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**SmartWood**

*Practical conservation through certified forestry*

Validation  
**Assessment**  
Report for:

Paso Pacifico  
in  
Rivas Province, Nicaragua

Report Finalized: March 27, 2008  
Audit Dates: January 8 to 10, 2008  
Audit Team: William Arreaga, Forestry  
Specialist; Jeffrey Hayward,  
Verification Services  
Manager

Type of Validation: CCBA  
Validation code: SW-VER-003118  
Validation issued: April 11, 2008

*Report based on Standard(s): CCB Standards 1st Edition, May 2005*

Organization Contact: Sarah Otterstrom,  
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## 1 INTRODUCTION

The purpose of this report is to document conformance with the requirements of CCBA project design validation standards by Paso Pacifico, who are the project proponents, hereafter referred to as “Company”. The report presents the findings of SmartWood auditors who have evaluated company systems and performance against the applicable standard(s). Section 2 below provides the audit conclusions and any necessary follow-up actions by the company through corrective action requests.

This evaluation follows Climate, Community and Biodiversity Project Design Standards, First Edition, May 2005. These were not developed by Rainforest Alliance, but by the Climate, Community and Biodiversity Alliance, CCBA. SmartWood CCBA evaluation reports are kept confidential in the draft stage. When finalized and successfully approved, the report is posted on SmartWood’s website and that of the CCBA.

The Rainforest Alliance’s certification program, SmartWood, was founded in 1989 to certify responsible forestry practices and now focuses on providing a variety of certification and auditing services. In 2005, Rainforest Alliance extended our role as a forest assessor/auditor to standards and services that included verification of forest carbon projects. Rainforest Alliance has the following status with the listed climate related standards and systems:

- Chicago Climate Exchange - we are an *associate member* and an approved *verifier*
- Climate, Community & Biodiversity Alliance – we are a *member* and an approved *verifier*
- Plan Vivo – we are a *verifier*

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

Dispute resolution: If SmartWood clients encounter organizations or individuals having concerns or comments about Rainforest Alliance / SmartWood and our services, these parties are strongly encouraged to contact SmartWood Headquarters directly. Formal complaints or concerns should be sent in writing.

## 2 AUDIT CONCLUSIONS

### 2.1 Summary of Conformance to CCB Standards

Paso Pacifico is a very small conservation NGO from California with an office in Managua, Nicaragua that was found to be accomplishing climate and conservation results through ecological restoration of a critical section of the Meso-American Biological Corridor, enhancing forest connectivity between remaining threatened forest patches near the border of Costa Rica and Nicaragua.

The project, known as Return to Forest (RTF), has been designed to work directly with communities and landowners (mostly cattle ranchers) to re-establish areas of dry and moist tropical forest using a wide variety of suitable native species - nearly 70 different species established. The plantings are designed to reestablish patches of forest in areas cleared over the years due to cattle ranching - one

of the most common, but increasingly un-profitable, land uses in the region. The RTF project was found to be strategically selecting planting sites alongside existing remnant patches and thus lead to new forest and re-habilitate remaining vegetation. Major project activities are designed to restore the vital connectivity of biological corridors through the Rivas Isthmus of Southwestern Nicaragua (a thin strip between Lake Nicaragua and the Pacific Ocean).

The initial project area is 406 hectares of newly planted forest, but more is planned to be created in the future. The importance of the project extends beyond the climate contribution of the predicted net carbon sequestration of 133,000 to 150,000 tCO2e over the next 40 years as planted areas are often alongside and connected to existing forest. Paso Pacifico aims to restore connectivity for wildlife populations (such as the Spider Monkey and Yellow-naped Parrot) in critically endangered Central American Tropical Dry Forests, which is the rarest and most unique forest type in Mesoamerica as less than 0.1% of the original forest cover remains. The project is funded through donations and a largely through an agreement and investment by Carbonfund, a carbon offset provider who has purchased the rights to the carbon that will be produced.

### General Section

	Conformance:		
G1. Original Conditions at Project Site	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
G2. Baseline Projections	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
G3. Project Design & Goals	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
G4. Management Capacity	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
G5. Land Tenure	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
G6. Legal Status	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
G7. Adaptive Management for Sustainability	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Optional
G8. Knowledge Dissemination	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Optional

### Climate Section

	Conformance:		
CL1. Net Positive Climate Impacts	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
CL2. Offsite Climate Impacts ("Leakage")	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
CL3. Climate Impact Monitoring	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
CL4. Adapting to Climate Change & Climate Variability	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Optional
CL5. Carbon Benefits Withheld from Regulatory Markets	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Optional

### Community Section

	Conformance:		
CM1. Net Positive Community Impacts	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
CM2. Offsite Community Impacts	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
CM3. Community Impact Monitoring	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
CM4. Capacity Building	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Optional
CM5. Best Practices in Community Involvement	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Optional

### Biodiversity Section

	Conformance:		
B1. Net Positive Biodiversity Impacts	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
B2. Offsite Biodiversity Impacts	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
B3. Biodiversity Impact Monitoring	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Required
B4. Native Species Use	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Optional
B5. Water & Soil Resource Enhancement	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Optional

### CCBA Validation Level Attained:

Approved	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Silver	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Gold	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

## 2.2 Auditor Recommendation

Based on Company's conformance with CCBA requirements, the auditor makes the following recommendation:

- Validation approved:*  
No CARs issued
- Validation not approved:*  
Conformance with CAR(s) required

**Additional comments:**

In the February 22, 2008 draft report, there were 2 CARs issued. These were both closed out by Paso Pacifico as explained in 2.4 below.

## 2.3 Corrective Action Requests

### 2.3.1 Corrective Action Requests (CARs)

*Note: CARs describe required actions or improvements that address COMPANY non-conformances identified during audits. CARs include defined timelines for completion. CARs issued during assessments /reassessments shall be closed prior to issuance of Validation. CARs issued during audits shall be closed within timeline or result in suspension.*

<b>CAR 1/08</b>	<b>Reference Standard &amp; Requirement: G3.7</b>
<b>Non-conformance:</b>	The PDD does not explain whether or not the RTF documents in English will be translated to Spanish.
<b>Corrective Action Request:</b> The RTF PDD shall explain the procedure for providing a Spanish translation of the PDD.	
<b>Timeline for conformance:</b>	Prior to validation.
<b>Evidence to close CAR:</b>	The PDD of March 11, 2008 states that "the project design document will be translated into Spanish and both the Spanish and English versions will be made available to all stakeholders." It is worth noting that nearly all supporting documents and activities of the project are communicated in Spanish.
<b>CAR Status:</b>	<b>CLOSED</b>
<b>Follow-up Actions:</b>	None.

<b>CAR 2/08:</b>	<b>Reference Standard &amp; Requirement: CM5.4</b>
<b>Non-conformance:</b>	The team observed a substandard accommodation for a property caretaker and absence of first aid kits at work sites.
<b>Corrective Action Request:</b> Paso Pacifico shall implement policies on working conditions, effecting health and safety, which will be consistent for all workers, independent of who is paying for their time.	
<b>Timeline for conformance:</b>	Prior to validation.

<b>Evidence to close CAR:</b>	Formal letter requesting improved worker housing and compliance labor laws submitted to landowners at Isla Vista Farm on February 26, 2008. Other actions to be taken include: formal presentation of legal obligations with respect to workers rights to the landowners (by June 2008). First aid kits on farms by June 2008, first aid training to workers by in 2008 or early 2009. These activities are mentioned in the PDD of March 11, 2008.
<b>CAR Status:</b>	<b>CLOSED</b>
<b>Follow-up Actions:</b>	None.

### 2.3.2 Observations

*Note: Observations are issued for areas that the auditor sees the potential for improvement in implementing standard requirements or in the quality system; observations may lead to direct non-conformances if not addressed.*

<b>OBS 1/08</b>	<b>Reference Standard &amp; Requirement: G2.1</b>
<b>Description of findings leading to observation:</b> The without-project scenario indicates plausible and probable land-uses, yet without quantified description or defense of the likelihood of these scenarios.	
<b>Observation:</b> Paso Pacifico should describe or quantify the degree of likelihood for 'plausible and possible' baseline scenarios.	

<b>OBS 2/08</b>	<b>Reference Standard &amp; Requirement: G3.4</b>
<b>Description of findings leading to observation:</b> The rationale for the project lifetime was not clearly expressed in the PDD.	
<b>Observation:</b> The PDD should provide clear rationale for the chosen length of the project.	

