4 August 2014):**



3. In case of 'selective harvesting' or 'conservation forest', the future CO<sub>2</sub>-fixation is based on the equilibrium stand volume during the crediting period of the project.

If the equilibrium stand volume is not yet reached by the end of the project's crediting period, the future CO<sub>2</sub>-fixation is determined by the 'stand volume' of the year the crediting period ends.

Evidence must be given through the project characteristics (tree species, project participants, etc.) and its silvicultural objectives that the forests will be used in a 'selective harvesting' regime or will be 'conserved' (no use of timber).

During the transition of this project to the Gold Standard, and the related registration of the project with Markit, some discrepancies were identified. The file reviewed on the climateprojects.info webpage (output file: Management-units\_ACP\_CFS.pdf) dated from 27 September 2013, had been mistakenly deleted from the website and was replaced by another Management Unit CO<sub>2</sub> certification output file (output file name: Management-Units\_ACP\_CFS.PDF) dated 23 April 2014. The file reviewed on 27 September 2013 was deleted due to a document control error in the climateprojects.info webpage. As a result, it was determined that the 23 April 2014 document shall be independently assessed for accuracy. Campbell Moore, Carbon Specialist with Rainforest Alliance, reviewed the file from 23 April 2014 on 4 August 2014 and confirmed the accuracy of this file. As a result, the actual CO<sub>2</sub> removals of the project over a 30 year timeline are:

Total ex ante removals: 378,566 CO<sub>2</sub> Certificates

Of this total,

70% are allocated as ex ante CO<sub>2</sub> Certificates: 264,996

30% are allocated ex ante to the buffer: 113,570

### Final Conclusion

- Accepted  
 Accepted with FAR  
 Not accepted with NCR



4. In case of rotation forestry, the future CO<sub>2</sub>-fixation is based on the mean stand volume during the first rotation period.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The Conservation, Agroforestry, and Silvopasture Management Units will not use Rotation Forestry, as confirmed in the PDD, field observations, and interviews during the field audit.

The PDD states that the Commercial plantation area will be subject to Selective Harvesting. Observation and interviews during the field audit confirm that it is much more likely that the Commercial plantation will be harvested with Rotation Harvesting. As a result the PDD and the model must be updated and to use the equation to calculate mean stand volume under “Option 2” in the CarbonFix Standard in the CO<sub>2</sub> Fixation Section. Additionally please note that the sequestration must be calculated over a 30 year time period per the CarbonFix Clarification Request ID 030 <http://www.carbonfix.info/CarbonFix-Standard/CarbonFix-Standard-v32/Clarification-Requests.html> (NCR 06-04).

**CARs / FARs / NCRs**

**Corrective Action Request 06-04:** ACP shall use the correct equation to estimate the carbon stocks, in this case to use the equation to calculate mean stand volume under “Option 2” for the commercial plantation areas (rotation harvesting). The PDD must be updated with the final results.

**Feedback project developer** (09 September 2013):

In the PDD the template was updated taken into account the following information:

- **Conservation forestry:** conservation for 50 years
- **Commercial:** rotation period of 25 years
- **Silvo-pasture:** Selective; Frutal trees and services trees ( total 80%) are conservation for a period of 50 years and the commercial trees ( 20%) will be logged after 25 years.
- **Agroforestry:** Selective; trees and services trees ( total 80%) are conservation for a period of 50 years and the commercial trees ( 20%) will be logged after 25 years.

Given the mix of species involved in the commercial plantations, with currently unknown growth rates, the developer has chosen not to implement the specific equation under “Option 2” in the CarbonFix Standard, but instead has opted to simply model the estimated carbon stock value at the end of the rotation period and reduce this value by 50%. The logic behind this is that it is simpler and that the growth model will be updated with empirical data from the Management Units in the near future.

**Conclusion of the certifier** (27. September 2013):

The project developer has updated the PDD to provide more specific details about the harvesting plans for the various management units and expected management plans. These updates include specifically noting that the commercial management units will be subject to rotation harvesting, thus addressing the nonconformity.

The audit team has evaluated what the estimated carbon stock value would be in the commercial management units using the “Option 2” (time average carbon stock) equation in the standard and compared this to the values the developer has obtained by simply reducing the carbon stock at the end of the rotation period by 50%. The developer’s values are slightly *more conservative*. Additionally, the values in the growth model will be updated



4. In case of rotation forestry, the future CO<sub>2</sub>-fixation is based on the mean stand volume during the first rotation period.

in the future with empirical data. The audit team is comfortable with this approach as it is more conservative than the standard requires, and enables future accuracy in the carbon accounting.

**CAR closed**

### Final Conclusion

- Accepted
- Accepted with FAR
- Not accepted with NCR



1. In order to account for project emissions due to the use of fossil fuels within the project (e.g. through machines, flights, etc.), 0.5% of the future CO<sub>2</sub>-fixation must be deducted.

**PDD check**

- sufficient / satisfactory information provided  
 consistent information provided

**Supporting documents check**

- up-to-dateness of information  
 reference integrity to the content in the PDD  
 accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit  
 confirmed by interview(s)  
 confirmed by general impression

**Findings**

The audit team reviewed the spreadsheets in which the growth model is developed. The 0.5% of the future CO<sub>2</sub>-fixation was properly deducted.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted  
 Accepted with FAR  
 Not accepted with NCR



2. In case fertilizer is used, 0.005 tCO<sub>2</sub> per kg of nitrogen (N) must be deducted. Hereby, no differentiation is made between synthetic and organic fertilizer.

**PDD check**

- sufficient / satisfactory information provided  
 consistent information provided

**Supporting documents check**

- up-to-dateness of information  
 reference integrity to the content in the PDD  
 accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit  
 confirmed by interview(s)  
 confirmed by general impression

**Findings**

As it is stated in the PD, the project uses organic fertilizer on a regular basis. This was confirmed by the audit team through interviews with project participants. A fertilizer NPK 12-24-12 was used and therefore a total of 2148tCO<sub>2</sub> was deducted from the carbon calculation benefits of the project. The audit team reviewed the calculation, no inconsistencies were found.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted  
 Accepted with FAR  
 Not accepted with NCR



3. In case the biomass of the baseline is burned on the field for the purpose of land preparation, an additional 10% of the baseline emissions must be accounted for. This is due to other greenhouse gases (N<sub>2</sub>O and CH<sub>4</sub>) that are released during the burning process.

**PDD check**

- sufficient / satisfactory information provided  
 consistent information provided

**Supporting documents check**

- up-to-dateness of information  
 reference integrity to the content in the PDD  
 accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit  
 confirmed by interview(s)  
 confirmed by general impression

**Findings**

Land preparation does not involve the use of fire; this was confirmed by the audit team through field observations and consultations with project participants and ACP technical experts.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted  
 Accepted with FAR  
 Not accepted with NCR



1. The baseline is the 'woody biomass' and 'non-woody biomass' on the eligible planting area just before the planting start.

The calculation can be done in two different ways:

- a. By executing field measurements. Here, the 'Forest Inventory' guideline shall be applied.
- b. By estimating the biomass in reference to similar areas
  - regional and national default values shall preferably be used
  - international default values can only be used if other values are not available

#### PDD check

- sufficient / satisfactory information provided  
 consistent information provided

#### Supporting documents check

- up-to-dateness of information  
 reference integrity to the content in the PDD  
 accuracy of the information

#### Evidence found during field-visit

- observed or experienced during the field-visit  
 confirmed by interview(s)  
 confirmed by general impression

### Findings

The developer chooses to use an international default value from the IPCC for Tropical Moist and Wet grassland on areas after conversion from another land use ([http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4\\_Volume4/V4\\_06\\_Ch6\\_Grassland.pdf](http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_06_Ch6_Grassland.pdf)). The developer chooses this value because of the prevalence of Paja canalera (*S. spontaneum*) in the project area and the fact that project activities are deliberately located in these areas based on the original remote sensing analysis used. However, based on auditor observation in the field as well as review of the source document, there are two significant problems with this default value.

The default value (6.2) is measured in "tonnes d.m. ha<sup>-1</sup>" (tonnes of dry matter per hectare), however, the model applies the 6.2t d.m. ha as if it were 6.2tC per ha. This is evident in review of the Baseline section of the PDD, as well as through discussion with members of the developer team. This error actually reduces the net CO<sub>2</sub> Fixation of the project. Based on conversations during the audit, the developer will correctly apply the value for the sake of accuracy. (NCR 09-01).

The audit team has observed that, although much of the planting areas are dominated by *S. spontaneum*, there are also significant remnant trees and palms. This varies by Management Unit, and Polygon. Review of the GIS shapefiles, as well as observations in the field has confirmed that the remaining trees and patches of trees were often not removed from the planting area. As such, the baseline is actually tropical moist grassland with remnant trees. Failure to incorporate this into the baseline carbon stocks will result in an overestimation of the project benefits in future monitoring events when the remnant trees that were not planted by the project will likely be included in the forest inventory. (CAR 09-02).

### CARs / FARs / NCRs

**Corrective Action Request 09-01:** ACP shall apply correctly the default value (6.2tC/ha) to estimate tonnes of dry matter per hectare when determining the baseline.

**Feedback project developer** (09 September 2013):

The developer chose to no longer use the 6.2tC/ha value in the revised PD, choosing instead a more conservative value described in the findings below for Corrective Action Request 09-02.

**Conclusion of the certifier** (27. September 2013):

The developer has resolved the issue the CAR was based on, having chosen a different value for the baseline carbon stocks, which is described below in the findings for Corrective Action Request 09-02. Therefore the issue



1. The baseline is the 'woody biomass' and 'non-woody biomass' on the eligible planting area just before the planting start.

The calculation can be done in two different ways:

- a. By executing field measurements. Here, the 'Forest Inventory' guideline shall be applied.
- b. By estimating the biomass in reference to similar areas
  - regional and national default values shall preferably be used
  - international default values can only be used if other values are not available

of citing the dry matter value incorrectly as carbon, has been resolved.

#### **CAR closed**

**Corrective Action Request 09-02:** ACP shall include remnant trees besides the tropical moist grassland, to determine baseline carbon stocks in the management units.

**Feedback project developer** (09 September 2013):

The developer has chosen a different method for estimating baseline carbon stocks which is more conservative and does adequately address the concern that remnant and isolated trees were not accurately quantified in the original baseline carbon stock estimate, which was based on grassland stocks. The new carbon stock values for the baseline are different for commercial/conservation management units and for agroforestry/silvopasture management units.

The new value for commercial/conservation management units is 23tCO<sub>2</sub>/ha. The new value for silvopasture and agroforestry management units is 31tCO<sub>2</sub>/ha.

**Conclusion of the certifier** (27. September 2013):

The revised biomass carbon stock for commercial and conservation areas is derived from an academic paper based on field measurements in Colombia. This paper cites biomass stocks 8 tdm/ha. This PDD reports the value as for total dry biomass, including above and belowground pools (8 \*1.58 to estimate belowground biomass). Converted to CO<sub>2</sub> the carbon stocks is 23tCO<sub>2</sub>/ha. The audit team has reviewed the PDF output of the carbon calculations on the Climate Projects registry (File: Management-Units ACP CFS.pdf) and confirmed that the baseline carbon values have been updated. The audit team has additionally reviewed the FOFI model and confirmed that this has been updated as well. The new carbon values are in conformance with the standard in that they are calculated without some of the errors observed during the field audit (See CAR 09-01), are based on scientific literature, and are calculated correctly. The audit team observed during the field audit that the commercial and conservation areas had minimal remnant trees from before project establishment and were mostly *saccharum* grass. The revised baseline stocks are acceptable for commercial and conservation management units.

The revised biomass carbon stock for silvopasture and agroforestry systems is derived from an academic paper also based on field measurements in Colombia of pasture systems with remnant trees. This paper cites biomass stocks as 17.2 tdm/ha. This value is also for total dry biomass, including above and belowground pools. Converted to CO<sub>2</sub> the value becomes 31tCO<sub>2</sub>/ha. The audit team has reviewed the PDF output of the carbon calculations on the Climate Projects registry (File: Management-Units ACP CFS.pdf) and confirmed that the baseline carbon values have been updated. The audit team has additionally reviewed the FOFI model and Baseline section of the PD and confirmed that this has been updated as well. The revised value of 31tCO<sub>2</sub>/ha for the silvopasture and agroforestry management units is acceptable and in conformance with the standard in that it reflects the site conditions observed during the field audit in which remnant trees from before the project start date, were observed. The audit team noted considerable variability between different sites within the agroforestry and silvopasture management units, with some sites having no remnant trees and others having several. This value from analogous locations in a scientific paper is acceptable.

\*It is noted that the audit team allowed some additional information to be submitted by FOFI and ACP to correct errors made in the original submission of data to RA to close NCRs. Some documents, including the PDD



1. The baseline is the 'woody biomass' and 'non-woody biomass' on the eligible planting area just before the planting start.

The calculation can be done in two different ways:

- a. By executing field measurements. Here, the 'Forest Inventory' guideline shall be applied.
- b. By estimating the biomass in reference to similar areas
  - regional and national default values shall preferably be used
  - international default values can only be used if other values are not available

had not been accurately updated to reflect the new baseline information. RA received this additional information on September 30, 2013.

**CAR closed**

### Final Conclusion

- Accepted  
 Accepted with FAR  
 Not accepted with NCR

1. The baseline is the 'woody biomass' and 'non-woody biomass' on the eligible planting area just before the planting start.

The calculation can be done in two different ways:

- a. By executing field measurements. Here, the 'Forest Inventory' guideline shall be applied.
- b. By estimating the biomass in reference to similar areas
  - regional and national default values shall preferably be used
  - international default values can only be used if other values are not available

#### PDD check

- sufficient / satisfactory information provided  
 consistent information provided

#### Supporting documents check

- up-to-dateness of information  
 reference integrity to the content in the PDD  
 accuracy of the information

#### Evidence found during field-visit

- observed or experienced during the field-visit  
 confirmed by interview(s)  
 confirmed by general impression

### Findings

The developer chooses to use an international default value from the IPCC for Tropical Moist and Wet grassland on areas after conversion from another land use ([http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4\\_Volume4/V4\\_06\\_Ch6\\_Grassland.pdf](http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_06_Ch6_Grassland.pdf)). The developer chooses this value because of the prevalence of *Saccharum spontaneum* in the project area and the fact that project activities are deliberately located in these areas based on the original remote sensing analysis used. However, based on auditor observation in the field as well as review of the source document, there are two significant problems with this default value. See NCR (09-01):

1. The default value (6.2) is measured in "tonnes d.m. ha<sup>-1</sup>" (tonnes of dry matter per hectare), however, the model applies the 6.2t d.m. ha as if it were 6.2tC per ha. This is evident in review of the Baseline section of the PDD, as well as through discussion with members of the developer team. This error



1. The baseline is the 'woody biomass' and 'non-woody biomass' on the eligible planting area just before the planting start.

The calculation can be done in two different ways:

- a. By executing field measurements. Here, the 'Forest Inventory' guideline shall be applied.
- b. By estimating the biomass in reference to similar areas
  - regional and national default values shall preferably be used
  - international default values can only be used if other values are not available

actually reduces the net CO<sub>2</sub> Fixation of the project. Based on conversations during the audit, the developer will correctly apply the value for the sake of accuracy.

2. The audit team has observed that, although much of the planting areas are dominated by *Saccharum spontaneum*, there are also significant remnant trees and palms. This varies by Management Unit, and Polygon. Review of the GIS shapefiles, as well as observations in the field has confirmed that the remaining trees and patches of trees were often not removed from the planting area. As such, the baseline is actually tropical moist grassland with remnant trees. Failure to incorporate this into the baseline carbon stocks will result in an overestimation of the project benefits in future monitoring events when the remnant trees that were not planted by the project will likely be included in the forest inventory.