<b>OBS 3/08</b>	<b>Reference Standard &amp; Requirement: G5.3</b>
<b>Description of findings leading to observation:</b> There is a very low risk of in-migration to the project, but the procedures for this eventuality are not described.	
<b>Observation:</b> Paso Pacifico should develop a procedure to identify, respond to, and mitigate the possible risks of in-migration.	

<b>OBS 4/08</b>	<b>Reference Standard &amp; Requirement: CL1.2</b>
<b>Description of findings leading to observation:</b> The project intends to use little chemical fertilizer in reforestation activities, but amounts are not indicated.	
<b>Observation:</b> Paso Pacifico should quantify the amount of fertilizer used in the project and the emissions.	

<b>OBS 5/08</b>	<b>Reference Standard &amp; Requirement: CL1.3</b>
<b>Description of findings leading to observation:</b> The PDD does not clearly define the exact mechanism by which Paso Pacifico or Carbonfund shall reserve 20% of the total carbon in reserve.	
<b>Observation:</b> Paso Pacifico should explain in the PDD the formal mechanism to withhold 20% of the carbon in reserve.	

<b>OBS 6/08</b>	<b>Reference Standard &amp; Requirement: CL2.2</b>
<b>Description of findings leading to observation:</b> Assumptions on the dynamics of demand for cattle production and the potential for activity shifting leakage were not quantified at the localized regional scale, i.e., Southwestern Nicaragua or the provinces the project is active within.	
<b>Observation:</b> Paso Pacifico should monitor quantitatively statistics on cattle production in the provinces of the project.	

<b>OBS 7/08</b>	<b>Reference Standard &amp; Requirement: CM5.3</b>
<b>Description of findings leading to observation:</b> Outside of the supervision by the staff forester, there was not strong evidence of clear instructions on rights that would be consistently provided by the project.	
<b>Observation:</b> Paso Pacifico should make available a simple brochure concerning the primary rights of workers promoted consistently by the project.	

## 2.4 Actions Taken by Company Prior to Report Finalization

After the audit, Paso Pacifico submitted additional documents and a revised project design document (PDD) on February 7, 2008, which were evaluated by the auditors and were found to contain more information relevant to addressing conformance with the CCB standards than the initial PDD posted on December 3, 2007. The first draft of the Rainforest Alliance audit report was completed on February 22, 2008. On March 11, 2008, the organization submitted a revised PDD and evidence of actions taken to close out the CARs (described in 2.3.1) as well as to address the observations in 2.3.3 above. The observations remain in this report as part of the public record, however the following actions were taken to address each observation of the audit team:

OBS 1/08	G2.1 - PDD now describes likelihood of plausible land use scenarios provided on page 39, paragraph 2-5 of the PDD.
OBS 2/08	G3.4 - Rationale for length of the project now provided in PDD on page 46, paragraph 2-4.
OBS 3/08	G5.3 - Process for reducing risk of in-migration and responding to in-migration now provided in PDD on page 51.
OBS 4/08	CL1.2 - Estimates of GHG emissions from maximum amount of fertilizer use within realm of possibility now provided on pg. 51. Non CO2 emissions with maximum potential fertilizer use continue to be less than 15%. The project intends to avoid chemical use as far as possible.
OBS 5/08	CL1.3 - Explanation for how 20% is withheld by the organization selling the carbon to the voluntary market is now provided in section CL2.2 (Leakage) on page 66, under "discounting".
OBS 6/08	CL2.2 - PDD now states that Paso Pacifico will monitor statistics on cattle production in the southwestern region of Nicaragua (Granada, Carazo and Rivas Provinces), page 66 under monitoring. Monitoring of cattle statistics will be through the Cenagro agricultural census which gathers data on cattle production in the provinces every five years.
OBS 7/08	CM5.3 - PDD now clarifies how workers will be informed of their rights, including through brochures and a community workshop. A presentation of labor laws will also be made to landowners. Page 81 of PDD.

### 3 AUDIT PROCESS

#### 3.1 Audit Overview

*Note: The table below provides an overview of the audit scope. See standard checklist appendix for specific details on auditor qualifications, staff interviewed, and audit findings per facility audited.*

Location/Facility	Date(s)	Length of Audit	Auditor(s)
Meeting room, San Juan del Sur	January 8, 2008	3 hours (opening meeting)	Arreaga, Hayward
Reforestation sites at "Las Fincas", Rivas Province	January 8, 2008	4 hours (3 planting sites) Interviews with workers	Arreaga, Hayward
Reforestation sites at "El Guacapolca"; Reforestation sites at "Isla Visa"; Rivas Province	January 9, 2008	8 hours (2 planting sites) Interviews with workers, landowners, community members;	Arreaga, Hayward
Municipality of San Juan Del Sur	January 10, 2008	1 hour	Arreaga, Hayward
Reforestation sites at "Chumbulum", Rivas Province	January 10, 2008	4 hours (1 planting site) Interviews with workers, landowner representatives	Arreaga, Hayward
Meeting room, San Juan del Sur	January 10, 2008	6 hours (document review) Interview with landowner	Arreaga, Hayward
Reforestation sites at "La Domitila", Granada Province	January 11, 2008	1 hour (1 planting site) Interviews with workers, landowners, community members;	Arreaga

#### 3.2 Description of Audit Process

Paso Pacifico submitted the project design document (PDD) to Rainforest Alliance at the same time as for posting to the CCBA website on December 8, 2007. Rainforest Alliance made a provisional review of the PDD and supporting documents to confirm that it was sufficiently complete to warrant an on-site audit. The Rainforest Alliance auditors and Paso Pacifico agreed to an audit schedule that would begin on January 8, 2008. After arrival to Nicaragua, the two auditors and the Paso Pacifico directors met for an opening meeting, which included a review of project files and planning for the specific site visits. Over the course of the ensuing three days, the auditors went to inspect various project activities as outlined in 3.1. As the audit took place after the rainy season had finished it was possible to access all of the plantation areas that the auditors wanted to visit. Most reforestation areas had already been planted, seedlings had been dispatched from the nurseries, and the work crews were involved in brushing competing vegetation and other aspects of managing the growing forest areas. The on-site inspections were chosen randomly by the auditors and involved walking the grounds of restoration areas, holding interviews with landowners and workers, with local stakeholders, and with the project staff responsible for leadership and implementation of the Return to Forest project. On every day, the auditors reviewed project documents and records to check these against the CCB Standards.

### 3.3 Documents reviewed

- 1.) PDD\_AR\_Form 03\_v 04 - Paso Pacifico Draft 1, December 8, 2007
- 2.) PDD\_Return to Forest: Mitigating Climate Change through the Restoration and Conservation of Endangered Forest Ecosystems in the Paso del Istmo Conservation Corridor, Rivas Province, Nicaragua, February 7, 2008; March 11, 2008
- 3.) Socio-Economic Study of the Communities in the Return to Forest project, Henningston M. Hodgson Mairena, Managua, January 6, 2008
- 4.) Ley 185 Codigo Laboral de Nicaragua, 1996.
- 5.) Paso Pacifico 2007. Fragmentation Analysis in Paso del Istmo conservation corridor. Technical Report.
- 6.) Cairns, M.A., Brown, S., Helmer, E.H. & Baumgardner, G.A. 1997. Root biomass allocation in the world's upland forests. *Oecologia* 111: 1-11.
- 7.) H. Camilo Fuentes Peña, Martín Lezama. 2007. Árboles y Vertebrados de diez fincas del pacífico sur de Nicaragua.
- 8.) Paso Pacifico 2007. Key Species Habitat Analysis.
- 9.) Paso Pacifico 2007. Threatened Species Flora List.
- 10.) Blas Hernández. 2007. Diversidad de Escarabajos (Coleóptera) y Mariposas diurnas (Lepidoptera) en San Juan del Sur, Cárdenas y Domitila en los Departamentos de Rivas y Granada, Nicaragua.
- 11.) Martín Lezama & Camilo Fuentes. 2007. Evaluación Ecológica Rápida adaptada para análisis de riqueza de fauna en fincas del área de influencia de Paso Pacífico, Rivas, Nicaragua.
- 12.) Paso Pacifico. 2008. Flora and Fauna List from La Flor.
- 13.) Paso Pacifico. 2007. Birds of the Cardenas Lake Property.
- 14.) Paso Pacifico. 2008. Ex Ante Carbon Calculation Worksheet 8 Jan 08.
- 15.) Paso Pacifico. 2008. Project Emissions - Leakage Worksheet.
- 16.) Paso Pacifico. 2008. Inventory of Paso Pacifico.
- 17.) Paso Pacifico. 2008. Proxy Plots and Baseline Plots Data.
- 18.) Shwarze, R., J.O. Niles, and J. Olander 2002: Understanding and Managing Leakage in forest-based Greenhouse-Gas-Mitigation projects. *Philosophical Transactions: Mathematical, Physical and Engineering Sciences* 360: 1685-1703

### **3.4 Stakeholder consultation process (if applicable)**

The CCBA requirements for stakeholder consultation are that the project design document(s) describing how the project meets CCB criteria must be posted on the CCBA website 21 days prior to the on-site field visit. Paso Pacifico prepared a project design document, which was posted to the CCBA website on December 8, 2007. The CCBA invited comment on the PDD through emails sent to the Climate Change Info Mailing List.