### CARs / FARs / NCRs

1. See NCR (09-01): The default value (6.2) is measured in "tonnes d.m. ha<sup>-1</sup>" (tonnes of dry matter per hectare), however, the model applies the 6.2t d.m. ha as if it were 6.2tC per ha. This is evident in review of the Baseline section of the PDD, as well as through discussion with members of the developer team. This error actually reduces the net CO<sub>2</sub> Fixation of the project. Based on conversations during the audit, the developer will correctly apply the value for the sake of accuracy.
2. The audit team has observed that, although much of the planting areas are dominated by *Saccharum spontaneum*, there are also significant remnant trees and palms. This varies by Management Unit, and Polygon. Review of the GIS shapefiles, as well as observations in the field has confirmed that the remaining trees and patches of trees were often not removed from the planting area. As such, the baseline is actually tropical moist grassland with remnant trees. Failure to incorporate this into the baseline carbon stocks will result in an overestimation of the project benefits in future monitoring events when the remnant trees that were not planted by the project will likely be included in the forest inventory

### Final Conclusion

- Accepted  
 Accepted with FAR  
 Not accepted with NCR



1. Leakage is caused by an increase of emissions outside of the project area as a result of the project activity.

Leakage emissions can be caused due to a shift of the following activities:

- |                      |                         |
|----------------------|-------------------------|
| a. fuelwood use      | d. agricultural farming |
| b. charcoal burning  | e. resettlement         |
| c. timber harvesting | f. livestock grazing    |

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

Given that the project aims to integrate the forest component into other socioeconomic activities (agriculture and grassland through agroforestry and silvopasture systems) rather than impose the strict protection of the existing forest, the PDD anticipated no leakage for agroforestry/silvopasture MUs, where the majority of the population lives. The audit team evaluated this assertion in the field via observation and interviews with participating farmers and concluded it was a reasonable assertion. The existing agricultural and pasture systems are very low productivity, mostly due to the dominance of *Saccharum spontaneum*. It is reasonable to assume equal or higher yields under agroforestry and silvopasture systems.

It is assumed that the forest within the project area will supply materials for domestic use (fire wood/timber for familiar consumption), with an extension service to ensure sustainable production. In this way, there is no reason to seek material outside the project area. Therefore, no displacement is foreseen in agroforestry and silvopasture plots.

The audit team also visited the commercial plots and found no evidence of displacement of agriculture, cattle or other activities from the project area to the surrounding areas.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



ClimateProjects – MU Document

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

ACP submitted all the materials, shapefiles and supporting documents in the climateproject platform. The audit team has reviewed the updated PDD and supporting documentation following the submission of additional evidence by the proponent to close nonconformities identified in the field audit. Review of the PDD and supporting information confirms that the outputs reported on the climateprojects platform match the PDD and supporting documentation. The Management Units PDF calculates the appropriate buffer withholding and ex ante CO<sub>2</sub> certificates. The audit team has confirmed via review of the PDD (Chapter 6) that the appropriate emissions reductions per Management Unit are input into the CarbonFix system.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



1. Evidence must be given that the project management has sufficient qualification and an appropriate structure to ensure sustainable implementation and management of the project.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



2. Evidence must be given that project management decisions are based on a joint process.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



3. Evidence must be given that the project management has an internal quality-control system.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



4. Evidence must be given that the project works with other institutions to continuously expand the project management's qualifications.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



5. Evidence must be given, that suitable knowledge transfer within the project management is ensured over time.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



6. Evidence must be provided that sufficient financial means are available for the long-term finance of the project.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



7. If **two** or more of the following points apply, the project is only allowed to assign 50% of its future CO<sub>2</sub>-certificates until the first successful monitoring certification - however at the earliest 3 years after the initial certification:
- The project financier has not managed other projects (not necessarily in forestry) of similar financial scale, yet.
  - The organisation of the project developer was founded earlier than 5 years ago.
  - The project is located in a country which is ranked in the second half of Land Property (LP) rating by IPRI.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



8. Evidence must be given that the project has sufficient technical capacity to ensure sustainable implementation and management of the project.

Therefore, a technical description of the following activities must be given:

- |   |                |
|---|----------------|
| a. Nursery                                      | e. Maintenance |
| b. Land preparation (incl. lining out /spacing) | f. Pruning     |
| c. Planting                                     | g. Thinning    |
| d. Beating up (replacing of dead seedlings)     | h. Harvesting  |

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



9. Evidence must be given that non-permanence risks of a project are mitigated.

Therefore, an evaluation of the following risks must be given

- |  |                                     |
|--|-------------------------------------|
| a. Water (drought, flood, hail, snow, heavy rains ...)   | e. Diseases (bacteria, viruses ...) |
| b. Wind (storms, hurricanes ...)                         | f. Temperature (coldness, heat)     |
| c. Animals (insects, domestic animals, wild animals ...) | g. Encroachment of people           |
| d. Fire (human made, natural)                            | h. Others                           |

A description of the projects potential risks and risks mitigation measures in-place must be given.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



10. If there is a risk of fire a 'Fire Management Plan' must implemented. This plan must include a description of the following activities:

- |                    |                               |
|--------------------|-------------------------------|
| a. Fire awareness  | d. Fire detection             |
| b. Fire prevention | e. Fire suppression           |
| c. Fire equipment  | f. Fire damage rehabilitation |

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



1. Evidence must be given that the project developer has an uncontested legal land title of the project area, for a minimum period of the project's crediting period.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



2. Evidence must be given that all necessary permits for the implementation and management of the project (planting permits, harvesting permits, infrastructures permits, etc.) are secured for a minimum period of the project's crediting period.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



3. On overview on the contact details of the project participants must be provided.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



4. Evidence must be given that the project developer is the
- a. Owner of the CO<sub>2</sub>-rights AND
  - b. Owner of the land AND
  - c. Owner of the timber AND
  - d. Owner of other resources
  - e. Project financier.

If the project developer is not all of the above, evidence must be given that the respective participant agrees with the expected project activity for the minimum period of the project's crediting period.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



5. In case the owner of CO<sub>2</sub>-rights is a group of multiple individuals, authorization for the issuance and assignment of the CO<sub>2</sub>-certificates must be given to the project developer with a written approval.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



1. Templates shall be filled out with a **green** colour and the font type Calibri, size 10.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The PP filled out all the templates following the documentation format.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



2. **Red** coloured comments in the template shall be deleted before document submission.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

All the red coloured comments in the template were deleted by the project proponent.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



3. Maps shall include the following information:

- Name of the project
- ID of the project
- Legend
- Printing date
- Scale
- Direction of North
- Used GPS coordinate system (e.g. WGS 84)
- GPS grid
- Infrastructure (roads, houses, etc.) and rivers
- Information on the satellite or aerial picture used (date, resolutions, data source)

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

Some maps are lacking the information required by the CarbonFix Standard. For example, Image 01-01 is lacking i) a scale, ii) printing date, iii) Direction of North, iv) GPS coordinate system, v) satellite metadata. (FAR 001-01)

**CARs / FARs / NCRs**

**Forward Action Request 001-01:** The project developer should review all maps in the PDD and supporting document and confirm that they meet the requirements of the CarbonFix Standard, cited above.

**Final Conclusion**

- Accepted
- Accepted with FAR (001-01)
- Not accepted with NCR



4. Figures above one thousand shall be formatted with a space (1 000 000), whereby decimals will be separated by a point (1.35).

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

All the figures in the PD and supporting documents are one thousand or less.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



5. Pictures, graphs and tables within project documents shall be clearly marked with a unique ID.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project proponent used standardized and unique identification for all the pictures, graphs and tables used on the PD and supporting documents.

**CARs / FARs / NCRs**

N/A

**See previous comments**

- Accepted
- Accepted with FAR
- Not accepted with NCR



6. Supporting documents must be numbered according to the following format:

Examples of supporting documents:

'01-01\_Western Tanzania maps\_Dec 1990'

'01-02\_Geoinformation on the land-use in Western Tanzania\_Jul 2003'

Chapter of the CFS 01

ID of the document 02

Title of document Geoinformation on the land-use in Western Tanzania

Date of publication Jul 2003

In the project documents, ONLY the reference number (01-02) shall be stated, together with the exact location of the referred information.

Example:

'Ref. 01-02, Page 2, Paragraph 3 and Table 2'

#### PDD check

- sufficient / satisfactory information provided  
 consistent information provided

#### Supporting documents check

- up-to-dateness of information  
 reference integrity to the content in the PDD  
 accuracy of the information

#### Evidence found during field-visit

- observed or experienced during the field-visit  
 confirmed by interview(s)  
 confirmed by general impression

### Findings

The Project proponent has adopted the CFS format properly. All the documents posted on the climateproject platform follow the format protocols established.

### CARs / FARs / NCRs

N/A

### Final Conclusion

- Accepted  
 Accepted with FAR  
 Not accepted with NCR



7. The project documents and supporting documents must be submitted in
- English, OR
  - a language which has been agreed upon by the project developer, the technical board of CarbonFix and the certification body that executes the certification process.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The majority of the documents are submitted in English. Others are written in Spanish which is the local language.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



8. The ClimateProjects platform must be used to submit the project information for any pre-validation and certification process - see [www.ClimateProjects.info](http://www.ClimateProjects.info)

All project information must be made publically available through the ClimateProjects system, except for confidential information.

#### PDD check

- sufficient / satisfactory information provided  
 consistent information provided

#### Supporting documents check

- up-to-dateness of information  
 reference integrity to the content in the PDD  
 accuracy of the information

#### Evidence found during field-visit

- observed or experienced during the field-visit  
 confirmed by interview(s)  
 confirmed by general impression

### Findings

The official platform of CFS was used by the proponent to submit the PD, supporting documents and all the elements regarding the CCBA validation.

### CARs / FARs / NCRs

N/A

### Final Conclusion

- Accepted  
 Accepted with FAR (...)  
 Not accepted with NCR (...)



1. In case of FSC, the CarbonFix Standard recognizes the certification as replacement of the criteria contained in the chapters 04, 05, and 10.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

N/A - There is no FSC Certification in place.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



2. In case of CCBA, the CarbonFix Standard recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. The CCBA website established that the project is valid from March 20, 2012. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



3. The certification according to FSC or CCBS must be valid for at least 1 more year from the date of the CarbonFix certification.

**PDD check**

- sufficient / satisfactory information provided  
 consistent information provided

**Supporting documents check**

- up-to-dateness of information  
 reference integrity to the content in the PDD  
 accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit  
 confirmed by interview(s)  
 confirmed by general impression

**Findings**

The CCBA website established that the project is valid from March 20, 2012. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted  
 Accepted with FAR  
 Not accepted with NCR



4. The documentation according to FSC or CCBS must be published on the ClimateProjects system.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The audit team reviewed the ClimateProjects platform and confirmed that all the relevant documents about the CCBA validation is posted.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



1. In case a project is located in a district or country that is part of a national or pan-national scheme that must report its forest area, the project developer can only assign its CO<sub>2</sub>-certificates to a CO<sub>2</sub>-buyer using minimum one of the following options:
  - 1a. The CO<sub>2</sub>-buyer explicitly agrees in purchase agreements to the following statement or a statement with a similar meaning:
 

“I am aware that this project is part of a national or pan-national scheme which is accounting the same CO<sub>2</sub>-fixation that I am purchasing with this contract in order to achieve its national reduction target. I am aware that this may have the effect that other companies within the projects host country have to reduce less CO<sub>2</sub>, as the project contributes to the reduction target of this scheme.”
  - 1b. The respective agency of the projects host-country gives the following statement or a statement with a similar meaning:
 

“Afforestation / reforestation projects that generate CO<sub>2</sub>-certificates within our country for the voluntary market do not lower the pressure on companies of the country(ies) the host-country is part of the compliance market in.”
  - 1c. The project developer retires
    - one additional CO<sub>2</sub>-certificate from another project certified according to the CarbonbFix Standard, OR
    - one additional Gold Standard certificate
 for every CO<sub>2</sub>-certificate assigned to a CO<sub>2</sub>-buyer.
 

Hereby, the additional retired certificate must carry the ID of the assigned CFS CO<sub>2</sub>-certificate.

**PDD check**

- sufficient / satisfactory information provided  
 consistent information provided

**Supporting documents check**

- up-to-dateness of information  
 reference integrity to the content in the PDD  
 accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit  
 confirmed by interview(s)  
 confirmed by general impression

**Findings**

The project is located in Panama, a country in which it is not required the forest area is reported to the national authority.

**CARs / FARs / NCRs**

N/A


**Final Conclusion**

- Accepted  
 Accepted with FAR  
 Not accepted with NCR

# Annex


In the following the original version of the Rainforest Alliance report from December 16, 2013 is attached.

# Certification Report

<p>The Rainforest Alliance RA-Cert Division Headquarters 65 Millet St. Suite 201 Richmond, VT 05477 USA Tel: +1 802-434-5491 Fax: +1 802-434-3116 <a href="http://www.rainforest-alliance.org">www.rainforest-alliance.org</a></p>	 <p><b>Rainforest Alliance</b></p>
<p><b>Project Name</b>  <b>Project ID</b> <b>Province and Country</b> <b>Project size</b></p>	<p>Panama Canal Authority (ACP) Sustainable Forest Cover Establishment PA-ACP Panama Province, Panama 2458 ha of planted eligible area. The developer intends to increase the planted area to 10,000 ha</p>
<p><b>Project developer</b></p>	<p><b>Autoridad del Canal de Panamá</b> Edificio 705, Corozal Oeste, Calle Ñeque Panama, Panama <b>represented by</b> Angel Ureña Vargas</p>
<p><b>Assessment Team Leader</b></p>	<p>William Arreaga</p>
<p><b>Internal Report ID</b></p>	<p>ACP CFS initial certification 13</p>
<p><b>CFS Version</b> <b>Type of Certification</b></p>	<p>3.2 Initial Certification</p>
<p><b>Date of issuance: Final Report</b> <b>Valid until</b></p>	<p>December 16, 2013 N/A</p>
<p><b>CO<sub>2</sub>-certificates (ex-ante) from which are ex-post</b></p>	<p><b>204,902 tCO<sub>2</sub></b> <b>0</b></p>
<p><b>Buffer CO<sub>2</sub>-certificats (ex-post &amp; ex-ante)</b></p>	<p>87,815 tCO<sub>2</sub></p>


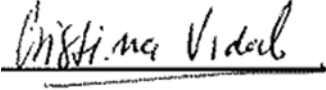


# Certification Report

About the certification body		
<b>Assessment Team Leader</b>	<p><b>William Arreaga</b> warreaga@ra.org</p> <p>Guatemalan; forester from San Carlos de Guatemala University, and M.Sc. from CATIE, Turrialba, Costa Rica. He is also involved in a MBA program on Financial Administration in Guatemala. William serves as a lead auditor for FSC Forest Management, and Chain-of-Custody. He has developed two biomass allometric equations in natural forests and plantations in Guatemala. Moreover, he had received formal training in Environmental Services at Winrock International; as well as he had developed a great experience with Carbon issues by his participation in the field for four CCB validations in Mexico, Nicaragua, Costa Rica, Panama, and Ecuador; VCS validations/verifications in Guatemala, Honduras, Panama, Mexico, Uruguay, United States, and Ecuador; CarbonFix verifications in Panama. He had received formal training as carbon validator in Vermont, and as lead auditor against ISO 14001 in Guatemala. Nowadays, he is the Verification Services Coordinator in Rainforest Alliance Mesoamerica Region.</p> <p>Signature: </p>	Shortcut W.A.
<b>Assessment Team Member</b>	<p><b>Campbell Moore</b> cmoore@ra.org</p> <p>Tropical forestry and REDD+ expert with professional experience in Africa and Southeast Asia. He is Carbon Expert with Rainforest Alliance where he conducts audits against six forest carbon standards, supervises methodology assessments, and acts as technical expert on carbon for RA-Cert globally. Campbell has experience on both the technical and policy sides of REDD+. Previous professional experience includes consulting work for GIZ Philippines performing carbon stock assessments of different forest types including agroforestry and plantation systems, as well as work centered on reforestation in Sri Lanka for the Environmental Leadership and Training Initiative. He additionally has worked for Climate Focus on LULUCF policy issues. From 2009-2011 Campbell pursued his Master of Forestry from the Yale University School of Forestry and Environmental Studies. This period included a variety of forestry projects including developing a management plan for Connecticut forest preserve, planning timber sales in a New England hardwood forest, and designing and modelling carbon sequestration potential of agroforestry systems for the Nature Conservancy's Global Climate Team. Prior to his time at Yale, Campbell worked in The Gambia for over two years as a Peace Corps Volunteer designing and implementing a wide variety of forestry, agroforestry, and agricultural projects. In addition to his Master of Forestry degree, he holds a M.A. in Environmental Studies from St. Mary's College. Campbell is fluent in Pulaar and Wolof and has experience with Spanish</p>	Shortcut C.M.



# Certification Report

	Signature: 	
<b>Assessment Team Member</b>	<p>Cristina Vidal                      cvidal@catie.ac.cr                      Paraguayan based in Costa Rica; Forestry Engineer; in 2005 she received a M.Sc. in Tropical Forest Management and Biodiversity Conservation from CATIE (Costa Rica). She has developed experience working in protected areas, ecosystem restoration, commercial plantations, silviculture, forestry production, ecology monitoring. She has received training as a lead auditor under ISO 14001:2004, and FSC formal training. Nowadays, she is involved in a formal carbon training (VCS and CFS) and Verification of Legal Compliance (VLC).</p> Signature: 	C.V.

## Partner contracted for the certification process

<b>Partner organisation</b>	n/a	Shortcut
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# Certification Report



History of this document	
<b>1. Draft send to project developer</b>	July 11, 2013
1. Feedback	September 9, 2013
<b>2. Draft send to project developer</b>	September 30, 2013
2. Feedback	October 7, 2013
<b>3. Draft send to project developer</b>	December 4, 2013
3. Feedback	December 5, 2013
<b>Date of issuance: Final Report</b>	December 16, 2013

# Certification Report



## 1. INTRODUCTION

### Objective

The purpose of this report is to document the conformance of “Panama Canal Authority (ACP) Sustainable Forest Cover Establishment Project” with the requirements of the CarbonFix Standard, V3.2. The project was developed by Panama Canal Authority (ACP), hereafter referred to as “Project Proponent”. The report presents the findings of qualified Rainforest Alliance auditors who have evaluated the Project Proponent’s systems and performance against the applicable standard.

### Scope

The scope of the audit is to assess the conformance of ACP Afforestation project in Panama against the CarbonFix Standard, V3.2 through an Initial Certification audit. The objectives of this audit included an assessment of the project’s conformance with the standard criteria. In addition, the audit assessed the project with respect to the baseline scenarios presented in the project design document. The project covers an area of 10,000 hectares with 2458 ha currently planted and generating CO<sub>2</sub> certificates. The land is a combination of privately owned silvopasture and agroforestry areas with commercial and conservation areas owned by the ACP. The information supporting the GHG assertion is projected in nature. The project has a lifetime of 25 years, and has calculated a GHG reduction and/or removal of 292,619 tCO<sub>2</sub>e over the course of the monitoring period.

### Level of assurance

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

### Materiality

All GHG sinks, sources and/or reservoirs (SSRs) and GHG emissions are evaluated equal to or greater than 5% of the total GHG assertion.



# Certification Report

## 2. METHODOLOGY

The Initial Certification started on September 9, 2013 when the Project Proponent (PP) submitted the Project Description (PD) and supporting documents through the CFS Climateproject platform. This information was reviewed by the audit team on preparation for the field audit which took place from May 28 to June 1, 2013, and consisted of:

**Desk-audit:** Before starting the field visit an agenda that included interviews with stakeholders was designed; the audit team along with the PP selected key stakeholders. Some of the interviewees (local communities, government institution representatives) were visited by the audit team, while others were interviewed during the field visit (employees).

The auditors received all the documentation referenced in the PD and the information required by the standard in digital version. Also to start the field visit, the project proponent explained in detail some key topics of the project: eligibility, baseline, carbon calculations, additionality and leakage analysis.

**Field audit:** According to the audit plan, the auditors visited a sample of management units involving the four kinds of project activities –commercial, conservation, agroforestry and silvopasture: 1, 4, 5, 6, 7, 8, 9, 10, 19, 22, 25, 28, 31. In order to improve efficiency, the audit team split into two groups to visit more area, but got technical meetings during nights.

During the closing meeting, the auditors explained the preliminary findings which could result in non-conformances. The draft report was sent to the proponent with five Forward Action Requests (FAR) and nine Corrective Action Requests (CARs). The proponent sent complementary evidence of compliance which was analysed by the audit team to close all the CARs; three FARs remained opened.



# Certification Report

## 3. SUMMARY OF ASSESSMENT

PDD assessment
<b>Documents</b>
PDD ACP CFS.pdf
Eligibility ACP CFS.pdf
Additionality ACP CFS.pdf
Forest Management ACP CFS.pdf
CO2 Fixation ACP CFS.pdf
Project Emissions ACP CFS.pdf
Baseline ACP CFS.pdf
Leakage ACP CFS.pdf
GTC ACP CFS.pdf
Management-Units_ACP CFS.pdf

# Certification Report



## Supporting documents assessment

ID	Date of publication	Title	Place, Author
	29 Sep 2013	Supporting Doc ACP CFS.zip	ACP
	09 Sep 2013	Eligibility ACP CFS.zip	ACP
	26 Apr 2013	Additionality ACP CFS.zip	ACP
	06 Sep 2013	Forest Management ACP CFS.zip	ACP
	09 Sep 2013	Project Emissions ACP CFS.zip	ACP
	29 Sep 2013	CO2 Fixation ACP CFS.zip	ACP
	29 Sep 2013	Baseline ACP CFS.zip	ACP

# Certification Report



Assessment during field-visit			
Date	Location	Time spend	Auditor
May 29 <sup>th</sup> , 2013	ACP Administrative office	One full day	C.Vidal C.Moore W.Arreaga
May 29 <sup>th</sup> , 2013	Management Units 6-10	One full day	C.Vidal C.Moore W.Arreaga
May 30 <sup>th</sup> , 2013	Management Units 1, 4, 5	One full day	C.Vidal C.Moore W.Arreaga
May 31 <sup>st</sup> , 2013	Management Units 19, 22, 23, 28, 31	One full day	C.Vidal C.Moore W.Arreaga

# Certification Report



Assessment during interviews			
Date	Person	Time spend	Auditor
May 29 <sup>th</sup> , 2013	Carlos Gómez, Departamento Forestal, point of contact UN-REDD, <a href="mailto:cgomez@anam.gob.pa">cgomez@anam.gob.pa</a>	1 hour	C.Vidal C.Moore W.Arreaga
May 29 <sup>th</sup> , 2013	Narciso Cubas, Departamento Forestal: Departamento de Plantaciones <a href="mailto:ncubas@anam.gob.pa">ncubas@anam.gob.pa</a>	1 hour	C.Vidal C.Moore W.Arreaga
May 29 <sup>th</sup> , 2013	Jorge Javino, Encargado Departamento Forestal <a href="mailto:jjavino@anam.gob.pa">jjavino@anam.gob.pa</a>	1 hour	C.Vidal C.Moore W.Arreaga



# Certification Report

## Summary of Corrective Actions Requests (CARs)

**Corrective Action Request 01-01:** ACP shall exclude from the eligible area the Management Unit 6 Soberania 1. It also must be excluded from the ex-ante modeling of carbon stocks.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 01-02.

**Corrective Action Request 01-02:** ACP must provide evidence, in the form of remote sensing data, aerial photography, or another means, that the identified silvopasture farms actually were not forest 10 years before the planting date, or those MU's must be removed from the monitoring unit, or the boundaries must be redrawn to exclude the areas in the farms that are forest.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 01-02.

**Corrective Action Request 01-03:** ACP shall provide evidence to transparently demonstrate that the planting areas are –or not- on grassland, shrub land, secondary forest, or primary forest.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 01-02.

**Corrective Action Request 06-01:** ACP shall assess the present CO<sub>2</sub>-fixation by using the CarbonFix guideline "Forest Inventory" and report these findings in an updated Monitoring Report. The measurements shall be done in all the management units in which tree height exceeds 3 m.

The proponent showed partially compliance with the requirement after the field visit, as a result CAR 06-01 became the FAR 06-01. See detailed findings on Chapter 06-01.

**Corrective Action Request 06-02:** ACP shall review the calculations in the growth models in order to correct the errors identified and also include the baseline carbon stocks.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 06-02.

**Corrective Action Request 06-03:** ACP shall clarify the silvicultural method for all the management units in the PD. Additionally the model must be updated to accurately calculate carbon sequestration depending on the method selected.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 06-03.

**Corrective Action Request 06-04:** ACP shall use the correct equation to estimate the carbon stocks, in this case to use the equation to calculate mean stand volume under "Option 2" for the commercial plantation areas (rotation harvesting). The PDD must be updated with the final results.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 06-04.

**Corrective Action Request 09-01:** ACP shall apply correctly the default value (6.2tC/ha) to estimate tonnes of dry matter per hectare when determining the baseline.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 08-01.

**Corrective Action Request 09-02:** ACP shall include remnant trees besides the tropical moist grassland, to determine baseline carbon stocks in the management units.

The proponent showed compliance with the requirement after the field visit. See detailed findings on Chapter 08-01.



# Certification Report

## Summary of Forward Actions Requests (FARs)

**Forward Action Request 01-01:** ACP shall provide sufficient evidence to prove that wetlands do not exist in the planting areas.

The proponent addressed this by submitting more evidence of compliance. See detailed findings on Chapter 01-03.

**Forward Action Request 01-02:** ACP shall establish if the project participants are allowed to remove the litter (leaves and small branches) from the eligible planting area, and how this will be monitored during the project lifetime in order to provide sufficient evidence of the impact of the nutrient balance of the soil.

The proponent addressed this by submitting more evidence of compliance. See detailed findings on Chapter 01-06.

**Forward Action Request 03-01:** ACP shall elaborate more about the objectives and activities that will take place during the project lifetime, mainly clarifying in the PD and related documents which management units will be grown to harvest timber selectively vs via rotation harvesting.

The proponent addressed this by submitting more evidence of compliance. See detailed findings on Chapter 03-01.

**Forward Action Request 03-02:** ACP shall define the transitional sites on the ground where the forest and conservation MU were established. Additionally, on commercial plantation ACP shall make the demarcation of the boundaries visible taking into account the forest patches inside these MU's.

The proponent addressed this by submitting more evidence of compliance, however the FAR remains open. See detailed findings on Chapter 03-02.

**Forward Action Request 03-03:** ACP shall clarify the project area (in hectares) of all the management units in order to avoid conflicting information regarding the planting year, i.e. Polygon 10, in the Cuidad del Arbol Management Unit, in the Conservation portion of the project.

The proponent addressed this by submitting more evidence of compliance. See detailed findings on Chapter 03-03.

**Forward Action Request 06-01:** ACP shall assess the present CO<sub>2</sub>-fixation by using the CarbonFix guideline "Forest Inventory" and report these findings in an updated Monitoring Report. The measurements shall be done in all the management units in which tree height exceeds 3 m.

The proponent addressed CAR 06-01 by submitting more evidence of compliance and became FAR 06-01. See detailed findings on Chapter 06-01.

**Forward Action Request 001-01:** The project developer should review all maps in the PDD and supporting document and confirm that they meet the requirements of the CarbonFix Standard, cited above.

This requirement was issued after the draft report was submitted. See detailed findings on Chapter 001-03.

# Certification Report



## Summary of Non Conformity Requests (NCRs)

N/A – No NCRs were issued during the present Initial Certification

# Certification Report



## 3. CERTIFICATION CONCLUSION & OPINION

Upon review of all documents submitted by the project proponent and internal audit team discussions, the Rainforest Alliance found the evidence sufficient to close the Corrective Action Requests. However, three Forward Action Requests remain open. Overall, the project was found to be in full conformance with the CarbonFix Standard Version 3.2 and the new management units are approved for Certification with the CarbonFix Standards. On the other hand, the open FARs shall be closed within six months of the issuance of the Initial Certification opinion to maintain conformance with the CarbonFix Standard.



Preconditions  
**01 Eligibility**

1. A description of the historical and the current situation of the project area must be given for the last 50 years. This description must include the development of its socioeconomic situation, its changes in land-uses and changes of property rights.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

PDD describes the current situation of land tenure and socioeconomic context of the Panama Canal Watershed (PCW). A historical description of the PCW was elaborated upon, although it is noted that there was little available information before 1999 when the PCW was returned to Panamanian control by the US government. . In addition, a multi temporal satellite analysis was carried out to study the past situation related to forest cover and deforestation rates along the PCW. The audit team verified the methods and results of the satellite imagery analysis through interview and observation of the remote sensing technicians at the ACP offices during the field. Audit. PDD notes that ANAM (Autoridad Nacional del Ambiente) along with the Ministry of Agriculture, Registration office and ACP started a program to clarify the land use by supporting the PCW inhabitants to issue land titles. According to ACP technical advisors, land title is one of the most important requirements in order to be accepted in the Environmental Economics Incentives Program (PIEA, is the acronym in Spanish). Nowadays, about 12,000 individuals have been registered under this program and have land tenure. Land use in the watershed was mainly agriculture for “cash” crops (i.e. banana) in the past but, due to the poor soil quality, many agricultural areas have converted to degraded pasture. During the field visit, different land use scenarios were observed (degraded pasture, cash crop agriculture, secondary forest), and considered likely to represent a temporal land use transition, supporting the historical land use analysis. The audit team interviewed the project participants visited and other stakeholders and which revealed that crop cultivation and cattle production on degraded pasture have happened for many years which have constituted the business as usual scenario for the project.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



# Preconditions

## 01 Eligibility

2. Planting area is ONLY eligible, if the land:
  - a. is planted with trees during the initial certification AND
  - b. is not a forest at the date of the project start AND
  - c. will result in the creation of a forest AND
  - d. has not been a forest for at least 10 years prior to the planting start OR has been a forest in the last 10 years prior to the planting start, but evidence is given that absolutely no relation between the project participants and the cause of deforestation exists (e.g. that the forest destruction was caused by force majeure)

Criterion 2d. must be proven by the interpretation of satellite images, aerial photographs, official maps or land-use records.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

### Findings

The audit team visited a sample of the polygons in a sample of the Management Units for each Project activity including Commercial forestry, Conservation forest, Agroforestry areas, and Silvopasture areas. Although some polygons had small areas where the trees had died, generally the polygons were planted. However, there was one notable exception. In the Conservation management Units, in MU6 Soberania I, planted in 2008, appeared to be a failed planting area. It is the audit team’s understanding that the contractor hired for the planting failed to control the *Saccharum spontaneum* effectively and as a result, as the audit team was traveling through the planting area it appeared that 90% or more of the trees had died. In addition, in silvopasture plots visited it is not clear if the scarce native trees planted will result on the creation of a forest. Lack of commitment from contractors could be the main reason for the area to have few trees alive after at least one replanting event. (NCR 01-01). These Management Units are not eligible, but could be added in a later Management Unit certification.

The shapefiles for the Silvopastoril areas have been reviewed by the audit team overlain on Google Earth imagery from 4/16/2003. Some areas appear to have substantial tree cover in these images, possibly greater than the 30% threshold, which would make these areas legally forest in Panama. For these areas to be eligible they must not have been forest for at least 10 years before the planting date. The farms that may be ineligible include:

Nombre: Fundación la vida en Rosa/Adelaida Arias

Area: 41387 m<sup>2</sup>

Nombre: Erasmo Gomez Rodrigues

Area: 46626 m<sup>2</sup>

Nombre: José Abel Herrera

Area: 24541 m<sup>2</sup>

Nombre: Miguel Gonzáles

Area: 50937 m<sup>2</sup>

The proponent must provide evidence, in the form of remote sensing data, aerial photography, or another means, that the identified silvopastoril farms actually were not forest 10 years before the planting date, or they must be removed from the monitoring unit, or the boundaries must be redrawn to exclude the areas in the farms that are forest. (NCR 01-02)

Related to this analysis, the audit team is awaiting documentation of the remote sensing analysis, including evidence of the accuracy assessment that was performed, to determine the eligibility of the planting areas of the entire project area. Specifically, the proponent should provide JPEG or other similar file types showing the land



## Preconditions

### 01 Eligibility

2. Planting area is ONLY eligible, if the land:
  - a. is planted with trees during the initial certification AND
  - b. is not a forest at the date of the project start AND
  - c. will result in the creation of a forest AND
  - d. has not been a forest for at least 10 years prior to the planting start OR has been a forest in the last 10 years prior to the planting start, but evidence is given that absolutely no relation between the project participants and the cause of deforestation exists (e.g. that the forest destruction was caused by force majeure)

Criterion 2d. must be proven by the interpretation of satellite images, aerial photographs, official maps or land-use records.

classification with the polygon boundaries of all planting areas in all Management Units so that the audit team can confirm that the planting areas were all not forest at the time of the Project start and 10 years before the planting date.