In the stakeholder comment period, there were very few comments received. One had to do with the spacing and thinning rationale, for which the project director responded explaining their objectives for planting density, species selection, and thinning of future mixed species forests.

During the validation process, the audit team met or spoke to different stakeholders, including community members, workers, landowners, municipal officials, researchers, and government agencies.

## Appendix A: COMPANY DETAILS

### 1 CONTACTS

#### 1.1 Primary Contact for Coordination with SmartWood

Primary Contact, Position:	Sarah Otterstrom, Executive Director
Address:	USA Address: PO Box 1244 • Ventura, CA 93002-1244 Nicaragua Address: Km 15 Carretera Ticuantepe • Centro Comercial MercoCentro, Modulo #5 • Ticuantepe, Nicaragua
Tel/Fax/Email:	US: 1-805-377-1794 / sarah@pasopacifico.org Nica: +505-279-7258 / liza@pasopacifico.org

#### 1.2 Billing Contact

Contact, Position:	Sarah Otterstrom, Executive Director
Address:	PO Box 1244 • Ventura, CA 93002-1244
Tel/Fax/Email:	1-805-377-1794 sarah@pasopacifico.org

### 2 SmartWood Website Customer Fact Sheet

*Note: upon Validation, the SmartWood website posts and maintains Customer Fact Sheets for companies with the information in the table below at <http://www.ra-smartwood.org/>*

Field	Text for Customer Fact Sheet	Has this Info Changed?
Contact, Title: (Sales & Marketing)	Sarah Otterstrom, Executive Director	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Address:	PO Box 1244 • Ventura, CA 93002-1244	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Tel/Fax/Email/Website:	1-805-377-1794 sarah@pasopacifico.org	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Products/Descriptions:	Carbon offsets through Carbonfund.org	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

### 3 Validation Scope

#### 3.1 Scope Definition:

This is a carbon project design validation for the intended restoration and reforestation of 406 hectares of mixed native species forests in southwest Nicaragua. The project is reforesting bare and deforested private lands, as well as those with remnant vegetation, to create additional dry and tropical humid forest. The project intends to sequester the net amount of approximately 170,000 tCO<sub>2</sub>e from the atmosphere over 40 years.

#### 3.2 Type of Legal Entity: Non-profit corporation

#### 3.3 Jurisdiction: US based with a head office in Ventura, California and a country office in Managua, Nicaragua.

## Appendix B: STANDARD CHECKLIST CCB STANDARDS

### 1 Evaluation of Project

Project Name:	Paso Pacifico - Return to Forest
Contact for Validation:	Sarah Otterstrom
Address:	PO Box 1244 • Ventura, CA 93002-1244
Tel/Fax/Email:	1-805-377-1794 sarah@pasopacifico.org

### 2 Evaluation Details

Auditor(s), Qualifications:	<p>Jeff Hayward, MSci., SW Verification Services Manager</p> <p>Jeff Hayward is a SmartWood lead auditor and provides leadership in developing SmartWood's global portfolio of verification services. These services include: verification of legal origin or legal compliance; carbon forest projects; the SmartStep program for stepwise certification; the FSC Controlled Wood standard for forest managers; and verification of social and conservation standards, including High Conservation Value Forests. He is based in Washington, DC. For nearly six years he managed the SmartWood certification programs in the Asia-Pacific region from Jakarta, Indonesia. In FSC certification, he has conducted over 25 forest management assessments, scopings, and/or audits and over 60 chain-of-custody assessments and/or audits. He has led certification awareness training courses in Malaysia, Indonesia, Japan, Fiji, and China. Jeff earned an MSc in forestry, (Univ. of British Columbia, Canada); and a B.A. in Latin American development and forestry (Univ. of Washington, USA).</p> <p>William Arreaga, SW Forestry Specialist, Central American Office.</p> <p>William joined the SmartWood staff in 2004, but his career in certification processes started in 2003. His educational background includes a forestry degree from the Escuela Nacional Central de Agricultura, and an engineering degree from the Universidad de San Carlos de Guatemala; in 2002 he received an M.Sc. in Tropical Forest Management and Biodiversity Conservation from CATIE (Costa Rica). His work has been focused in natural forests managed by communities in the Mayan Biosphere Reserve, Petén, Guatemala. He also has experience in carbon storage and carbon flows in natural forests and plantations. As forest specialist for SmartWood's Central America Regional Office, William is a lead auditor responsible for coordinating and implementing Chain-of-Custody and Forest Management certification.</p> <p>Pre-Audit document review by:</p> <p>Bryan Foster, RA Climate Change Technical Specialist</p> <p>Bryan Foster has a Master of Forest Science from Yale University and Ph.D. in Natural Resources from University of Vermont. He is an FSC and ISO 14001 trained auditor and has worked professionally developing ISO 14001 environmental management</p>
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	systems. Bryan recently joined Rainforest Alliance as the Technical Specialist for our Climate Change Program. Before that, he was an independent forestry consultant specializing in forest carbon. He has recently researched and written a draft manual for Rainforest Alliance on developing, measuring, and verifying forest carbon sequestration projects.
Sites Visited:	See 3.1 main report above.
People Interviewed, Titles:	Sarah Otterstrom, Executive Director - Paso Pacifico US; Liza Gonzales, Country Director - Paso Pacifico Nicaragua; Roberto Marcenaro, Forester - Paso Pacifico Nicaragua; Juan Mejilla Martinez, Administrator, Nic Dev Finca; Dr. Fernando Arce Montiel, Landowner; Miguel Melendes, Asociacion Pacifico del Sur; Oscar Salinas Montoya, Municipality San Juan del Sur; Kevin Whiteman, Forestry Consultant to Landowners; Donn Wilson, Landowner; Suzanne Hagel, Scientist, Northern Arizon University;

### 3 Standard Checklist

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

### G1. Original Conditions at Project Site - Required

#### Concept

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

#### Indicators

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

#### General Information

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

#### Findings

The Return to Forest project takes place on 406 hectares in Cárdenas, San Juan del Sur, Rivas, and Nandaime municipalities within Rivas and Granada Provinces of Nicaragua. Paso Pacifico has an established office in Managua, Nicaragua and has been collaborating with landowners and communities on conservation activities since 2005. The Paso Pacifico staff are familiar with local conditions, having done research and worked there before the present project. They maintain close personal connections with the landowners and their properties that are being reforested. Hence, there was a solid foundation for pre-project site and area documentation, aerial photography, maps, and other data from the project sites. The location of all properties was clearly documented with maps and coordinates, the climate for the area, mean monthly precipitation, general soil types, land use history, fauna and flora, etc., were all described.

Conformance  
CAR/OBS

Yes

No

N/A

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

Findings	Each project site has a number and a farm name. There are eight farms (landowners) with 11 distinct properties and several reforestation blocks within each property, which constitute the project 'site'. Due to the variation in topography, elevation, soils, precipitation, climate and past land use, there are different types of vegetation and condition on each property and reforestation area. The predominant difference in the vegetation is characterized by the two distinct Holdridge Life Zones spanning the area, with Lowland Dry Tropical Forest (from central west of the Isthmus to Pacific Coast) and Lowland Tropical Moist Forest (along eastern side of the Isthmus). The reforestation areas prior to planting were generally native grasses or non-native pasture grasses, occasionally accompanied by savannah-like trees and shrubs, and patches of remnant vegetation. The reforestation areas did not meet Nicaraguan definition of forest as there is <30% area with tree cover with potential to reach minimum height of 5 m at maturity.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

### Climate Information

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

Findings	<p>The methodology to estimate carbon stocks followed AR-AM0002 of the Clean Development Mechanism. The methodology is justified because:</p> <p style="padding-left: 40px;">The project does not lead to a shift of pre-project activities outside of project boundaries;</p> <p style="padding-left: 40px;">Lands to be reforested are severely degraded or degradation is on-going;</p> <p style="padding-left: 40px;">Environmental conditions do not permit significant in-growth or regeneration of natural tree vegetation;</p> <p style="padding-left: 40px;">Grazing will not occur within the project boundary; and,</p> <p style="padding-left: 40px;">The baseline approach 22(a), 'Existing or historical changes in Carbon Sinks in the carbon pools in project Boundary' was used.</p> <p>Ex ante carbon stock quantification was conducted via establishment of permanent circular nested plots of 20 m radius within proxy forests (adjacent to planting areas, at different selected age class and forest types). Respected and appropriate allometric equations were used to estimate the above ground biomass (Brown et al 1997) and below-ground biomass (Cairns et al 1997) of trees and saplings was estimated. Tons of carbon per hectare were subsequently quantified for each of the planting sites and the appropriate conversion factor to t CO<sub>2</sub> e was applied. The PDD's reviewed by the audit team from December 7, 2007 and February 7, 2008 describe the methods and assumptions applied and reference the supporting scientific literature for the chosen approach.</p>		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

### Community Information

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

Findings	Paso Pacifico had conducted a detailed socio-economic study, which provides complete description of the communities in and around each of the project reforestation sites. The methodologies used were appropriate and included a review of government statistics, research data, interviews with community leaders and key resource people, and community based surveys. This data was analyzed and community demographics were characterized across variables such as population, poverty levels, education,		
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	literacy, land use, land tenure, migration, physical and natural capital, and community history.			
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	

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

Findings	The Paso Pacifico PDD describes the recent historical land use for each of the properties with reforestation. Land uses range from conservation (2 sites) to cattle grazing (6 sites). All properties have legal title to properties. Paso Pacifico has entered into a binding project agreement with all landowners to cede the rights of the carbon to Paso Pacifico for the duration of project. During the audit, the team reviewed all of the contracts, which provided evidence of legal title, free and clear, for all of the properties in the project.			
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	

### Biodiversity Information

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

Findings	<p>The Return to Forest project has a primary goal to conserve Central American forest ecosystem and wildlife by restoring currently fragmented and unprotected forest through reforestation in the Rivas Isthmus. Indeed, it is forest loss and fragmentation that represent the greatest threat to biodiversity in the region. Paso Pacifico conducted recent surveys of plants and vertebrate animals (from July to September 2007) on properties undergoing reforestation. Key Species Habitat Analysis was also conducted, focusing on the Yellow-naped Parrot and the Central American Spider Monkey. In addition, surveys of beetles and butterflies, were also undertaken. The methodologies followed were well-documented and appropriate. Studies by the project identified numerous taxa of significance due to their rare, threatened, or endemic status. The project developed detailed species lists for sites in the project area, based on their surveys.</p> <p>Paso Pacifico has ongoing research on species and habitats of international concern, which will enhance knowledge and likely increase the number of species on these lists. The project demonstrated a high level of understanding for the biodiversity significance of the forests that comprise the Mesoamerican Hotspot. Paso Pacifico aims to restore connectivity for wildlife populations, especially in critically endangered Central American Tropical Dry Forests - the rarest and most unique forest type in the region.</p>			
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	

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

Findings	Scientific names of threatened and endemic vegetation, reptiles, birds, and primate species in area and appropriate reference (CITES/IUCN) are provided and were based upon field surveys and literature review.			
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	



- 2) A projection of future carbon stock changes in the absence of the project, based on the land-use scenario described above. The timeframe for this analysis can be either the project lifetime (see G3) or the project accounting period, whichever is more appropriate<sup>2</sup>. If there is evidence that non-CO<sub>2</sub> greenhouse gas (GHG) emissions such as CH<sub>4</sub> or N<sub>2</sub>O are more than 15% of the baseline GHG fluxes at the project site (in terms of CO<sub>2</sub> equivalents), they must be estimated.

Findings	Paso Pacifico installed approximately 20 permanent sample plots to conduct forestry inventories on all properties and with respect to the dry and humid zones. Based on these measurements and with known and documented scientific literature, the carbon stock was estimated and the data was used to make projections over the duration of the 40 year project lifetime. The analysis calculated the effective net t C/ha that would be sequestered by the end of the project. Non-CO <sub>2</sub> greenhouse gases were considered to be far below the 15% threshold, and this is because soil disturbance for planting is minimal, there are no wetland soils disturbed, no flooded irrigation, no burning is permitted, and minimal use of chemical fertilizers. Paso Pacifico modeled the without project scenario based on aerial photographs, GIS, interviews with nearby communities, and local experts. Paso Pacifico shared with the auditing team the data base upon which it realized its projection.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	The RTF project conducted an extensive community study of all the communities in the project area. The PDD does not make a projection from that community information on a without project scenario, other than to estimate that the indicators of community well-being would tend to follow the regional norm. The small-scale nature of the project makes it difficult to surmise what would be the effect on peoples' lives in the absence of the project.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	The RTF project estimates that without the project the land uses would largely continue a pattern of degradation and increased fragmentation. With increased population pressures in the area, also, the estimate is that certain wildlife populations will be particularly vulnerable over time and are expected to decrease to the point of possible local extinction. From Paso Pacifico mammal surveys in Chococente National Reserve, for example, the results indicated that overall declines from 2002 to 2005 led to a near extinction of the local population of spider monkeys. The project conducted a Fragmentation Analysis study that supported the without project scenario.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	The RTF project estimates that soil and water resources are expected to degrade, or remain the same, into the future under the without-project scenario. It is stated that grazing is known to compact soils, while grazing on hillsides can lead to erosion, and in addition, livestock grazing accelerates streambank erosion and compaction of sensitive riverbeds. Section B5 of the PDD provides support from the scientific literature on soil and water response/conditions resultant from cattle grazing.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

<sup>2</sup> In some cases, the project lifetime and the project accounting period may be different.



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

Findings	The RTF project has been designed for a 40 year lifetime. The accounting period for carbon will begin on July 1, 2008, although the project formally began on July 1, 2007. The 40 year period was based on the estimated length of time for the trees to reach full carbon sequestration potential and for the development of a forest with conditions and qualities similar to the mature surrounding forest in the project area that RTF hopes to restore. The rationale for the project lifetime was not clearly expressed in the PDD.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS	OBS 2/08: The PDD should provide clear rationale for the chosen length of the project.		

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

Findings	Carbon projects typically involve six major risks (1) Inaccurate measurement risk, (2) Human disturbance risk, (3) Natural disturbance risk, (4) Additionality/baseline risk, (5) Leakage risk, and (6) Permanence risk.  In the PDD, section G3.5, Paso Pacifico summarizes what it has identified as the specific risks to the project benefits and actions to mitigate these risks. This list of risks includes concerns related to disturbances and permanence, such as: a) wildfire, b) volcanic eruption, c) plant diseases, d) cattle grazing, e) land sale, f) changes in Paso Pacifico, and g) land invasion. The mitigation measures for disturbances are reasonable and would be expected to be further developed in the eventuality of any of these risks. Permanence risk is alleviated by private reserve management plans, binding contracts, and monitoring partnerships with community members and university staff.  Risks related to inaccurate measurement and baseline/additionality risk are discussed in section CL3, regarding monitoring of climate effects during the life of the project, in which plans for increased and continual measurement is described.  Risks from leakage are identified in section CL2 and pertain to activity shifting and life cycle emissions shifting. Leakage risk is mitigated through withholding a reserve of 20% of the carbon credits and also through estimating the use of fossil fuels accountable to the project and removing these from the future carbon stocks.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

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

Findings	The auditors observed through interviews with community members, landowners, and local officials that the project has excellent relationships with the local stakeholders. The PDD describes the definition of stakeholders related to project activities. During the evaluation, the auditors were presented with the list of stakeholders maintained by Paso Pacifico.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

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

Findings	The RTF project documents, including the PDD, are to be made available at 1) SINIA - Nicaraguan System for Environmental Education; 2) Paso Pacifico office; 3) Municipal government offices of San Juan Del Sur; and 4) directly to each landowner.  The PDD of February 7, 2008 did not mention whether or not these documents will be translated to Spanish. The PDD of March 11, 2008 clarifies that the final PDD will be translated to Spanish and available in English.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