In the PDD Section 01 Eligibility, Images 01-00 through 01-05 fail to demonstrate that the planting areas were deforested 10 years before the project start date. The date of this analysis is from 2008. Additionally, the polygons that show the planting areas are not transparent so it is impossible to see if the planting areas are on grassland, shrub land, secondary forest, or primary forest. The proponent should resubmit these images with the polygons transparent so the audit team can assess this. NCR 01-03

Most of the Commercial plots inspected were obviously eligible. However, there are some forest patches across the plots which shall be identified in the maps and excluded from the eligible area. It was unclear on the ground whether they were officially included or excluded. By a review of the imagery at the ACP GIS Department, it was verified that large patches of forest were excluded, but not the small ones. In addition, it is not clear if the small patches achieve the 30% crown cover, requested by the National Forest Definition.

#### CARs / FARs / NCRs

**Corrective Action Request 01-01\*:** ACP shall exclude from the eligible area the Management Unit 6 Soberania 1. It also must be excluded from the ex-ante modeling of carbon stocks.

**Feedback project developer** (09 September 2013):

**Clarification:** the area is still eligible but not applicable to include it for this certification! No lack of commitment from the contractor is the reason. Instead is a natural fight between the planted trees and the existing vegetation. In this area it was not possible yet to kill *Saccharum spontaneum* and substitute the area with native trees. The area will be replanted and later included in the project.

2. All the areas from all the MUs that present growth problems due to difficulties of fighting *Saccharum spontaneum* were excluded from the ex-ante modeling of carbon stocks. See also MUs: 7,9,11,14 and ex12

3. Not all the area from MU6 present problems. Therefore this area was not excluded.

4. After flying the region; ACP identified some areas with limitations in the following MUs: 6, 7, 9, 11, ex12 and 14. The mentioned areas were excluded from the ex-ante modeling of carbon stocks. Once the areas are replanted, these areas will be in the future included in the project (See table 01-01, in page 6, under the Column: Eligible areas with limitations)

5. Additional for the case of MU6, Aerial photography with geo-references and a map showing the location of the Aerial photography is presented as Supporting documentation. This proves that there are areas inside MU 6 that the trees survived.

Supporting documentation

Ref. 06-30

Ref. 06-31

New maps with transparent MUs are presented. It is possible to distinguish where the forest and planting area is located.

An additional Eligibility analysis was conducted using Landsat images from 1996 to prove that the 4 polygons are eligible. See the maps in pages 20 to 22. The same vegetation classification was applied for all the polygons that for part of the MUs of agroforestry and silvopasture activities. Ref 07-08 contains the Landsat images that were used for the eligible study



## Preconditions

### 01 Eligibility

2. Planting area is ONLY eligible, if the land:
  - a. is planted with trees during the initial certification AND
  - b. is not a forest at the date of the project start AND
  - c. will result in the creation of a forest AND
  - d. has not been a forest for at least 10 years prior to the planting start OR has been a forest in the last 10 years prior to the planting start, but evidence is given that absolutely no relation between the project participants and the cause of deforestation exists (e.g. that the forest destruction was caused by force majeure)

Criterion 2d. must be proven by the interpretation of satellite images, aerial photographs, official maps or land-use records.

Landsat images were used with multispectral bands. The scenes used show medium and close infrared bands. By combining these bands it was possible to determinate the zones with grassland and shrubs (matorrales, pastizal, rastrojo)

During this analysis Land sat images from 1996, 1998 and 2000 were used depending on the planting start date (Ref. 07-08). It was possible to classified the eligible area according to more specific existing vegetation. The result of this classification determinate a mix of grassland and schrubland and they have some specific native names: matorrales, pasto and rastrojo. However, in all the cases the area is eligible. This means that in all the cases the area contains less than 30% of forest vegetation. Since the project contains more than 700 Polygons with an average size of 3 hectares, only four examples of different planting areas are provided in the PDD. For a further analisis of all the other 700 polygons it is possible to use the Landsat images provided in ref 07-08.

#### **Conclusion of the certifier** (27. September 2013):

The audit team agrees that it is likely that not all areas of the Soberania MU and (and other MUs) should be excluded due to low survival rates in the planted areas. The CAR was issued in the spirit of conservativeness, a foundational principle of carbon validation and verification. The evidence the proponent has submitted, in the form of aerial photography demonstrating areas that were planted and unplanted areas, is appropriate. The georeferenced aerial photography presented in reference 06-30 does establish that there are indeed areas within Soberania MU that have surviving trees. Upon review it is clear that the trees in these areas are distinct from surrounding remnant patches of forest, which have a much greater canopy height. Reference 06-31 provides a simplistic, but helpful overview of the location of the photos in reference 06-30 within the entire MU. The audit team has reviewed table 01-01 in the PDD and determined that the original estimated planting area of management units that experienced failures in seedling survival, has been reduced. These areas could be later integrated into the project if they are replanted. This enables greater accuracy and is in conformance.

#### **CAR closed**

**Corrective Action Request 01-02:** ACP must provide evidence, in the form of remote sensing data, aerial photography, or another means, that the identified silvopasture farms actually were not forest 10 years before the planting date, or those MU's must be removed from the monitoring unit, or the boundaries must be redrawn to exclude the areas in the farms that are forest.

#### **Feedback project developer** (09 September 2013):

Landsat images were used with multispectral bands. The scenes used show medium and close infrared bands. By combining these bands it was possible to determinate the zones with grassland and shrubs (matorrales, pastizal, rastrojo)

**1. Clarification:** ACP used a Landsat image of 1986 to probe that all the planting areas are eligible (see map and details in page 8 and 9). ACP did not used only a 1998 Landsat image for the eligibility analisis; as the auditors stated in this report. This image was only used to compare the existing vegetation.

**2.** ACP also used Landsat images from 1996, 1998 and 2000 to draw the polygons selected as eligible planting areas. See the new maps in the PD. This images are at least 10 years before the planting date.( Ref 07-08)

#### **Supporting documentation**

- 07-08: Landsat images from 1996,1998,2000
- MU maps using Landsat images that are at least 10 years older than the planting start date. (Pages 9-26)
- 01-10: Examples of the how the polygons were classified according to the existing vegetation. The same concept was applied for all the other polygons of agroforestry and silvopasture activities.



## Preconditions

### 01 Eligibility

2. Planting area is ONLY eligible, if the land:
  - a. is planted with trees during the initial certification AND
  - b. is not a forest at the date of the project start AND
  - c. will result in the creation of a forest AND
  - d. has not been a forest for at least 10 years prior to the planting start OR has been a forest in the last 10 years prior to the planting start, but evidence is given that absolutely no relation between the project participants and the cause of deforestation exists (e.g. that the forest destruction was caused by force majeure)

Criterion 2d. must be proven by the interpretation of satellite images, aerial photographs, official maps or land-use records.

#### Conclusion of the certifier (27. September 2013):

As required, the developer has provided sufficient evidence to demonstrate that land cover type of the silvopastoral areas that were of concern. The land cover is acceptably determined as pastureland or scrubland and is therefore eligible under the CarbonFix Standard.

#### CAR closed

**Corrective Action Request 01-03:** ACP shall provide evidence to transparently demonstrate that the planting areas are –or not- on grassland, shrub land, secondary forest, or primary forest.

**Feedback project developer** (09 September 2013):

1. The new maps provided show the boundaries between forest and non forest ( planting areas)
2. **Clarification:** For the agroforestry and silvo-pastoral activities is important to clarify that only the planting area is included to the project. This means that some farms of the stakeholders have also other areas with other land uses such as forest conservation. However only the eligible planting (more than 700 polygons) are part of the program PIEA. **“The auditors visited all the farm”**  
In the case of the commercial and conservation MUs, all the areas with forest ( protection areas) are visible in the new maps ( see PD pages 9 to 15)
3. To complement the transparency of the remote sensing analysis that was performed for the polygons of silvo-pasture and agroforestry activities, the PD provides 4 examples of the type of vegetation existing inside the planting area ( PD, page 20 to 22)). The Land sat images are part of the supporting documentation ( Ref 07-08)

#### Conclusion of the certifier (27. September 2013):

The project developer has provided appropriate evidence for the audit team to conclude with reasonable assurance that there is no material error in the demonstrate of the eligibility of the planting areas, noting that some planting areas in the Conservation MUs have been reduced in area to account for areas with little to no seedling survival. To facilitate greater transparency, the developer has added additional aerial photography into the PD that transparently demonstrates the eligible planting areas. The audit team accepts this evidence to close the CAR.

#### CAR closed

### Final Conclusion

- Accepted  
 Accepted with FAR  
 Not accepted with NCR

\* refers to ID of chapter + ID of the CAR for the chapter



Preconditions  
**01 Eligibility**

3. Planting area is NOT eligible, if the land:
- a. was deforested and thereafter replanted in order to generate CO2-certificates OR
  - b. is wetland OR
  - c. is situated on ground that is permafrost OR
  - d. is agriculture farming land and threatens the food security of the local population through the conversion to forest.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

- a. There is no evidence in the documentation or from the field audit to indicate that the planting area was deforested and later replanted to generate CO2 certificates. Deforestation, as verified through the remote sensing analysis and through stakeholder interviews typically occurred in the 1960-1980s. Additionally, most all Management Units contain remnant trees from before the planting began.
- b. In the Eligibility section of the PD, the proponent does not provide sufficient demonstration that the planting areas do not contain wetlands. The proponent only provides a map of the RAMSAR recognized wetlands of Panama. RAMSAR wetlands are those officially recognized as having global importance (FAR 01-01).
- c. The project is in the tropics and clearly permafrost is not an issue. The proponent documents this.
- d. The Conservation and Commercial Management Units occur on areas predominantly covered with Paja canalera (*Saccharum spontaneum*), an invasive grass which is very hard to remove. Hence no agriculture occurs on these lands. The agroforestry and silvopasture systems occur on either low productivity agricultural land and/or cattle pasture. The proponent cites scientific literature sources providing support that these activities will increase the productivity of the areas, possibly enhancing food security.

**CARs / FARs / NCRs**

**Forward Action Request 01-01:** ACP shall provide sufficient evidence to prove that wetlands do not exist in the planting areas.

**Feedback project developer** (09 September 2013):

Specific maps from the ACP watershed were provided to probe that no wetlands are inside the watershed, therefore, not inside the planting area. The ACP main objective is to protect the water bodies to guaranty enough water for the ships that cross the Panama Channel and drinking water for inhabitants of the cities of Colon, Panama and San Miguelito. (See page 24 in the PDD)

Images as Supporting documentation:

Ref 01-06-Humedales Fincas PIEA

Ref 01-07-Humedales ACP watershed

**Conclusion of the certifier** (27. September 2013):

The audit team reviewed the two maps provided by the PP in the PDD (Eligibility Chapter). One showing the geographical location of the eligible area and the wetlands in the watershed Corridor Region (conservation and commercial management units), and the other in the watershed Cri-Trinidad (silvopastoril and agroforestry management units). In both cases it is evident that wetlands (as defined by CFS) are not part of the eligible area.



## Preconditions

### 01 Eligibility

3. Planting area is NOT eligible, if the land:
- was deforested and thereafter replanted in order to generate CO<sub>2</sub>-certificates OR
  - is wetland OR
  - is situated on ground that is permafrost OR
  - is agriculture farming land and threatens the food security of the local population through the conversion to forest.

**FAR closed**

#### Final Conclusion

- Accepted  
 Accepted with FAR  
 Not accepted with NCR



Preconditions  
**01 Eligibility**

4. Evidence must be given, that in case any agricultural, agroforestry or silvopasture activities are taking place on the planting area, they contribute to the aim of creating a forest.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

All of the project planting types (agroforestry, silvopasture, commercial, and conservation plantings) were visited during the field visit. In agroforestry systems (i.e. MU 22) there is no doubt that the planting will lead to the creation of a forest according to the national definition of forest of Panama. These systems were mostly comprised of coffee (old plantations), cassava and plantain. The trees planted were: Inga (*Inga sp.*), Roble (*Tabebuia sp*), Maria (*Callophylum brasiliense*) and Laurel (*Cordia sp*). Some trees (around 50/ha) were left from the previous land use system. It is predicted that the site will be converted into a forest by the end of the project.

For silvopastoral systems (i.e. MU 31), the situation is different due to the history of these landscapes: degraded pasture with few isolated trees left. Trees are planted in a spacing of 20x20m. In one of the farm visited, there were only Nance trees planted (*Byrsonima crassifolia*), a fruit tree. Further monitoring will determine whether the growth and survival of these trees are subject to animal damage. As such, the creation of a forest here is not clear; the priority at the moment of the field visit it is to maintain a fruit tree plantation. If the planting experiences high survival rates a forest, as defined in Panamanian law, will be created.

More diversity of species (Roble, Caoba, Gliricidia and Espave) was found in other farm, but arranged in a living fence. The farmer reported that he did not receive any indication (from contractors or project proponent) about how to plant those trees, thus, he decided to plant them as living fences (perimeter of the plot).

In contrast, in other MU visited (silvopasture) it is not clear if the scarce native trees planted will result in the creation of a forest. Lack of commitment from contractors could be the main reason for the area to have few trees after at least one replanting event. Future monitoring certifications will evaluate the success of these plantings and whether they create a forest.

**CARs / FARs / NCRs**

See NCR 01-01

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Preconditions  
**01 Eligibility**

5. Evidence must be given that project activities will NOT lead to a long-term increase of greenhouse gas emissions in the carbon pool 'soil' on the project area.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

Irrigation, drainage, ploughing, planting operations, and forest operations are identified in the PD as potential project activities that could impact soil carbon in the project area. These activities are evaluated and considered unlikely to lead to a long-term increase in GHG emissions.

Irrigation activities are anticipated in the agroforestry and silvopasture lands, however no concrete evidence of this was found by the audit team in the field visit. It is unlikely that the scale of irrigation activities that may be implemented, would lead to increase in soil GHG emissions.

Regarding drainage activities, the audit team verified that no such activity took place in the project area.

In the management units visited, the audit team confirmed that ploughing was done according to the PD, which considers minimum impacts to the soil. Conservation, Agroforestry and Silvopastural plots are predominantly native species, and the high observed and projected survival rates indicates it is unlikely that ploughing will be required in the future except on new planting areas. Commercial plots consist mostly of teak plantations which do not require activities considered likely to significantly impact soil carbon.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Preconditions  
**01 Eligibility**

6. If litter (leaves and small branches) is extracted from the eligible planting area, it must be limited to the extent of not harming the nutrient balance of the soil.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

Although the audit team confirmed that litter is not extracted from the eligible planting area, the PD does not accurately mention if the project participants are allowed to use litter for example as fire wood. (FAR 01-02)

**CARs / FARs / NCRs**

**Forward Action Request 01-02:** ACP shall establish if the project participants are allowed to remove the litter (leaves and small branches) from the eligible planting area, and how this will be monitored during the project lifetime in order to provide sufficient evidence of the impact of the nutrient balance of the soil.

**Feedback project developer** (09 September 2013):

One of the main objectives of the project is to protect the region from soil erosion. Controlling soil erosion will help ACP to reduce the amount of sedimentations in the existing Dams. Rainfall erosion is the first cause of landslides and loose of soil nutrients. Due to this reason the project protects litter and it will not be removed it from the planting area. Instead it is expected that it will increase during the life cycle of the project. Notice that 50% of the trees planted in the agroforestry and silvopasture activities are classified as Services trees. This means that they will help to fix nitrogen, prevent erosion and increase the existing organic layer (ref 06-29,page 5, paragraph 1). For the conservation and commercial forestry polygons it is a must to keep the organic layer. This is indispensable to control the propagation of *saccarum spontaneum*.