CAR/OBS	CAR 1/08, issued in the first draft report of February 22, 2008, was closed by actions of Paso Pacifico, i.e., in the RTF PDD of March 11, 2008 it was explained that a Spanish translation of the PDD will be provided.
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## G4. Management Capacity - Required

### Concept

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

### Indicators

The project proponents must:

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

Findings	Paso Pacifico has experienced and qualified leadership with forest ecology, natural resource and protected areas management backgrounds. Extensive relevant experience in core competency areas for a restoration forestry and conservation project has been gained primarily in Nicaragua (and also Costa Rica) by the Executive and Country Directors. The project has a Nicaraguan forester with extensive reforestation experience. The auditors reviewed CVs of other staff and consultants, who were qualified to support the project. Further, Paso Pacifico has identified resource experts to assist the project as well as additional staff training needs and positions that are being created.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

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

Findings	The auditors are confident that the staff allocation, organizational funding and budget, and planning in place are sufficiently adapted to the scale of a 406 hectare reforestation project. Paso Pacifico plans to increase the organizational capacity if the project were to expand beyond this scale. During the audit, it was evidenced that landowner relationships were being maintained, that workers and communities tending planted areas or producing plants in the nursery were active and had been able to accomplish the majority of the planting planned for 2007. Management activities were being carried forward by the project forester according to reforestation management plans for each property.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

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

Findings	The RTF PDD specifies the main technical skills required to manage the reforestation projects. Interviews with Paso Pacifico staff, with landowner administrators, and workers indicated that the project possessed these skills.		
Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CAR/OBS			

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

Findings	Paso Pacifico provided the auditors with documents necessary to demonstrate the current and long-term fiscal health of the RTF project. The budget for the current year was provided. The contract between the primary investor in RTF, Carbonfund, was reviewed. All payment for the carbon services will be invested within the first five years. Given this, Paso Pacifico prepared financial projections for the value of these		
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investments, with timing of five year installments, over the 40 year period, to determine whether the funds would suffice to sustain the project for its duration. Paso Pacifico estimated 3 different scenarios based on rates of return (low, medium, and high) under different investment climates for Nicaragua. All projections turned out to be adequate. The project is required to complete an annual financial audit and submit independently prepared progress reports to the investor.

Conformance  
CAR/OBS

Yes

No

N/A

## G5. Land Tenure - Required

### Concept

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

### Indicators

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

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

#### Findings

Paso Pacifico demonstrated to the audit team through legal documentation for each property that the land ownership is private and legally secure for the long-term. The information presented included the name of the owner, the name of the farm, the total area and the date of its legal inscription. Paso Pacifico verified the veracity of the information through its legal counsel and consulting the National Register, as well as through interviews with the neighbors of the properties.

For each reforestation site there exists a legal contract that was voluntarily signed by the landowner and the project, where it is established that the reforested areas within the project will be maintained under forest cover for a period of 40 years. The contracts were executed and maintained by an environmental lawyer in Nicaragua. The terms of these contracts bind the land-use for the reforestation area as forest cover to be maintained in perpetuity, which would be passed forward with the land title in the event that it was sold. Although this is not a 'covenant' as understood in US practice, the legal status of the title has registered the land use with the responsible Nicaraguan agencies.

Conformance  
CAR/OBS

Yes

No

N/A

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

#### Findings

The audit team received evidence that the areas to be reforested by the RTF project would be exclusively on privately held land and it would not be necessary to relocate any persons for the establishment of the plantations.

Conformance  
CAR/OBS

Yes

No

N/A

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

#### Findings

In the RTF PDD, Paso Pacifico lists all of the communities that are close to the properties where the project will be developed. It was also evidenced during the evaluation that the community members would benefit directly and indirectly from the RTF project. In as much as these community members see themselves as allies of the project, it is expected that they would not generate problems of land invasions or migrations onto the properties of the landowners in this project. Landowners

	interviewed said that they had not had such problems on their lands. In spite of there not being any actual cases registered of in-migracion to the small area for which the project is planting, the project had not developed a procedure to prevent or respond before such eventuality. The PDD does expect there to be a low risk of “in-migration” of people to the project management areas. This is justifiable largely due to the strength of private property rights of the landowners. The assumption is that there will be time for the project to monitor and develop mitigation programs for this potential, even if thought to be small, once the project is running.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> OBS 3/08: Paso Pacifico should develop a procedure to identify, respond to, and mitigate the possible risks of in-migration.

## G6. Legal Status - Required

### Concept

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

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

### Indicators

The project proponents must:

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

Findings	Paso Pacifico manifested and presented written evidence that during the period of the planning of the RFT project they took into account the opinion of, and consulted with, the Instituto Nacional Forestal (INAFOR), Ministerio de Agricultura (MAGFOR), the Unidad de Gestión Ambiental Municipal, and the Ministerio de Ambiente y Recursos Naturales (MARENA) to assure no laws would be broken. Since the project inception, the Paso Pacifico personnel have maintained communication with these institutions and have generated bilateral support, principally in terms of the legal assistance/guidance on the part of these institutions and technical support on the part of Paso Pacifico. The audit team, through means of interviews and site visits, found no existence of non-compliance to the law and rather, all indications are that the RTF has complied with the labor, environmental, forestry, and protected areas laws for the country and demonstrated that it is aware of the relevant laws and retaining legal counsel as needed to reinforce such understanding of regulations.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

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

Findings	The Paso Pacifico staff demonstrated to the audit team that they maintain cordial, close, and professional communications/relations with the relevant state agencies in Nicaragua. Paso Pacifico, through maintained contacts and interactions with these relevant state agencies, was aware of changes in procedures and environmental/forestry rules affecting the project. According to landowners and project staff, Paso Pacifico will carry out the legal process to inscribe some of the participating properties as Protected Private Reserves through cooperation with the Ministerio de Ambiente y Recursos Naturales (MARENA).
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

## G7. Adaptive Management for Sustainability - 1 Point, Optional

### Concept

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

Adaptive management is based upon the premise that ecosystems and social systems are complex and inherently unpredictable. Adaptive management views land management actions as learning opportunities and as potential experiments for systematically testing assumptions and identifying adjustments that could benefit the project. It enables a project to evolve to meet changing or unanticipated needs, and can help ensure that the project realizes its goals over the long term.

### Indicators

The project proponents must:

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

Findings	Project is established with a research, evaluation, and monitoring component. Paso Pacifico has collaborative arrangements with the US Forest Service and other institutions to support long-term monitoring for the purpose of adaptive management.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	The project has laid out its objectives for strengthening its capacity to deliver outreach, provide technical assistance, and implement a conservation science program over the next five years. Many of the specific indicators that the project will use to evaluate successful outcomes are related to internal capacity building and institutional strengthening as it may support the external sharing of information.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	The Paso Pacifico directors have designed a project with the intent that it can grow in size and scope, which is likely to happen as a positive reaction to successful reforestation. The PDD does not describe the defined process to adjust project activities; however, it was evident that the planning methods and project implementation so far have embraced an approach of adaptability. This can be evidenced by the fact that the project is having such success in attracting cattle ranchers, who might otherwise be unsupportive of a project with a conservation focus.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

- 4) Demonstrate an early commitment to the long-term sustainability of project benefits once initial project funding expires. Potential activities may include: designing a new project that builds on initial project

<sup>3</sup> The definition of Adaptive Management and several of the indicators were based on Nyberg (1999). *An Introductory Guide to Adaptive Management*.

outcomes; securing payments for ecosystem services; promoting micro-enterprise; and establishing alliances with organizations or companies to continue sustainable land management.

Findings	Project has planned for a 40 year financial horizon, which would be considered a long-term and sustainable one. The organization is young, and growing, and has both identified the possibility to expand to take on other similar projects and the need to be set up so the project could continue in the case where Paso Pacifico underwent organizational changes.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

## G8. Knowledge Dissemination - 1 Point, Optional

### Concept

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

### Indicators

The project proponents must:

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

Findings	One of the contractual responsibilities of Paso Pacifico with the property owners is to document and disseminate the results of the technical and scientific studies, and also the principal strengths and weaknesses detected by third parties. The project plans to realize regular self-evaluation (i.e., SWOP analysis of Strengths, Weaknesses, Opportunities, Threats) and invite investigators into the project to generate useful information for the project itself, but also for the public.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	The project has numerous workshops and presentations planned for the local communities and the land owners in the project. These are related to the results and evaluations of the project, but also in the form of technical training and skill-building. In addition, Paso Pacifico has invited academic institutions and government agencies to workshops designed to raise awareness of RTF and its results. Visiting national and international scientists have been invited to offer training. For example, one component of the spider monkey study will be "to train a cohort of local scientists (e.g., recent university graduates in biology) in the skills necessary to conduct wildlife and primate conservation assessments."  Paso Pacifico also maintains relations with the personnel of the National office of the Clean Development Mechanism in Nicaragua, with whom they have planned to share information generated through the experience of the RTF project.  Paso Pacifico has already realized training courses for the field workers in such areas as establishment and management of plantations and of nurseries, which are viewed by the workers and community members as welcome growth to their own understanding.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

## CL1. Net Positive Climate Impacts - Required

### Concept

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

### Indicators

The project proponents must:

- 1) Use the methodologies of the Intergovernmental Panel on Climate Change's Good Practice Guidance (IPCC GPG) to estimate the net change in carbon stocks due to the project activities. The net change is equal to carbon stock changes *with* the project minus carbon stock changes *without* the project (the latter having been estimated in **G2**). Alternatively, any methodology approved by the CDM Executive Board may be used. This estimate must be based on clearly defined and defensible assumptions about how project activities will alter carbon stocks and non-CO<sub>2</sub> GHG emissions over the duration of the project or the project accounting period.

### Findings

The Paso Pacifico carbon calculations were based on good practice and available science. The project demonstrated extensive understanding and solid implementation of methodologies given the current state of data on tropical forest species in dry and moist tropical forest in Southwestern Nicaragua. To estimate the actual carbon existing on site at the time of planting and the projected amount of carbon that would be sequestered through the mixed native species reforestation, Paso Pacifico utilized the approved methodology of the IPCC, (known as AR-AM002) for the restoration of degraded lands through afforestation/reforestation.

To implement the methodology Paso Pacifico utilized GIS and aerial photography for area calculation; photo analysis, land title review, and interviews with landowners and neighbors to establish historic land use; and measurement of proxy forests with conditions that would conservatively approximate the projected growth of the newly planted mixed species stands in both dry and moist forest. Ex ante carbon storage was determined by proxy dry and wet forests of ages 20, 30, 40 and mature. Measurement of standing trees in terms of species, DAP, height, and regression equations with A and B constants for biomass, multiplied by 0.5 for carbon, then expanded by carbon per area. The allometric equations used to estimate the biomass of the future forests over time were based on scientific literature considered to be accepted and conservative. A constant regression equation was used for biomass (-2.134 a constant, 2.53 b constant). A constant regression equation used for belowground carbon storage (-1.0587 a constant, 0.8836 b constant). Similarly, seedling biomass and CWD was estimated.

The project also indicated the assumptions for the existing baseline and future trajectory of such baselines in the absence of a project, such that:

- 1) on some sites limited natural regeneration would occur in absence of project;
- 2) degradation would continue in absence of project; or
- 3) on sites where cattle ranching would continue without project, tree cover would remain the same or decline in absence of the project.

The RTF project is designed conservatively to result in the net greenhouse gas removals, through carbon sequestration, of approximately 170,000 t CO<sub>2</sub>e after removal of the pre-project carbon and emissions from project leakage.

### Conformance

Yes

No

N/A

### CAR/OBS

- 2) Factor in the non-CO<sub>2</sub> gases CH<sub>4</sub> and N<sub>2</sub>O to the net change calculations (above) if they are likely to account for more than 15% (in terms of CO<sub>2</sub> equivalents) of the project's overall GHG impact.

### Findings

The project is not required to factor in the non-CO<sub>2</sub> gases to the net change calculations, because there will be a negligible contribution from such gases, far below 15%. Paso Pacifico explained in the PDD why the potential contributors of non-CO<sub>2</sub>

	gases are not a factor, or very minimal, in this project. One of these possible factors is fertilizer use. The project states that chemical fertilizers will be used in small quantity, but amounts were not quantified. Auditors did not detect much fertilizer use during the audit.
Conformance CAR/OBS	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> OBS 4/08: Paso Pacifico should quantify the amount of fertilizer used in the project and the emissions.

- 3) Demonstrate that the net climate impact of the project (including changes in carbon stocks, and non-CO<sub>2</sub> gases where appropriate) will give a positive result in terms of overall GHG benefits delivered.

Findings	The calculations for the net carbon stocks during the life of the project indicate that the impact for the climate will be positive, even after accounting for possible leakage and for the existing baseline carbon stocks. The project indicates that 20% of the carbon will be withheld from the market as a buffer for uncertainties regarding permanence or leakage. Given the nature of the project, where they promote land use change from pasture and a degraded condition to one of forest, it is expected that the benefits will continue to be positive. Nevertheless, Paso Pacifico has planned to realize regular monitoring of the actual carbon realized.  Estimated gross GHG removals over project life in dry forest sites reach 67,000 tons and in humid forest sites reach 145,000 tons.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> OBS 5/08: Paso Pacifico should explain in the PDD the formal mechanism to withhold 20% of the carbon in reserve.

## CL2. Offsite Climate Impacts (“Leakage”) - Required

### Concept

***The project proponents must quantify and mitigate likely negative offsite climate impacts; namely, decreased carbon stocks or increased emissions of non-CO<sub>2</sub> GHGs outside the project boundary, resulting from project activities (referred to as “leakage” in climate change policy).***

### Indicators

The project proponents must:

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

Findings	The PDD states that Paso Pacifico will closely monitor changes in land use across the project area. There is a plan for long-term monitoring of forest cover across the corridor. Monitoring will involve direct measurement of project activities on site and effects offsite. The project has identified 4 types of potential offsite impacts, two are negative and two are positive. The mechanisms for such leakage (activity shifting, life cycle emissions shifting, etc.) are identified.  Leakage was estimated at approximately 5000 tons CO <sub>2</sub> over the project life and current area.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

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

Findings	In the first instance, the project is estimating limited leakage to occur through project activities. This assumption is based upon fragmentation analysis conducted in nearby Costa Rica examining the trends of reforestation and patterns of shifting of grazing when there is limited forest left, such as in the project area where only 16% of forest
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	remains. It has been found that most cattle ranchers that wanted to plant trees, but remain in cattle ranching, shifted to lands that were already under pasture. Secondly, the project intends to discount from total carbon the amount that they calculate as leakage. Third, for that leakage which remains difficult to estimate, a 20% reserve buffer has been established. In addition, livelihood methods are expected to address leakage through generation of forest friendly economic options for community members such as eco-tourism, forest guard and plantation work, research projects.
Conformance	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
CAR/OBS	OBS 6/08: Paso Pacifico should monitor quantitatively statistics on cattle production in the provinces of the project.

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

Findings	The leakage that Paso Pacifico estimated, around 5000 tons CO <sub>2</sub> were removed from the climate benefits the project is claiming. The balance continues to be very positive.
Conformance	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
CAR/OBS	

### CL3. Climate Impact Monitoring - Required

#### Concept

***Before a project begins, the project proponents must have an initial monitoring plan in place to quantify and document changes in project-related carbon pools, and non-CO<sub>2</sub> GHG emissions if appropriate, (within and outside the project boundaries). The monitoring plan should state which measurements will be taken and which sampling strategy will be used.***

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

#### Indicators

The project proponents must:

- 1) Have an initial plan for how they will select carbon pools and non-CO<sub>2</sub> GHGs to be monitored, and the frequency of monitoring. Potential pools include aboveground biomass, litter, dead wood, belowground biomass and soil carbon. Pools to monitor must include any pools expected to decrease as a result of project activities. Relevant non-CO<sub>2</sub> gases must be monitored if they account for more than 15% of the project's net climate impact expressed in terms of CO<sub>2</sub> equivalents.