Specific Supporting documentation:

- Ref 03-09-Manejo de la capa organica PIEA
- Ref 03-10-Manejo de la sombra PIEA
- Ref 06-29-Plan de monitoreo Forestal

**Conclusion of the certifier** (27. September 2013):

The audit team reviewed the first two documents (Plan de monitoreo forestal was not found). These two apparently correspond to internal documentation written by ACP and accepted by the project participants of the PIEA. Both documents clarify the objectives of the forest projects regarding the runoff, protection of the soils and the convenience for the ecosystem of letting the organic matter increase as a result of the management of the plantations. Although removal of litter is not explicitly prohibited, both documents remark the importance of it in reaching the objectives and combating the propagation of *Saccarum spontaneum*.

**FAR closed**

**Final Conclusion**

## Preconditions

### 01 Eligibility



6. If litter (leaves and small branches) is extracted from the eligible planting area, it must be limited to the extent of not harming the nutrient balance of the soil.

- Accepted
- Accepted with FAR
- Not accepted with NCR



## Preconditions

**02 Additionality**

1. Evidence must be given that the project is not business as usual. Therefore, the additionality analysis must be executed according to the latest version A/R CDM 'Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities'.

Link: <http://cdm.unfccc.int/methodologies/ARmethodologies/tools/>

Hereby, the first Point of STEP 0 can be omitted.

Note that some terms in this tool (e.g. CERs, A/R CDM project) differ from the terms defined by the CFS and shall be interpreted accordingly.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**Step 0

Evidence that sale of carbon credits was seriously considered in the decision to proceed with the project activity. The developer provides a range of pieces of evidence to support this idea.

It is clear that carbon sequestration is now considered a significant goal of the management of the Panama Canal watershed, with the ACP establishing baseline carbon dioxide emissions of ACP operations and ships transiting the Panama Canal in order to understand the role offsets can play in mitigation.

Additionally, the project has recently (March 2012) achieved validation of the Panama Canal Watershed reforestation project against another major carbon standard (CCB), demonstrating strong interest in carbon credits. The evidence provided is mostly dated after the project start date and demonstrates that carbon credits are considered important for the later plantations but not necessarily the earliest plantation (2007).

However, the ACP also submits a document (Reference 02-07, Convenio de Cooperación ANAM-ACP, Monitoreo de la Cuenca Hidrográfica del Canal de Panama), dated January 2006 (before the project start date), which does emphasize in its objectives the importance of monitoring vegetation growth and watershed management in the Panama Canal Zone in order to facilitate carbon projects. As such, this meets this requirement of the tool.

Step 1

The proponent identifies four alternative baseline scenarios including continuation of the pre-project land use (degraded land covered with Paja canalera (*S. spontaneum*)). Based on the audit team's analysis of the land cover in Panama during the field visit as well as interviews with multiple farmers the audit team concludes that the alternative land use scenarios have been appropriately selected.

Step 1b

The proponent demonstrates that all selected land use scenarios i) exist in the region, and ii) are legal. The audit team confirmed this through field observation in which several of these alternative scenarios were actually adjacent to the project planting sites, as well as through confirmation of legality through targeted interviews.

Step 2

The proponent demonstrates technical and financial barriers appropriately for the alternative baseline scenarios:



## Preconditions

**02 Additionality**

1. Evidence must be given that the project is not business as usual. Therefore, the additionality analysis must be executed according to the latest version A/R CDM 'Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities'.

Link: <http://cdm.unfccc.int/methodologies/ARmethodologies/tools/>

Hereby, the first Point of STEP 0 can be omitted.

Note that some terms in this tool (e.g. CERs, A/R CDM project) differ from the terms defined by the CFS and shall be interpreted accordingly.

**Pre-project land use:** There are effectively no barriers to this scenario. *S. spontaneum* is a globally renowned invasive grass species and there are well documented challenges to its restoration in many areas including Panama. It is very unlikely that without human intervention, that these areas would be reforested naturally given the likelihood of fire and the state of degradation.

**Reforestation activities in the absence of carbon finance:** There are reforestation projects in Panama but it is well documented that they do tend to happen in areas with better soil that are less dominated by *Saccharum*. The project had some clear MUs that failed to be reforested because the implementing people did not have the technical ability to successfully manage the invasive grass. There are clear investment and technical barriers. Interviews with local farmer confirmed in the agroforestry and silvopasture areas that the farmers did not have the capacity to reforest the land, or the technical knowledge.

**Cattle ranching:** There are technological barriers to silvopasture system implementation in cattle raising areas. This was confirmed through interviews with farmers during the field audit.

Step 3:

The project confronts many of the typical challenges of smallholder based PES programs. Project costs are high as they require training and coordination of hundreds of smallholder members as well as experimental eradication of an invasive grass. Project benefits are primarily ecosystem services which are non monetized other than through carbon finance. The project will earn some money from timber harvesting in the Commercial plantation areas (other areas will not generate revenue for the project).

The additionality assessment compares the revenue earned only from the commercial plantation (other planting areas do not generate revenue) to the IRR of a Panamanian government bond and the interest rate of a saving account in Panama. Appropriate references are provided for these alternatives. Without the carbon revenue the ACP project is less financially attractive (IRR is lower) than the two alternative options. With the assumption of sales of carbon credits, the project becomes either more attractive than the government bond, or more attractive than both the government bond and the savings account, depending on the hypothetical carbon credit price. Carbon credit prices (Table 02-01) are credible given credit prices for CarbonFix projects cited in recent reports. For example the 2013 State of the Voluntary Carbon Market report (Ecosystem Marketplace) cited a 2011 CarbonFix average offset price of \$10.7/tCO<sub>2</sub>e. It is clear from the analysis that the project activity without carbon credits is less profitable than alternative options because i) the IRR is less than the expected IRR of a Panamanian Savings Account or a Government Bond, and ii) the IRR only becomes higher than these in the assumption of well priced carbon credits. Further, this assessment only evaluates the revenue earned from the Commercial planting area. The agroforestry, silvopasture, and conservation Management Units have substantial up front costs and are in effect subsidized by the future revenue that may be earned from the commercial area. There will be no revenue earned from these other three project activities.

Step 4:

The proponent appropriately lists similar project activities by different actors in the country with and without carbon finance. There are other similar plantation projects in the country that do not use carbon finance, however, these project are either 80% or 100% Teak (*Tectona grandis*) plantations and none of them include the substantial Conservation Management Units, Silvopastoral Management Units, and Agroforestry Management Units that are a core part of the ACP project. The Commercial Management Units are the only part of ACP that is comparable. Additionally, there are projects developed by Forest Finance that are similar to the commercial Management Units of ACP, but these areas are also certified to CCB, a carbon standard.



Preconditions

**02 Additionality**

1. Evidence must be given that the project is not business as usual. Therefore, the additionality analysis must be executed according to the latest version A/R CDM 'Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities'.

Link: <http://cdm.unfccc.int/methodologies/ARmethodologies/tools/>

Hereby, the first Point of STEP 0 can be omitted.

Note that some terms in this tool (e.g. CERs, A/R CDM project) differ from the terms defined by the CFS and shall be interpreted accordingly.

There are similarities between the proposed ACP project and the other identified projects, yet there are substantial and meaningful differences that make the ACP project fundamentally different and contribute to its additionality.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Preconditions  
**02 Additionality**

2. Evidence must be given that the most likely without-project-scenario would not lead to an increase of 'woody biomass' on the eligible planting area.

If this is not the case, the baseline must refer to the biomass that would have been on the area in the long-term.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The most likely without project scenario is a continuation of the pre project scenario, which is domination of the planting sites by invasive *Saccharum spontaneum* grasslands. Based on interviews and literature review the audit team concludes that this baseline scenario would not lead to an increase in wood biomass in the eligible project area of any meaningful amount. It is hypothetically possible that some areas would regenerate to forest over a long time period, however given the likelihood of fire and the catastrophic fires that occur in *Saccharum spontaneum* areas, as well as the high population density in the project zone it is unlikely that there would be an increase in woody biomass.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Preconditions  
**02 Additionality**

3. Evidence must be given that the project contributes to a more sustainable development than the most likely without-project scenario, short-, mid- and long-term.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The baseline scenario is clearly the continuation of the pre project activities, which in all the management unit scenarios is the continuation of cattle on degraded lands predominantly covered by aggressive grass and related degradation of unproductive agricultural land to pasture. To the contrary, the implementation of the project pursues conservation and commercial purposes generating local benefits to the environment and project participants from short to the long-term. The project scenario is considered by the audit team to be more likely to lead to sustainable development than the baseline scenario.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

## Sustainable Forest Management

### 03 Forest Management



1. A description of the project's general forest management objectives must be given.

#### PDD check

- sufficient / satisfactory information provided  
 consistent information provided

#### Supporting documents check

- up-to-dateness of information  
 reference integrity to the content in the PDD  
 accuracy of the information

#### Evidence found during field-visit

- observed or experienced during the field-visit  
 confirmed by interview(s)  
 confirmed by general impression

### Findings

The PDD states the general objectives of forest management, describing the different activities that are taking place during the development of the project. However, the forest management objectives differ depending on the MU planting activity planting activity (commercial, agroforestry, silvopasture or conservation objectives). These objectives are not well described in this section. (FAR 03-01)

In the field, the audit team evaluated some of the activities presented in this section, such as land preparation, and planting. There are some inconsistencies with the data provided on the PDD, such as spacing for silvopastoral systems, which in the field were observed at 20x20m while the PDD states 10x10m.

The nursery was not visited but the technical advisor of the project described a nursery ran by the women of the surrounding of Chagres National Park. Women collect the seeds from the forest for the native species. On the other hand, the farmers from Capira sector that participate in the project received the seedling from contractors, there were no local nurseries established yet.

According to the description of activities for commercial plots which will comprise thinning and pruning and a final cut at 25 years, it will not correspond to the Selective Harvesting method as mentioned in the PD. The rotation harvesting approach will be used. During the visit, a technical advisor in charge of the agroforestry systems mentioned that timber species in the farms will be harvested upon farmer's convenience. They expressed that about 20% of the trees will be harvested. (FAR 03-01)

### CARs / FARs / NCRs

**Forward Action Request 03-01:** ACP shall elaborate more about the objectives and activities that will take place during the project lifetime, mainly clarifying in the PD and related documents which management units will be grown to harvest timber selectively vs via rotation harvesting.

**Feedback project developer** (09 September 2013):

1. The PD was updated with more specific information from the objectives.

Additional supporting documentation regarding the management plan objectives of all the activities is provided

☑ Agro-forestry: Ref 03-11- TDR Licitacion manejo agroforestal y silvopastoril, Ref 03-14-Plan de manejo fincas agroforestales

☑ Silvo-pasture: Ref 03-11- TDR Licitacion manejo agroforestal Ref 03-15-Plan de manejo fincas silvopastoril

☑ Commercial: Ref.03-17-Plan de manejo reforestacion comercial

☑ Conservation: Ref 03-12-TDR-Plan de manejo conservacion -Soberania

2.The PD was corrected and specifies the harvesting model that will be used for each activity as following:

☑ Conservation forestry: conservation for 50 years

☑ Commercial: rotation period of 25 years

☑ Silvo-pasture: Selective; Frutal trees and services trees ( total 80%) are conservation for a period of 50 years and the commercial trees ( 20%) will be logged after 25 years.

☑ Agroforestry: Selective; trees and services trees ( total 80%) are conservation for a period of 50 years and the commercial trees ( 20%) will be logged after 25 years.

## Sustainable Forest Management

### 03 Forest Management



1. A description of the project's general forest management objectives must be given.

\*In the PD for agro-forestry and silvo-pasture activities selective logging is used as harvesting model.

**Conclusion of the certifier (27. September 2013):**

From the new supporting documents submitted, it is now clear that only the conservation management units will not be harvested. The commercial, silvopasture and agroforestry MUs will be harvested according to the harvesting model explained in the PD but also in the legal documents signed by the ACP as the project developer, and the land owners as the project participants. These documents establish that 20% of the commercial trees used in the agroforestry and silvopasture management units will be logged after year 25. Selective harvest is defined to happen in the agroforestry and silvopasture management units. It has been clarified that the commercial MUs will be harvested according to rotation forestry approach.

**FAR closed**

#### Final Conclusion

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 03 Forest Management



2. Evidence must be given that the boundaries of the project area, planting area (eligible and non-eligible), management units and nature conservation area are clearly defined and visible in the field.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

### Findings

Commercial plantations are clearly defined in the maps. The audit team verified with the GPS unit the boundaries of the sampled polygons and these coincided with the information provided in the PDD. On the ground, there is no clear evidence of the boundaries among different management units. There are also some transitional sites in conservation MUs where is not visible where plantations were established due to the lack of demarcation of the limits. In commercial MUs, there were detected some forest remnants which are very small and are not excluded from the project demarcation. There are some questions regarding eligibility (see this section). FAR 03-02

For agroforestry and silvopastoral MUs, there were no nonconformities observed for the boundaries demarcated on the ground due to the monitoring of cadastral/mapping system in place, which is one of the requirements to be eligible in the PIEA. The relevant government agency monitors the MU boundaries as part of the process of the landowners receiving land tenure.

### CARs / FARs / NCRs

**Forward Action Request 03-02:** ACP shall define the transitional sites on the ground where the forest and conservation MU were established. Additionally, on commercial plantations ACP shall make the demarcation of the boundaries clear taking into account the forest patches inside these MU's.

**Feedback project developer** (09 September 2013):

The demarcation was done in the maps and in the field the use of living fences and also barbed wire to protect the planting areas.

For the commercial and conservation MUs all the small forest patches inside the polygons were excluded from the planting eligible area (See maps in the PD, pages 9-15).

For the agroforestry and silvo-pastoral activities is important to clarify that only the planting area is included to the project. This means that some farms of the stakeholders have also other areas with other land uses such as forest conservation. However only the eligible planting (more than 700 polygons located in different districts) are part of the PD.

Example: Finca Juan Benitez with a total area of 26 hectares, the polygons included to the PIEA are only 7,3 hectares ( Ref. 03-14, page 4, point 3.1.1)

All the Fincas have a management plan and it is possible to see with a map how the activities are distributed (see maps in ref. 03-14, pages 13-14).

**Conclusion of the certifier** (27. September 2013):

The FAR 03-02 will remain open since observations from the field are necessary to make sure of the compliance.

**FAR 03-02 remains open**

### Final Conclusion

## Sustainable Forest Management

### 03 Forest Management



2. Evidence must be given that the boundaries of the project area, planting area (eligible and non-eligible), management units and nature conservation area are clearly defined and visible in the field.

- Accepted
- Accepted with FAR (03-02)
- Not accepted with NCR

# Sustainable Forest Management

## 03 Forest Management



3. A description of the following tree species characteristics must be given:
- a. Origin and distribution of the tree species (indicate if the species are native or not)
  - b. Provenance of the seeds
  - c. Main purpose / Use of trees
  - d. Possible pests and diseases
  - e. Time when forest products are foreseen to be used

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

ACP reports in the PD a total of 30 species planted. A table was provided including all the tree species and characteristics of the tree species. The audit team has reviewed this information and confirmed that the information in the PDD is sufficient and matches observations made in the field.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 03 Forest Management



4. Evidence must be given that at least 10% of the project area is managed
- a. as a nature conservation area OR
  - b. to meet a national or sub-national HCV area definition.

Criterion 4. does not have to be fulfilled in case more than 30% of the project area is managed according to chapter '06 CO<sub>2</sub>-fixation - Option 1b) Conservation forest'.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

According to the PDD, 1770 ha out of 2985 ha of eligible planting area (note that following the audit, the eligible planting area currently planted was revised downward to 2458 ha) were selected for Conservation purposes. It means that 30.49% of it will be managed as a nature conservation area. Considering the eventual maximum project area (10,000 ha), this guarantees that at least 17.7% will be maintained for conservation.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 03 Forest Management



5. Evidence must be given that the nature conservation area is managed in order to establish, maintain or restore the natural ecosystem of the landscape the project is integrated in.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

There is sufficient evidence provided that ACP is seeking to restore the natural landscape along the watershed. The project utilizes several native species in the conservation area and includes a rigorous monitoring and research program in collaboration with the Smithsonian Tropical Resources Institute (STRI). During the field visit some MUs of Soberania National Park and Ciudad del árbol were inspected. These sites showed elements of initial secondary forest succession such as: 1) pioneer tree species detected, which were not planted by the project, but were natural regeneration; 2) soil composition by the presence of forest litter showed the recovery of the ecosystem. According to the interview held with the technical expert, wildlife animals' footprints were spotted by the workers, which help to spread the seeds from the adjacent rainforest to the conservation MUs proposed.

The audit team has confirmed through interviews, field observations and document review that the nature conservation area is managed for natural ecosystem restoration.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 03 Forest Management



6. Evidence must be provided that the protection or management of the nature conservation area enhances habitat connectivity.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

### Findings

Two national parks were visited along the audit visit: Chagres and Soberania NP, which are extremely important for the project due to the extension of the effective protected area and buffer functions for flooding control. The Panama Canal Watershed forest represents 80% of the total forest in Panamá and just Chagres NP represents 55% of forest cover along PCW. In their adjacent areas, reforestation with native species was established to reinforce these protected areas and create a continuous mass of vegetation that could connect with these core areas simulating a corridor for wildlife protection, assuring the preservation of the forest integrity. There are also other conservation areas into the project that are connected by reforestation projects and documented in the PDD like Camino de las Cruces National Park, Gatun Lake and Natural Metropolitan Park.

Within the management units, it is also evident that riparian forests for instance, or patches of natural forest or even sparse trees are left standing in order to promote the connectivity with native species plantation plots.

The project design and management has demonstrated a clear dedication and ability to enhance habitat connectivity.

### CARs / FARs / NCRs

N/A

### Final Conclusion

- Accepted
- Accepted with FAR
- Not accepted with NCR

## Sustainable Forest Management

### 03 Forest Management



7. Key figures on the following areas must be provided:

- Project area
- Planting area(s)
- Eligible planting area(s)
- Nature conservation area(s)

#### PDD check

- sufficient / satisfactory information provided
- consistent information provided

#### Supporting documents check

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

#### Evidence found during field-visit

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

### Findings

- Image 01-01 clearly depicts the total project area.
- The planting areas cited in the PDD Section 03 match with the planting areas reported in associated supporting documents. However, there is one exception. There is conflicting information in project documents regarding the planting date of Polygon 10 of the Ciudad del Arbol Management Unit, in the Conservation portion of the project. File 06-21-ACP in the folder 06, CO2 Fixation states that the planting date of this polygon was 2006, while the "Certificates and Management Units" document reports the planting year for that polygon as 2007, as does Section 03 of the PDD. (FAR 03-03).
- Image 01-01 clearly depicts the total project zone as well as the eligible planting areas.
- The Nature Conservation area currently makes up 30.5% of the area that has been planted thus far. Evidence demonstrating this area is provided in the PDD under the Forest Management Section as well as in supporting documentation that has been provided to the audit team. The audit team independently verified the planting of the Nature Conservation area. However, as noted above, it appears that one of the Management Units in the Conservation area is unplanted. However, even if this area is removed, the Nature Conservation area will still be greater than 10%.

### CARs / FARs / NCRs

**Forward Action Request 03-03:** ACP shall clarify the project area (in hectares) of all the management units in order to avoid conflicting information regarding the planting year, i.e. Polygon 10, in the Ciudad del Arbol Management Unit, in the Conservation portion of the project.

**Feedback project developer** (09 September 2013):

The PD was reviewed and proved that the information is the same in all the supporting documentation and the PD. The main changes Ciudad del arbol are mentioned below:

- Ciudad del arbol changed from 3 MUs to 2MUs: EX MU12 has tree growth limitations
- MU 10 was planted in 2006 with 50 hectares
- MU 11 was planted in 2007 with 70 hectares
- EX MU12: The planted are establish in 1998 with 86 hectares has limitations due to *saccarum spontaneum*. Therefore it was excluded from this initial certification ( see page 14, map MU10-11 Ciudad del arbol).

**Conclusion of the certifier** (27. September 2013):

The audit team reviewed the following report as well as the updated PDD and confirmed that the areas for MU 10 and MU 11 now are the same.

## Sustainable Forest Management

### 03 Forest Management



7. Key figures on the following areas must be provided:
- Project area
  - Planting area(s)
  - Eligible planting area(s)
  - Nature conservation area(s)

[http://www.climateprojects.info/chameleon/outbox//6f15ea186eab22e0bf46877cd6e7e5ec/Management-Units\\_ACP\\_CFS.pdf](http://www.climateprojects.info/chameleon/outbox//6f15ea186eab22e0bf46877cd6e7e5ec/Management-Units_ACP_CFS.pdf)

Here, MU 010 eligible area is 48 ha while MU 011 eligible area is 44 ha. The original discrepancy was a result of differences between the total MU area and the MU area with limitations (areas have been removed from the MU due to small patches of remnant forest not planted by the project).

**FAR 03-03 is CLOSED**

#### Final Conclusion

- Accepted  
 Accepted with FAR  
 Not accepted with NCR

# Sustainable Forest Management

## 03 Forest Management



8. Shapefiles with the following information must be submitted through ClimateProjects:
- Project area(s)
  - Management Units

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

### Findings

The developer has provided shapefiles of the project area to the Climate Projects site, along with accompanying information including roads, lakes, towns, etc. Additionally the developer has provided shapefiles with each Management Unit and the distinct polygons that make up each Management Unit (for example some Agroforestry Management Units contain several farms that are clustered close together). The requirement has been fulfilled.

### CARs / FARs / NCRs

N/A

### Final Conclusion

- Accepted
- Accepted with FAR
- Not accepted with NCR

9. The certification body may require the submission of shapefiles with the following information:
- Land-use classes of the project area 10 years prior to planting start for '01 Eligibility'
  - Wetland areas within the project area for '01 Eligibility'
  - Nature conservation area(s) for '04 Environmental Aspects'
  - Neighbours of the project (individuals, villages, towns, etc.) for '05 Socio-economic Aspects'
  - Eligible planting area and non-eligible planting area for '06 CO<sub>2</sub>-fixation'
  - Land-use classes of the project area just before the planting start for '08 Baseline'
  - Infrastructure of the project (roads, rivers, houses, etc.) for '11 Capacities'

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

# Sustainable Forest Management

## 03 Forest Management



9. The certification body may require the submission of shapefiles with the following information:
- a. Land-use classes of the project area 10 years prior to planting start for '01 Eligibility'
  - b. Wetland areas within the project area for '01 Eligibility'
  - c. Nature conservation area(s) for '04 Environmental Aspects'
  - d. Neighbours of the project (individuals, villages, towns, etc.) for '05 Socio-economic Aspects'
  - e. Eligible planting area and non-eligible planting area for '06 CO<sub>2</sub>-fixation'
  - f. Land-use classes of the project area just before the planting start for '08 Baseline'
  - g. Infrastructure of the project (roads, rivers, houses, etc.) for '11 Capacities'

### Findings

- a. Image 01-01 has been submitted to demonstrate the land classes 10 years prior to the planting start, however this image does not show the specific project area polygons of the planting areas. Additionally, there is no legend describing the actual land cover types in the image. Please see NCR 01-02, in Section 01, Eligibility of this report.
- b. Please see FAR 01-01 under Section 01 Eligibility of this report.
- c. The proponent has submitted the requested shapefiles
- d. The shapefiles in the folder specified in the PDD include roads, population centers, etc.
- e. Image 01-01 depicts the eligible planting area and the total project zone, which is larger than the eligible planting area.
- f. Image 01-02 depicts the land-use classes of the project area and project zone in 2008, prior to the planting start. This is not a shapefile, but is acceptable.
- g. Shapefiles of project infrastructure has been submitted in the specified folder.

### CARs / FARs / NCRs

N/A

### Final Conclusion

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 04 Environmental Aspects



1. The project developer must provide a description of the different land-use classes of the project area.  
 If significantly different land-use classes are bordering the project area, they must also be described.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Cover Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 04 Environmental Aspects



2. Evidence must be given that the project has net-positive ecological impacts.

Therefore,

- a. positive ecological impacts of the projects must be enhanced AND
- b. negative or potential negative ecological impacts must be mitigated.

Descriptions of the following project characteristics must be given in regard to criteria 2a. and 2b.:

- Soil                      Nutrients, Erosion
- Water                    Quality, Quantity
- Biodiversity          Flora, Fauna
- Climate                Temperatures, Precipitation

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 04 Environmental Aspects



3. All endangered and critically endangered species of the IUCN Red List must be identified and evidence must be provided that appropriate measures are put in place to protect them.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 04 Environmental Aspects



4. Evidence must be given that the use of chemical products is
- a. justified AND
  - b. documented AND
  - c. minimized

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

### Findings

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

### CARs / FARs / NCRs

N/A

### Final Conclusion

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 04 Environmental Aspects



5. Evidence must be given that waste is disposed in an environmentally appropriate way.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 04 Environmental Aspects



6. Evidence must be given that 15 meter wide buffer strips along permanent or temporary water courses (streams, rivers, wetlands) are implemented. These buffer strips must be

- part of the nature conservation area, OR
- must be managed according to '06 CO<sub>2</sub>-fixation - Option 1b) Conservation forest'.

In both cases only native tree species are allowed to be planted.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11.

<http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 04 Environmental Aspects



7. Evidence must be given that no genetically modified species are being used.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 04 Environmental Aspects



8. The project management shall plant native species in mixed stands and in case the timber of the forest is being used, selective harvesting management shall be applied.

If this criterion is not met, the project developer must justify its

- choice of tree species
- silvicultural system
- harvesting method

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

### Findings

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11.

<http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

### CARs / FARs / NCRs

N/A

### Final Conclusion

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 04 Environmental Aspects



9. Evidence must be given that all species planted are site-adapted under changing climate conditions.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 05 Socio-Economic Aspects



1. Evidence must be given that the project has net-positive socio-economic impacts.

Therefore,

- a. positive socio-economic impacts of the projects must be enhanced AND
- b. negative or potentially negative socio-economic impacts must be mitigated.

For criterion 1a. descriptions of the following aspects must be given:

- Creation of employment
- Capacity building of project workforce
- Welfare activities

For criterion 1b. descriptions of the following aspects must be given:

- Displacement of people
- Spiritual, religious, or other socially important places influenced by the project activities

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 05 Socio-Economic Aspects



2. Stakeholders must be subject to free, prior, and informed consent on project activities that may have an influence on them.

With all stakeholders groups an agreement on the continuous dialog shall be established from the project start. In this agreement the following topics shall be addressed:

- Contact person that represents the stakeholder group
- Means, frequency and contents of information exchange
- Standard procedure to address and solve concerns

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11.

<http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 05 Socio-Economic Aspects



3. Evidence must be given that the working staff is able to organize themselves and negotiate with their employers on a voluntary basis.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 05 Socio-Economic Aspects



4. Evidence must be given that the working staff's working environment is kept safe and risk free.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11.

<http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 05 Socio-Economic Aspects



5. Evidence must be given that no children under the age of 16 are working for the project.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11.

<http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 05 Socio-Economic Aspects



6. Evidence must be given that contracts are clearly defined and include the following aspects:
- |  |  |
|--|--|
| <p><b>For employees</b></p> <ul style="list-style-type: none"> <li>a. working hours and leave days</li> <li>b. duties</li> <li>c. salary</li> <li>d. modalities on health insurance</li> <li>e. modalities on the termination of the contract</li> </ul> | <p><b>For contractors</b></p> <ul style="list-style-type: none"> <li>a. tasks (quantity, quality, time)</li> <li>b. payment</li> <li>c. modalities on the termination of the contract</li> </ul> |
|--|--|

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

### Findings

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

### CARs / FARs / NCRs

N/A

### Final Conclusion

- Accepted
- Accepted with FAR
- Not accepted with NCR

# Sustainable Forest Management

## 05 Socio-Economic Aspects



7. Evidence must be provided that preference is given to working staff from neighbouring areas.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11.

<http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

CO<sub>2</sub>-Certificates  
**06 CO<sub>2</sub>-Fixation**



1. The present CO<sub>2</sub>-fixation must be assessed, once the average tree height within a management unit exceeds 3 meters. Hereby, the CarbonFix guideline 'Forest Inventory' must be followed.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The audit team observed in the field that the majority of trees in the Conservation Management Units were over 3m tall. The majority of Tectona trees in the Commercial Management units were also over 3m tall. Management units focused on other species in the Commercial Management Units (for example, *Terminalia amazonia*) were not 3m tall.

The project developer has not demonstrated compliance with this requirement as the developer has not evaluated the present CO<sub>2</sub> Fixation in these Management Units where the average tree height is greater than 3m. The project developer must use the CarbonFix guideline "Forest Inventory" to assess the present CO<sub>2</sub> Fixation and report these findings in an updated Monitoring Report to be submitted to the audit team for review. (NCR 06-01)

**CARs / FARs / NCRs**

**Corrective Action Request 06-01:** ACP shall assess the present CO<sub>2</sub>-fixation by using the CarbonFix guideline "Forest Inventory" and report these findings in an updated Monitoring Report. The measurements shall be done in all the management units in which tree height exceeds 3 m.

**Feedback project developer** (09 September 2013):

1. ACP is developing a complete monitoring system for 2014. All the MUs with a tree high that exceeds 3 meters will be measure.
2. Until 2013, ACP has developed an initial Monitoring system guide that is presented ( Ref.06-29)
3. A Forest Inventory is presented as supporting documentation for the MUs that have tress with an average high that exceeds 3 meters. The MUs are: 1,3,12,10,11. See Ref ( 06-33,34,35,36)

**Conclusion of the certifier** (27 September 2013):

The audit team has reviewed the supporting references. The developer has made substantial progress towards meeting the requirements of the CarbonFix Standard, that Management Units where the tree height has attained 3m should be subject to a forest inventory (following the guidance of the CarbonFix Standard) and growth models should be updated accordingly. However, the project is not yet in full compliance with this requirement. The developer must take additional actions.

**CAR 06-01 converted to FAR 06-01**

**Final Conclusion**

- Accepted
- Accepted with FAR (06-01)
- Not accepted with NCR

CO2-Certificates  
**06 CO2-Fixation**



2. The future CO2-fixation is determined by a management unit specific growth-model.

Evidence must be given, that growth-models are based on credible scientific sources and site-adapted factors.

Evidence must be given that before any monitoring certification, the management unit specific growth-models are adjusted according to the latest actual monitoring data gained through the assessment of the present CO2-fixation.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The Forest Finance model that the developer uses estimates the CO2-fixation by each project activity (Commercial, Conservation, Agroforestry, and Silvopastoral) and then multiplies this estimated CO2 fixation per hectare by the area of each specific Management Unit. This meets the CarbonFix requirements. The developer provides all sources for the model. The audit team has reviewed the source data, including wood density, root to shoot, and Biomass Expansion Factor (BEF) values. All values reviewed and used in the model have been cited accurately from the literature source they are derived from. Input values are primarily from published literature, or for less common species, IPCC default data is used (for example for the Mean Annual Increment for native species in the Conservation Management Units.) Acceptable sources are used for the growth models.

This is the initial certification, so the growth models will be adjusted based on tree growth at the first Monitoring Certification in the future.

However, although all sources for the growth models are acceptable, there appears to be some errors in the calculations in the model. First, the baseline carbon stocks are calculated incorrectly (see the Baseline section of this report). (NCR 06-02)

**CARs / FARs / NCRs**

**Corrective Action Request 06-02:** ACP shall review the calculations in the growth models in order to correct the errors identified and also include the baseline carbon stocks.