Findings	<p>Paso Pacifico has an initial monitoring plan and methodologies for measuring reforestation areas and reference forests on a regular basis through the life of the project. Permanent sample plots are established in the planted areas and nearby natural 'reference' forests. The monitoring of these plots will generate direct measurement data about carbon stocks over time during the project.</p> <p>Monitoring will include periodic measurement (each five years) of the following carbon pools:</p> <ol style="list-style-type: none"> <li>a) Above-ground biomass: dbh of trees in reforestation areas will be measured and allometric equations will be applied to estimate above-ground biomass. When saplings are below 5 cm dbh, then allometric equations for seedlings will be applied. Below-ground biomass will be estimated.</li> <li>b) Dead wood: Dead-wood will be measured starting at year five and with subsequent years to test whether projections of 5% of total aboveground biomass were accurate. Dead-wood will be measured using Brown-transects for measuring downed</li> </ol>
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Conformance CAR/OBS	woody debris. Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
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## CL4. Adapting to Climate Change and Climate Variability - 1 Point, Optional

### Concept

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

### Indicators

The project proponents must:

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

Findings	Paso Pacifico has identified drought and hurricanes as the most significant impacts from climate change variability. Scientific literature is referred to that predicts a decline in precipitation and more pronounced hurricanes for Central America for the latter 21st century.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

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

Findings	Paso Pacifico has planned for a range of potential impacts and has listed appropriate actions to address these. For example, if extreme drought effects seedlings, the project will utilize more drought resistant species and plan for irrigating them during their first five years. For example, if wildfires become more prevalent, the project will increase preventative patrols, etc.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

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

### Concept

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

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

## Indicators

The project proponents must:

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

### Findings

Paso Pacifico has agreed to sell carbon benefits from this project directly to the non-profit Carbonfund.org. This organization sells and trades in the voluntary market, primarily to private citizens who are interested in offsetting their carbon emissions. There is no indication that the project would seek a compliance or regulated market verification, therefore there is not the option, currently, of selling into such a market.

### Conformance CAR/OBS

Yes

No

N/A

## CM1. Net Positive Community Impacts - Required

### Concept

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

### Indicators

The project proponents must:

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

### Findings

In August 2007, Paso Pacifico developed a tool to determine the socioeconomic level of the communities involved in the RTF. This tool presents indicators to measure the actual status of communities with respects to health, living conditions, and education. They utilized a survey format to realize a social diagnostic to interview people along a timeline of execution.

In January 2008, the project presented results from the exercise in the field to determine the impacts of the project on communities. As a baseline for the study, they used socioeconomic data at the level of the country, department, and community. In each community (of 10 in total) they evaluated the aspects specific to housing, population, scholastics, migration, and captial (physical, economic, natural, and human).

In the communities where Paso Pacifico has realized activities since 2006, they have identified the following positive impacts, both direct and indirect:

- Income diversification, on behalf of activities like filling bags or collecting seeds for the nursery (El Aceituno, El Carmen, Pueblo Nuevo y Escamequita);
- Major source of employment and opportunities (labor stability);

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

	<ul style="list-style-type: none"> <li>- Men and women have organized to establish their own nurseries and sell plants to the project or others;</li> <li>- They have generated domestic projects on behalf of the Paso Pacifico technical assistance;</li> <li>- Will reduce the out migration over the long-term;</li> <li>- The higher level of community organization will permit them to obtain credit or other benefits from the government institutions.</li> <li>- Overall positive impacts to environmental quality and life in general.</li> </ul>
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

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

Findings	Paso Pacifico presented the auditors with a stakeholder list of those that were invited to give their opinion about the scope, goals, and objectives of the project. Within those consulted with were members of local development institutions, municipalities, representatives from communities, and other organized groups. Through capacity building workshops, Paso Pacifico presented details of the projects and building awareness on the possible impacts that could be brought about through the RTF, whether positive or negative, and how these could affect the communities.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

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

Findings	At the time of the audit the project has planned to introduce a mechanism to respond to grievances, but this had not been finished. Paso Pacifico has defined the attributes of such a mechanism that will address the indicator, however this needs to have the approval of the board of directors of Paso Pacifico and also this mechanism needs to be socialized amongst the communities and fairly consulted with them.
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>

<sup>5</sup> In cases where it is unclear whether a project will be implemented or not, it is acceptable to start with a preliminary community consultation, provided there are plans for a full engagement once the project is funded. (Such a cautious approach is warranted when there is evidence that raising community expectations prematurely could lead to frustration).

## CM2. Offsite Community Impacts - Required

### Concept

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

### Indicators

The project proponents must:

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

Findings	Paso Pacifico has identified the most significant potential negative impacts that could happen from the project, namely loss of some economic opportunities for those who had worked in cattle ranching. The project has recognized that some of the tourism activities and research activities will bring new ideas, attitudes, and new goods into the communities. Paso Pacifico implemented a methodology to measure the impacts in the communities and did not detect negative impacts so far, and will continue with this in the future.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	According to the findings from the evaluation, they did not report negative impacts; nevertheless, the project had planned to continue monitoring for those to identify them with time and to put in place mitigation measures.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	There were no negative offsite impacts identified. There were some jobs lost, but those were expected to be replaced by more jobs created. The balance of social and economic benefits is expected to be positive.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

## CM3. Community Impact Monitoring - Required

### Concept

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

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

## Indicators

The project proponents must:

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

Findings	Paso Pacífico has already done monitoring and analysis of the impacts to communities. The plan for monitoring calls for regular surveys of a number of variables that are explained clearly in the PDD and for which there are specific planned frequencies for measurement.		
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Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
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## CM4. Capacity Building - 1 Point, Optional

### Concept

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

### Indicators

The project proponents must show that capacity building is:

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

Findings	The project is working at the grass roots, directly with communities, to build skills through training programs that not only serve the reforestation objectives but other areas of community development.		
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Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
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- 2) Targeted to a wide range of groups, not just elites;

Findings	From the evaluation of the training materials and information on workshops realized by Paso Pacifico it was clear that a wide range of community members are being reached by the training. There was evidence of training in the schools, as well as community organizations represented by women and men.		
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Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
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- 3) Targeted to women to increase their participation; and

Findings	The auditors spoke to women and men during the evaluation. It was evident that women are involved in project activities. Some of the outreach activities of the project are targeting household development issues. And women do play an important role in managing the nurseries. Additionally, it is worth noting that the Executive Director and Country Director of Paso Pacifico are both women and while that does not guarantee increased participation at the community level, it may make the entry point for some community women easier when they are invited to activities by a female leader rather than a male one.		
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Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
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4) Aimed to increase community participation in project implementation.

Findings	Auditors reviewed progress reports on the workshops and community capacity building events that were carried out in the past year. These covered a range of subjects and were realized in many different communities. The PDD provides a summary of all the courses offered, the purpose and subjects covered, and the communities who were involved.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

### Concept

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

### Indicators

The project proponents must:

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

Findings	The leadership of Paso Pacifico had done research, conservation program management, and other work in the region of the project for many years beforehand, and have a strong understanding of the cultural values and sensitivities. The landowners, community members, and workers interviewed during the audit were strongly supportive of the approach of Paso Pacifico. The government agencies indicated a solid collaborative role played by the project.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	There was only evidence of local community members being recruited and hired for the range of fieldwork positions of the project. Women were hired for paid activities. Researchers conducting fieldwork in the project area have hired and trained local field assistants. The consultants hired to do socio-economic and biodiversity studies for the project planning and design all are from Nicaragua.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	Workers for the project can be hired in two main ways: by the landowner directly or by Paso Pacifico. This presents a range of responsible parties for the process of such information on rights, and thus some variation in the quality of pay and benefits. During the audit, the evaluation team spoke with different worker crews independent of the		
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	Paso Pacifico leadership, both those being paid by Paso Pacifico and by landowners. According to interviews, salaries met the norm for agricultural laborers. There was not firm evidence that the project was not complying with the international and national rules on workers' rights and some landowners were apparently surpassing the norm. Workers understood their hours of work and rates of pay; however, outside of the supervision by the staff forester, there was not strong evidence of clear instructions on rights that would be consistently provided by the project.
Conformance	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
CAR/OBS	OBS 7/08: Paso Pacifico should make available a simple brochure concerning the primary rights of workers promoted consistently by the project.

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

Findings	The project has prepared a plan to improve the safety equipment available to workers and the quality of their basic working conditions. During the audit, a few workers described issues with their working conditions that had not been resolved to their satisfaction (such as amount of leave time, granting of leave time, and quality of accommodations). The team observed a substandard accommodation for a property caretaker and absence of first aid kits at work sites.  Paso Pacifico took action by writing a formal letter requesting improved worker housing and compliance labor laws, which was submitted to landowners at Isla Vista Farm on February 26, 2008.  Other actions described in the PDD of March 11, 2008 that are planned include: formal presentation of legal obligations with respect to workers rights to the landowners (by June 2008); first aid kits on farms by June 2008; and first aid training to workers in late 2008 or early 2009. These activities are mentioned in the PDD of March 11, 2008
Conformance	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
CAR/OBS	CAR 2/08 issued in the first draft audit report of February 22, 2008 was closed out, i.e., Paso Pacifico has described policies on working conditions, affecting health and safety, that will be consistent for all workers, independent of who is paying for their time.