**Feedback project developer** (09 September 2013):

For the eligible planting area we are using a higher average baseline considering that in some areas it was possible to find only grassland, but in some other areas it was possible to find a mix of Rastrojo and/or sparse trees (shrubland). The complex distribution and the size of the polygons that comprehend the MUs is the reason to choose a higher baseline and avoid possible uncertainties of possible existing shrubland inside the MUs( following the CFS conservative approach). Some of the polygons are smaller than two hectares, and therefore it was better to keep a higher average baseline. The value 11,7 tons/ha for commercial and conservation forestry and the value 17,2 t/ha for agroforestry and silvopasture of dry biomass was selected based in the study from Oregon and del Valle ( 2001). The study was done in a similar tropical region with the same existing shrubland vegetation (rastrojo). (ref 08-04, 08-05)

**Conclusion of the certifier** (27. September 2013):

The project developer has addressed the primary concern of the nonconformity—that the baseline stocks were underestimated given the significant amount of individual trees and shrubs within the project areas, rather than just pasture/grassland. The project developer has chosen a new suitable baseline carbon stock value for

## CO<sub>2</sub>-Certificates

### 06 CO<sub>2</sub>-Fixation



2. The future CO<sub>2</sub>-fixation is determined by a management unit specific growth-model.

Evidence must be given, that growth-models are based on credible scientific sources and site-adapted factors.

Evidence must be given that before any monitoring certification, the management unit specific growth-models are adjusted according to the latest actual monitoring data gained through the assessment of the present CO<sub>2</sub>-fixation.

commercial and conservation areas, as well as a new suitable value for agroforestry and silvopasture areas. These values come from an appropriate reference. The CAR is closed.

**CAR closed**

#### Final Conclusion

- Accepted  
 Accepted with FAR  
 Not accepted with NCR

CO2-Certificates  
**06 CO2-Fixation**



3. In case of 'selective harvesting' or 'conservation forest', the future CO<sub>2</sub>-fixation is based on the equilibrium stand volume during the crediting period of the project.

If the equilibrium stand volume is not yet reached by the end of the project's crediting period, the future CO<sub>2</sub>-fixation is determined by the 'stand volume' of the year the crediting period ends.

Evidence must be given through the project characteristics (tree species, project participants, etc.) and its silvicultural objectives that the forests will be used in a 'selective harvesting' regime or will be 'conserved' (no use of timber).

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The PDD claims that the Conservation, Agroforestry, and Silviculture Management Units either will not be harvested (Conservation Forest, some Agroforestry and Silviculture areas), or will be selectively harvested. For these Management Units, the model estimates the CO<sub>2</sub>-fixation based on the stand volume at the end of the crediting period (25 years) and is in conformance with the requirement.

However, the PDD mistakenly reports that the Commercial Management Units will be subject to selective harvesting when in fact they will actually be subject to rotation harvesting, based on observation and interviews in the field. As a result, this part of the PDD must be updated to be accurate. Additionally the model must be updated to accurately calculate carbon sequestration. Finally, per Clarification Request ID030 from the CarbonFix technical board (<http://www.carbonfix.info/CarbonFix-Standard/CarbonFix-Standard-v32/Clarification-Requests.html>), the modeling must be updated to calculate carbon sequestration over a minimum 30 year time period. Currently it is modeled only over a 25 year time period. The CarbonFix has clarified that project lifetime and crediting time period should not differ. (NCR 06-03).

**CARs / FARs / NCRs**

**Corrective Action Request 06-03:** ACP shall clarify the silvicultural method for all the management units in the PD. Additionally the model must be updated to accurately calculate carbon sequestration depending on the method selected.

**Feedback project developer** (09 September 2013):

The commercial management units have a rotation period of 25 years. The PDD was corrected and also the climateprojects web page was updated to calculate carbon sequestration over a minimum 30 year time period (as the standard requires).

**Conclusion of the certifier** (27. September 2013):

The audit team has confirmed that the PDD has been updated such that Section h of Section 03 Forest Management now identifies the harvesting regime for the commercial areas as rotation forestry with a 25 year rotation period, rather than the original erroneous assertion of selective harvesting. The audit team has reviewed the climateprojects web page (output file: Management-Units\_ACP\_CFS.pdf) and confirmed that the ex-ante carbon modelling is now projected over 30 years. This is in conformance with the CarbonFix Standard. The CAR is closed.

**CAR closed**

## CO<sub>2</sub>-Certificates

### 06 CO<sub>2</sub>-Fixation



3. In case of 'selective harvesting' or 'conservation forest', the future CO<sub>2</sub>-fixation is based on the equilibrium stand volume during the crediting period of the project.

If the equilibrium stand volume is not yet reached by the end of the project's crediting period, the future CO<sub>2</sub>-fixation is determined by the 'stand volume' of the year the crediting period ends.

Evidence must be given through the project characteristics (tree species, project participants, etc.) and its silvicultural objectives that the forests will be used in a 'selective harvesting' regime or will be 'conserved' (no use of timber).

#### Final Conclusion

- Accepted  
 Accepted with FAR  
 Not accepted with NCR

## CO<sub>2</sub>-Certificates

### 06 CO<sub>2</sub>-Fixation



4. In case of rotation forestry, the future CO<sub>2</sub>-fixation is based on the mean stand volume during the first rotation period.

#### PDD check

- sufficient / satisfactory information provided  
 consistent information provided

#### Supporting documents check

- up-to-dateness of information  
 reference integrity to the content in the PDD  
 accuracy of the information

#### Evidence found during field-visit

- observed or experienced during the field-visit  
 confirmed by interview(s)  
 confirmed by general impression

### Findings

The Conservation, Agroforestry, and Silvopasture Management Units will not use Rotation Forestry, as confirmed in the PDD, field observations, and interviews during the field audit.

The PDD states that the Commercial plantation area will be subject to Selective Harvesting. Observation and interviews during the field audit confirm that it is much more likely that the Commercial plantation will be harvested with Rotation Harvesting. As a result the PDD and the model must be updated and to use the equation to calculate mean stand volume under "Option 2" in the CarbonFix Standard in the CO<sub>2</sub> Fixation Section. Additionally please note that the sequestration must be calculated over a 30 year time period per the CarbonFix Clarification Request ID 030 <http://www.carbonfix.info/CarbonFix-Standard/CarbonFix-Standard-v32/Clarification-Requests.html> (NCR 06-04).

### CARs / FARs / NCRs

**Corrective Action Request 06-04:** ACP shall use the correct equation to estimate the carbon stocks, in this case to use the equation to calculate mean stand volume under "Option 2" for the commercial plantation areas (rotation harvesting). The PDD must be updated with the final results.

**Feedback project developer** (09 September 2013):

In the PDD the template was updated taken into account the following information:

- Conservation forestry:** conservation for 50 years
- Commercial:** rotation period of 25 years
- Silvo-pasture:** Selective; Frutal trees and services trees ( total 80%) are conservation for a period of 50 years and the commercial trees ( 20%) will be logged after 25 years.
- Agroforestry:** Selective; trees and services trees ( total 80%) are conservation for a period of 50 years and the commercial trees ( 20%) will be logged after 25 years.

Given the mix of species involved in the commercial plantations, with currently unknown growth rates, the developer has chosen not to implement the specific equation under "Option 2" in the CarbonFix Standard, but instead has opted to simply model the estimated carbon stock value at the end of the rotation period and reduce this value by 50%. The logic behind this is that it is simpler and that the growth model will be updated with empirical data from the Management Units in the near future.

**Conclusion of the certifier** (27. September 2013):

The project developer has updated the PDD to provide more specific details about the harvesting plans for the various management units and expected management plans. These updates include specifically noting that the commercial management units will be subject to rotation harvesting, thus addressing the nonconformity.

The audit team has evaluated what the estimated carbon stock value would be in the commercial management units using the "Option 2" (time average carbon stock) equation in the standard and compared this to the values the developer has obtained by simply reducing the carbon stock at the end of the rotation period by 50%. The developer's values are slightly *more conservative*. Additionally, the values in the growth model will be updated

## CO<sub>2</sub>-Certificates

### 06 CO<sub>2</sub>-Fixation



4. In case of rotation forestry, the future CO<sub>2</sub>-fixation is based on the mean stand volume during the first rotation period.

in the future with empirical data. The audit team is comfortable with this approach as it is more conservative than the standard requires, and enables future accuracy in the carbon accounting.

**CAR closed**

#### Final Conclusion

- Accepted  
 Accepted with FAR  
 Not accepted with NCR

CO2-Certificates  
**07 Project Emissions**



1. In order to account for project emissions due to the use of fossil fuels within the project (e.g. through machines, flights, etc.), 0.5% of the future CO2-fixation must be deducted.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The audit team reviewed the spreadsheets in which the growth model is developed. The 0.5% of the future Co<sub>2</sub>-fixation was properly deducted.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

CO2-Certificates  
**07 Project Emissions**



2. In case fertilizer is used, 0.005 tCO<sub>2</sub> per kg of nitrogen (N) must be deducted. Hereby, no differentiation is made between synthetic and organic fertilizer.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

As it is stated in the PD, the project uses organic fertilizer on a regular basis. This was confirmed by the audit team through interviews with project participants. A fertilizer NPK 12-24-12 was used and therefore a total of 2148tCO<sub>2</sub> was deducted from the carbon calculation benefits of the project. The audit team reviewed the calculation, no inconsistencies were found.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

CO2-Certificates  
**07 Project Emissions**



3. In case the biomass of the baseline is burned on the field for the purpose of land preparation, an additional 10% of the baseline emissions must be accounted for. This is due to other greenhouse gases (N<sub>2</sub>O and CH<sub>4</sub>) that are released during the burning process.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

Land preparation does not involve the use of fire; this was confirmed by the audit team through field observations and consultations with project participants and ACP technical experts.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

## CO<sub>2</sub>-Certificates

### 08 Baseline



1. The baseline is the 'woody biomass' and 'non-woody biomass' on the eligible planting area just before the planting start.

The calculation can be done in two different ways:

- a. By executing field measurements. Here, the 'Forest Inventory' guideline shall be applied.
- b. By estimating the biomass in reference to similar areas
  - regional and national default values shall preferably be used
  - international default values can only be used if other values are not available

#### PDD check

- sufficient / satisfactory information provided  
 consistent information provided

#### Supporting documents check

- up-to-dateness of information  
 reference integrity to the content in the PDD  
 accuracy of the information

#### Evidence found during field-visit

- observed or experienced during the field-visit  
 confirmed by interview(s)  
 confirmed by general impression

### Findings

The developer chooses to use an international default value from the IPCC for Tropical Moist and Wet grassland on areas after conversion from another land use ([http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4\\_Volume4/V4\\_06\\_Ch6\\_Grassland.pdf](http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_06_Ch6_Grassland.pdf)). The developer chooses this value because of the prevalence of Paja canalera (*S. spontaneum*) in the project area and the fact that project activities are deliberately located in these areas based on the original remote sensing analysis used. However, based on auditor observation in the field as well as review of the source document, there are two significant problems with this default value.

The default value (6.2) is measured in "tonnes d.m. ha<sup>-1</sup>" (tonnes of dry matter per hectare), however, the model applies the 6.2t d.m. ha as if it were 6.2tC per ha. This is evident in review of the Baseline section of the PDD, as well as through discussion with members of the developer team. This error actually reduces the net CO<sub>2</sub> Fixation of the project. Based on conversations during the audit, the developer will correctly apply the value for the sake of accuracy. (NCR 09-01).

The audit team has observed that, although much of the planting areas are dominated by *S. spontaneum*, there are also significant remnant trees and palms. This varies by Management Unit, and Polygon. Review of the GIS shapefiles, as well as observations in the field has confirmed that the remaining trees and patches of trees were often not removed from the planting area. As such, the baseline is actually tropical moist grassland with remnant trees. Failure to incorporate this into the baseline carbon stocks will result in an overestimation of the project benefits in future monitoring events when the remnant trees that were not planted by the project will likely be included in the forest inventory. (CAR 09-02).

### CARs / FARs / NCRs

**Corrective Action Request 09-01:** ACP shall apply correctly the default value (6.2tC/ha) to estimate tonnes of dry matter per hectare when determining the baseline.

**Feedback project developer** (09 September 2013):

The developer chose to no longer use the 6.2tC/ha value in the revised PD, choosing instead a more conservative value described in the findings below for Corrective Action Request 09-02.

**Conclusion of the certifier** (27. September 2013):

## CO<sub>2</sub>-Certificates

### 08 Baseline



1. The baseline is the 'woody biomass' and 'non-woody biomass' on the eligible planting area just before the planting start.

The calculation can be done in two different ways:

- a. By executing field measurements. Here, the 'Forest Inventory' guideline shall be applied.
- b. By estimating the biomass in reference to similar areas
  - regional and national default values shall preferably be used
  - international default values can only be used if other values are not available

The developer has resolved the issue the CAR was based on, having chosen a different value for the baseline carbon stocks, which is described below in the findings for Corrective Action Request 09-02. Therefore the issue of citing the dry matter value incorrectly as carbon, has been resolved.

#### **CAR closed**

**Corrective Action Request 09-02:** ACP shall include remnant trees besides the tropical moist grassland, to determine baseline carbon stocks in the management units.

**Feedback project developer** (09 September 2013):

The developer has chosen a different method for estimating baseline carbon stocks which is more conservative and does adequately address the concern that remnant and isolated trees were not accurately quantified in the original baseline carbon stock estimate, which was based on grassland stocks. The new carbon stock values for the baseline are different for commercial/conservation management units and for agroforestry/silvopasture management units.

The new value for commercial/conservation management units is 23tCO<sub>2</sub>/ha. The new value for silvopasture and agroforestry management units is 31tCO<sub>2</sub>/ha.

**Conclusion of the certifier** (27. September 2013):

The revised biomass carbon stock for commercial and conservation areas is derived from an academic paper based on field measurements in Colombia. This paper cites biomass stocks 8 tdm/ha. This PDD reports the value as for total dry biomass, including above and belowground pools (8 \*1.58 to estimate belowground biomass). Converted to CO<sub>2</sub> the carbon stocks is 23tCO<sub>2</sub>/ha. The audit team has reviewed the PDF output of the carbon calculations on the Climate Projects registry (File: Management-Units ACP CFS.pdf) and confirmed that the baseline carbon values have been updated. The audit team has additionally reviewed the FOFI model and confirmed that this has been updated as well. The new carbon values are in conformance with the standard in that they are calculated without some of the errors observed during the field audit (See CAR 09-01), are based on scientific literature, and are calculated correctly. The audit team observed during the field audit that the commercial and conservation areas had minimal remnant trees from before project establishment and were mostly *saccharum* grass. The revised baseline stocks are acceptable for commercial and conservation management units.

The revised biomass carbon stock for silvopasture and agroforestry systems is derived from an academic paper also based on field measurements in Colombia of pasture systems with remnant trees. This paper cites biomass stocks as 17.2 tdm/ha. This value is also for total dry biomass, including above and belowground pools. Converted to CO<sub>2</sub> the value becomes 31tCO<sub>2</sub>/ha. The audit team has reviewed the PDF output of the carbon calculations on the Climate Projects registry (File: Management-Units ACP CFS.pdf) and confirmed that the baseline carbon values have been updated. The audit team has additionally reviewed the FOFI model and Baseline section of the PD and confirmed that this has been updated as well. The revised value of 31tCO<sub>2</sub>/ha for the silvopasture and agroforestry management units is acceptable and in conformance with the standard in that it reflects the site conditions observed during the field audit in which remnant trees from before the project start date, were observed. The audit team noted considerable variability between different sites within the agroforestry and silvopasture management units, with some sites having no remnant trees and others having several. This value from analogous locations in a scientific paper is acceptable.

CO2-Certificates  
08 Baseline



1. The baseline is the 'woody biomass' and 'non-woody biomass' on the eligible planting area just before the planting start.

The calculation can be done in two different ways:

- a. By executing field measurements. Here, the 'Forest Inventory' guideline shall be applied.
- b. By estimating the biomass in reference to similar areas
  - regional and national default values shall preferably be used
  - international default values can only be used if other values are not available

\*It is noted that the audit team allowed some additional information to be submitted by FOFI and ACP to correct errors made in the original submission of data to RA to close NCRs. Some documents, including the PDD had not been accurately updated to reflect the new baseline information. RA received this additional information on September 30, 2013.

**CAR closed**

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

1. The baseline is the 'woody biomass' and 'non-woody biomass' on the eligible planting area just before the planting start.

The calculation can be done in two different ways:

- a. By executing field measurements. Here, the 'Forest Inventory' guideline shall be applied.
- b. By estimating the biomass in reference to similar areas
  - regional and national default values shall preferably be used
  - international default values can only be used if other values are not available

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The developer chooses to use an international default value from the IPCC for Tropical Moist and Wet grassland on areas after conversion from another land use ([http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4\\_Volume4/V4\\_06\\_Ch6\\_Grassland.pdf](http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_06_Ch6_Grassland.pdf)). The developer chooses this value because of the prevalence of *Saccharum spontaneum* in the project area and the fact that project activities are deliberately located in these areas based on the original remote sensing analysis used. However, based on auditor observation in the field as well as review of the source document, there are two significant problems with this default value. See NCR (09-01):

## CO<sub>2</sub>-Certificates

### 08 Baseline



1. The baseline is the 'woody biomass' and 'non-woody biomass' on the eligible planting area just before the planting start.

The calculation can be done in two different ways:

- a. By executing field measurements. Here, the 'Forest Inventory' guideline shall be applied.
- b. By estimating the biomass in reference to similar areas
  - regional and national default values shall preferably be used
  - international default values can only be used if other values are not available

1. The default value (6.2) is measured in "tonnes d.m. ha<sup>-1</sup>" (tonnes of dry matter per hectare), however, the model applies the 6.2t d.m. ha as if it were 6.2tC per ha. This is evident in review of the Baseline section of the PDD, as well as through discussion with members of the developer team. This error actually reduces the net CO<sub>2</sub> Fixation of the project. Based on conversations during the audit, the developer will correctly apply the value for the sake of accuracy.
2. The audit team has observed that, although much of the planting areas are dominated by *Saccharum spontaneum*, there are also significant remnant trees and palms. This varies by Management Unit, and Polygon. Review of the GIS shapefiles, as well as observations in the field has confirmed that the remaining trees and patches of trees were often not removed from the planting area. As such, the baseline is actually tropical moist grassland with remnant trees. Failure to incorporate this into the baseline carbon stocks will result in an overestimation of the project benefits in future monitoring events when the remnant trees that were not planted by the project will likely be included in the forest inventory.

#### CARs / FARs / NCRs

1. See NCR (09-01): The default value (6.2) is measured in "tonnes d.m. ha<sup>-1</sup>" (tonnes of dry matter per hectare), however, the model applies the 6.2t d.m. ha as if it were 6.2tC per ha. This is evident in review of the Baseline section of the PDD, as well as through discussion with members of the developer team. This error actually reduces the net CO<sub>2</sub> Fixation of the project. Based on conversations during the audit, the developer will correctly apply the value for the sake of accuracy.
2. The audit team has observed that, although much of the planting areas are dominated by *Saccharum spontaneum*, there are also significant remnant trees and palms. This varies by Management Unit, and Polygon. Review of the GIS shapefiles, as well as observations in the field has confirmed that the remaining trees and patches of trees were often not removed from the planting area. As such, the baseline is actually tropical moist grassland with remnant trees. Failure to incorporate this into the baseline carbon stocks will result in an overestimation of the project benefits in future monitoring events when the remnant trees that were not planted by the project will likely be included in the forest inventory

#### Final Conclusion

- Accepted  
 Accepted with FAR  
 Not accepted with NCR

CO<sub>2</sub>-Fixation  
**09 Leakage**



1. Leakage is caused by an increase of emissions outside of the project area as a result of the project activity.

Leakage emissions can be caused due to a shift of the following activities:

- a. fuelwood use
- b. charcoal burning
- c. timber harvesting
- d. agricultural farming
- e. resettlement
- f. livestock grazing

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

Given that the project aims to integrate the forest component into other socioeconomic activities (agriculture and grassland through agroforestry and silvopasture systems) rather than impose the strict protection of the existing forest, the PDD anticipated no leakage for agroforestry/silvopasture MUs, where the majority of the population lives. The audit team evaluated this assertion in the field via observation and interviews with participating farmers and concluded it was a reasonable assertion. The existing agricultural and pasture systems are very low productivity, mostly due to the dominance of *Saccharum spontaneum*. It is reasonable to assume equal or higher yields under agroforestry and silvopasture systems.

It is assumed that the forest within the project area will supply materials for domestic use (fire wood/timber for familiar consumption), with an extension service to ensure sustainable production. In this way, there is no reason to seek material outside the project area. Therefore, no displacement is foreseen in agroforestry and silvopasture plots.

The audit team also visited the commercial plots and found no evidence of displacement of agriculture, cattle or other activities from the project area to the surrounding areas.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

# CO<sub>2</sub>-Fixation ClimateProjects – MU Document



ClimateProjects – MU Document	
<p><b>PDD check</b></p> <p><input checked="" type="checkbox"/> sufficient / satisfactory information provided</p> <p><input type="checkbox"/> consistent information provided</p> <p><b>Supporting documents check</b></p> <p><input type="checkbox"/> up-to-dateness of information</p> <p><input type="checkbox"/> reference integrity to the content in the PDD</p> <p><input checked="" type="checkbox"/> accuracy of the information</p>	<p><b>Evidence found during field-visit</b></p> <p><input type="checkbox"/> observed or experienced during the field-visit</p> <p><input type="checkbox"/> confirmed by interview(s)</p> <p><input type="checkbox"/> confirmed by general impression</p>
<b>Findings</b>	
<p>ACP submitted all the materials, shapefiles and supporting documents in the climateproject platform. The audit team has reviewed the updated PDD and supporting documentation following the submission of additional evidence by the proponent to close nonconformities identified in the field audit. Review of the PDD and supporting information confirms that the outputs reported on the climateprojects platform match the PDD and supporting documentation. The Management Units PDF calculates the appropriate buffer withholding and ex ante CO<sub>2</sub> certificates. The audit team has confirmed via review of the PDD (Chapter 6) that the appropriate emissions reductions per Management Unit are input into the CarbonFix system.</p>	
<b>CARs / FARs / NCRs</b>	
<p>N/A</p>	
<b>Final Conclusion</b>	
<p><input checked="" type="checkbox"/> Accepted</p> <p><input type="checkbox"/> Accepted with FAR</p> <p><input type="checkbox"/> Not accepted with NCR</p>	



Permanence  
**10 Capacities**

1. Evidence must be given that the project management has sufficient qualification and an appropriate structure to ensure sustainable implementation and management of the project.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Permanence  
**10 Capacities**

2. Evidence must be given that project management decisions are based on a joint process.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Permanence  
**10 Capacities**

3. Evidence must be given that the project management has an internal quality-control system.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Permanence  
**10 Capacities**

4. Evidence must be given that the project works with other institutions to continuously expand the project management's qualifications.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Permanence  
**10 Capacities**

5. Evidence must be given, that suitable knowledge transfer within the project management is ensured over time.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Permanence  
**10 Capacities**

6. Evidence must be provided that sufficient financial means are available for the long-term finance of the project.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Permanence  
**10 Capacities**

7. If **two** or more of the following points apply, the project is only allowed to assign 50% of its future CO<sub>2</sub>-certificates until the first successful monitoring certification - however at the earliest 3 years after the initial certification:
- The project financier has not managed other projects (not necessarily in forestry) of similar financial scale, yet.
  - The organisation of the project developer was founded earlier than 5 years ago.
  - The project is located in a country which is ranked in the second half of Land Property (LP) rating by IPRI.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Permanence  
**10 Capacities**

8. Evidence must be given that the project has sufficient technical capacity to ensure sustainable implementation and management of the project.

Therefore, a technical description of the following activities must be given:

- a. Nursery
- b. Land preparation (incl. lining out /spacing)
- c. Planting
- d. Beating up (replacing of dead seedlings)
- e. Maintenance
- f. Pruning
- g. Thinning
- h. Harvesting

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Permanence  
**10 Capacities**

9. Evidence must be given that non-permanence risks of a project are mitigated.

Therefore, an evaluation of the following risks must be given

- |  |                                     |
|--|-------------------------------------|
| a. Water (drought, flood, hail, snow, heavy rains ...)   | e. Diseases (bacteria, viruses ...) |
| b. Wind (storms, hurricanes ...)                         | f. Temperature (coldness, heat)     |
| c. Animals (insects, domestic animals, wild animals ...) | g. Encroachment of people           |
| d. Fire (human made, natural)                            | h. Others                           |

A description of the projects potential risks and risks mitigation measures in-place must be given.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11.

<http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Permanence  
**10 Capacities**

10. If there is a risk of fire a 'Fire Management Plan' must implemented. This plan must include a description of the following activities:
- a. Fire awareness
  - b. Fire prevention
  - c. Fire equipment
  - d. Fire detection
  - e. Fire suppression
  - f. Fire damage rehabilitation

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

Permanence  
**11 Land & CO2 Tenure**



1. Evidence must be given that the project developer has an uncontested legal land title of the project area, for a minimum period of the project's crediting period.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11.

<http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Permanence

11 Land & CO2 Tenure

2. Evidence must be given that all necessary permits for the implementation and management of the project (planting permits, harvesting permits, infrastructures permits, etc.) are secured for a minimum period of the project's crediting period.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project "Panama Canal Authority (ACP) Sustainable Forest Convert Establishment" achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Permanence  
**11 Land & CO<sub>2</sub> Tenure**

3. On overview on the contact details of the project participants must be provided.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Permanence  
**11 Land & CO2 Tenure**

4. Evidence must be given that the project developer is the
- a. Owner of the CO2-rights AND
  - b. Owner of the land AND
  - c. Owner of the timber AND
  - d. Owner of other resources
  - e. Project financier

If the project developer is not all of the above, evidence must be given that the respective participant agrees with the expected project activity for the minimum period of the project's crediting period.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Permanence  
**11 Land & CO<sub>2</sub> Tenure**

5. In case the owner of CO<sub>2</sub>-rights is a group of multiple individuals, authorization for the issuance and assignment of the CO<sub>2</sub>-certificates must be given to the project developer with a written approval.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

Procedures  
**001 Documentation Format**



1. Templates shall be filled out with a **green** colour and the font type Calibri, size 10.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The PP filled out all the templates following the documentation format.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

Procedures  
**001 Documentation Format**



2. **Red** coloured comments in the template shall be deleted before document submission.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

All the red coloured comments in the template were deleted by the project proponent.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

Procedures  
**001 Documentation Format**



3. Maps shall include the following information:

- Name of the project
- ID of the project
- Legend
- Printing date
- Scale
- Direction of North
- Used GPS coordinate system (e.g. WGS 84)
- GPS grid
- Infrastructure (roads, houses, etc.) and rivers
- Information on the satellite or aerial picture used (date, resolutions, data source)

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

Some maps are lacking the information required by the CarbonFix Standard. For example, Image 01-01 is lacking i) a scale, ii) printing date, iii) Direction of North, iv) GPS coordinate system, v) satellite metadata. (FAR 001-01)

**CARs / FARs / NCRs**

**Forward Action Request 001-01:** The project developer should review all maps in the PDD and supporting document and confirm that they meet the requirements of the CarbonFix Standard, cited above.

**Final Conclusion**

- Accepted
- Accepted with FAR (001-01)
- Not accepted with NCR



Procedures  
**001 Documentation Format**

4. Figures above one thousand shall be formatted with a space (1 000 000), whereby decimals will be separated by a point (1.35).

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

All the figures in the PD and supporting documents are one thousand or less.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

Procedures  
**001 Documentation Format**



5. Pictures, graphs and tables within project documents shall be clearly marked with a unique ID.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project proponent used standardized and unique identification for all the pictures, graphs and tables used on the PD and supporting documents.

**CARs / FARs / NCRs**

N/A

**See previous comments**

- Accepted
- Accepted with FAR
- Not accepted with NCR



# Procedures

## 001 Documentation Format

6. Supporting documents must be numbered according to the following format:

Examples of supporting documents:

'01-01\_Western Tanzania maps\_Dec 1990'

'01-02\_Geoinformation on the land-use in Western Tanzania\_Jul 2003'

Chapter of the CFS 01

ID of the document 02

Title of document Geoinformation on the land-use in Western Tanzania

Date of publication Jul 2003

In the project documents, ONLY the reference number (01-02) shall be stated, together with the exact location of the referred information.

Example:

'Ref. 01-02, Page 2, Paragraph 3 and Table 2'

### PDD check

- sufficient / satisfactory information provided
- consistent information provided

### Supporting documents check

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

### Evidence found during field-visit

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

## Findings

The Project proponent has adopted the CFS format properly. All the documents posted on the climateproject platform follow the format protocols established.

## CARs / FARs / NCRs

N/A

## Final Conclusion

- Accepted
- Accepted with FAR
- Not accepted with NCR

Procedures  
**001 Documentation Format**



7. The project documents and supporting documents must be submitted in
- English, OR
  - a language which has been agreed upon by the project developer, the technical board of CarbonFix and the certification body that executes the certification process.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The majority of the documents are submitted in English. Others are written in Spanish which is the local language.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Procedures  
**001 Documentation Format**

8. The ClimateProjects platform must be used to submit the project information for any pre-validation and certification process - see [www.ClimateProjects.info](http://www.ClimateProjects.info)

All project information must be made publically available through the ClimateProjects system, except for confidential information.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The official platform of CFS was used by the proponent to submit the PD, supporting documents and all the elements regarding the CCBA validation.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR (...)
- Not accepted with NCR (...)

Procedures  
**004 Combined Certification**



1. In case of FSC, the CarbonFix Standard recognizes the certification as replacement of the criteria contained in the chapters 04, 05, and 10.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

N/A - There is no FSC Certification in place.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

Procedures  
**004 Combined Certification**



2. In case of CCBA, the CarbonFix Standard recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project “Panama Canal Authority (ACP) Sustainable Forest Convert Establishment” achieved a Gold Level CCBA validation on March 30, 2012. The CCBA website established that the project is valid from March 20, 2012. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>. Following the combined certification procedures, CFS recognizes the certification as replacement of the criteria contained in the chapters 04, 05, 10 and 11.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

Procedures  
**004 Combined Certification**



3. The certification according to FSC or CCBS must be valid for at least 1 more year from the date of the CarbonFix certification.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The CCBA website established that the project is valid from March 20, 2012. <http://www.climate-standards.org/2011/06/08/panama-canal-authority-sustainable-forest-cover-establishment-project/>

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR

Procedures  
**004 Combined Certification**



4. The documentation according to FSC or CCBS must be published on the ClimateProjects system.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The audit team reviewed the ClimateProjects platform and confirmed that all the relevant documents about the CCBA validation is posted.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR



Procedures

**010 Avoidance of Double Counting**

1. In case a project is located in a district or country that is part of a national or pan-national scheme that must report its forest area, the project developer can only assign its CO2-certificates to a CO2-buyer using minimum one of the following options:

1a. The CO2-buyer explicitly agrees in purchase agreements to the following statement or a statement with a similar meaning:

“I am aware that this project is part of a national or pan-national scheme which is accounting the same CO2-fixation that I am purchasing with this contract in order to achieve its national reduction target. I am aware that this may have the effect that other companies within the projects host country have to reduce less CO2, as the project contributes to the reduction target of this scheme.”

1b. The respective agency of the projects host-country gives the following statement or a statement with a similar meaning:

“Afforestation / reforestation projects that generate CO2-certificates within our country for the voluntary market do not lower the pressure on companies of the country(ies) the host-country is part of the compliance market in.”

1c. The project developer retires

- one additional CO2-certificate from another project certified according to the CarbonbFix Standard, OR
- one additional Gold Standard certificate

for every CO2-certificate assigned to a CO2-buyer.

Hereby, the additional retired certificate must carry the ID of the assigned CFS CO2-certificate.

**PDD check**

- sufficient / satisfactory information provided
- consistent information provided

**Supporting documents check**

- up-to-dateness of information
- reference integrity to the content in the PDD
- accuracy of the information

**Evidence found during field-visit**

- observed or experienced during the field-visit
- confirmed by interview(s)
- confirmed by general impression

**Findings**

The project is located in Panama, a country in which it is not required the forest area is reported to the national authority.

**CARs / FARs / NCRs**

N/A

**Final Conclusion**

- Accepted
- Accepted with FAR
- Not accepted with NCR