## B1. Net Positive Biodiversity Impacts - Required

### Concept

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

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

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

### Indicators

The project proponents must:

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

Findings	Paso Pacifico has used appropriate methodologies, especially for the small scale nature of the project to increase the biodiversity understanding considerably for the sites within the project. Fragmentation analysis, key species habitat analysis, individual taxa surveys, and other data collection and analysis are taking place directly because of the project. In addition, the project used existing literature to support its hypothesis that the RTF will enhance net biodiversity. As stated in G2, the primary function the RTF will play in the restoration of forest patches within the fragmented dry and moist tropical forest will be to increase connectivity. In personal conversation with Dr. Suzanne Hagell, a primatologist studying spider monkey populations, the loss of connectivity of forest that is happening and would continue without the project, creates limits to the mobility of wild animals, which impacts movement of genes, thus harming genetic diversity, and threatening species survival. The PDD compares the without and with project scenarios and effects on biodiversity and concludes that for each main scenario element the net effect is positive for biodiversity conservation. The PDD describes monitoring indicators which aim to establish quantitatively the extent to which this is the case.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	There is no non-native species intentionally used by the project.		
Conformance CAR/OBS	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

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

Findings	See G1.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	See B4. All species used by the project were native to the planting areas and most are now locally collected.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	Paso Pacifico attests that no GMOs are used in the project to generate carbon credits.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

## B2. Offsite Biodiversity Impacts - Required

### Concept

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

### Indicators

The project proponents must:

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

Findings	The RTF project is designed to have net positive impacts on biodiversity. It is unlikely that there would be negative offsite biodiversity impacts. However, the project has identified two possible impacts, which should be minor, although the Paso Pacifico has described plans to mitigate these problems should they arise. 1) Potential for increased employment and economic opportunity to increase consumption - and hence, trash. 2) Hunting will not be permitted in the reforestation areas, so it is possible that hunters may go elsewhere to hunt in areas that are less well patrolled and protected.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	Paso Pacifico intends to use current education campaigns - and strengthen these - to change awareness as a means of addressing such possible negative offsite biodiversity impacts. Already, campaigns and programs in schools to raise awareness of waste management have taken place and Paso Pacifico is working with municipalities to encourage incorporation of improved waste management practices. The project hopes to address hunting effects through education and awareness to build support among landowners, their neighbors and the communities. The project also expects that the landscape level, corridor-wide approach to the project will diffuse the conservation ethic more widely than if the project was located in one fixed spot.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	The RTF PDD explores each of the two potential negative offsite impacts, the planned mitigation strategy, and the likelihood of the end impact being more positive or more negative. In both situations the project defends its conclusions that the net result should be more positive than negative.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

### B3. Biodiversity Impact Monitoring - Required

**Concept**

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

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

**Indicators**

The project proponents must:

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

Findings	Paso Pacifico plans for long-term monitoring of forest cover through the duration of the project. An initial monitoring plan has been drafted. Paso Pacifico expects financial and technical support of the USDA Forest Service and International Institute of Tropical Forestry through USAID funds to establish permanent monitoring sites within reforestation areas and selected forest fragments to study biodiversity variables over time. At project commencement, in 2007, reforestation sites and surrounding forests were surveyed for various taxa and its planned for these locations to be measured (re-sampled) each five years. Such as: trees, vegetation, butterflies, beetles, reptiles and amphibians, primates, and birds. Additionally, Paso Pacifico has research programs utilizing in-house, local, and visiting scientists (including graduate students and post-doctorates) studying the changes in biodiversity via the project. Threatened or endangered species, such as the Yellow-naped Parrot and the Spider Monkey, are the main subject of ecological studies. Variables and indicators for long-term water monitoring are also outlined in the PDD.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

### B4. Native Species Use - 1 Point, Optional

**Concept**

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

**Indicators**

The project proponents must:

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

Or

- Justify that any non-native species used by the project are superior to native species for generating concrete biodiversity benefits (e.g., for rehabilitating degraded areas unlikely to support natives, or for producing fuel wood that reduces logging pressure on intact ecosystems)

Findings	The RTF project is only using native species in the reforestation. In addition, the project is utilizing a wide range of native species. In the first year of planting, there were over 170,000 seedlings planted from among nearly 70 species, of which 22 were used most frequently (90% of the total).  Species included: Pimienta, Zapote Mico, Nambar, Cortez, Javillo, Guaba, Guanacaste blanco, Caimito, Guanacaste, Chocuabo, Guapinol, Laurel, Espavel, Cedro Real, Pochote, Jobo, Genizaro, Caoba, Madronno, Acetuno, Gavilan, Nispero, Roble. Selection was based on the species suitability to grow in the areas being planted and based on microclimatic conditions of site, such as soil moisture or shade tolerance.  Community members were trained in nursery care techniques for native species, especially methods of seed treatment and scarification to enhance germination.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

### Concept

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

### Indicators

The project proponents must:

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

Findings	Streamcourses and water bodies are present in or near the reforestation sites. The project anticipates that water and soil quality will be enhanced through both the exclusion of cattle and livestock grazing as well as the restoration of streamside habitat. The RTF project activities that will bring about such enhancement, specifically are: removing cattle, maintaining partial weed cover during early years of reforestation to protect from soil erosion, planting a diversity of species leading to a diverse soil microbial communities, establishing protected areas at reforestation sites, planting trees on contours, planting native drought-tolerant tree species, and allowing natural litterfall and woody debris to accumulate on soil surface.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

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

Findings	The project provides a table of the restoration effects that will take place due to restoration and the mechanism that will bring the effect in improved water or soil quality. These are referenced to the scientific literature as appropriate, which helps defend the project assertion. In addition, the RTF PDD explains that these variables will be measured as part of the ongoing monitoring of soil and water.		
Conformance CAR/OBS	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

## Appendix C: STAKEHOLDER LISTS (CONFIDENTIAL)

### List of Project Proponent Staff Consulted

Name	Title	Contact	Type of Participation
Liza Gonzales	Paso Pacifico Country Director	<a href="mailto:liza@pasopacifico.org">liza@pasopacifico.org</a>	Interview
Sarah Otterstrom	Paso Pacifico Executive Director	<a href="mailto:sarah@pasopacifico.org">sarah@pasopacifico.org</a>	Interview
Roberto Marsanaro	Paso Pacifico Forester		Interview

### List of other Stakeholders Consulted

Name	Organization	Contact	Type of Participation
Juan Mejilla Martinez	Administrator, Nic Dev Finca		Interview
Dr. Fernando Arce Montiel	Landowner		Interview
Orlando Fajardo	Encargado de reforestación	Comunidad Aceituno, Cárdenas, Nicaragua	Interview
Miguel Fernández	Líder comunitario	Comunidad Aceituno, Cárdenas, Nicaragua	Interview
Kevin Whiteman	Forestry Consultant to Landowners		Interview
Donn Wilson	Landowner		Interview
Oscar Salinas	Responsable de la Unidad de Gestión Ambiental Municipal de San Juan del Sur	San Juan del Sur, Nicaragua. (505) 6109810 <a href="mailto:oscarlawrece71@yahoo.com">oscarlawrece71@yahoo.com</a>	Interview
Francisco Marchena	Trabajador Finca Guacapolca, Cárdenas, Nicaragua	Cárdenas, Nicaragua	Interview
Mynor Marchena	Trabajador Finca Guacapolca, Cárdenas, Nicaragua	Comunidad Dolores del Lago, Granada, Nicaragua	Interview
Milton Marchena	Trabajador Finca Guacapolca, Cárdenas, Nicaragua	Cárdenas, Nicaragua	Interview
Vismar Marchena	Trabajador Finca Guacapolca, Cárdenas, Nicaragua	Comunidad Dolores del Lago, Granada, Nicaragua	Interview
Rafael Avilez	Trabajador Finca Guacapolca, Cárdenas, Nicaragua	Cárdenas, Nicaragua	Interview
Gonzalo Ulloa	Trabajador Reserva Silvestre Privada Domitila	Comunidad Dolores del Lago, Granada, Nicaragua	Interview
María José de Mejía	Propietaria Reserva Silvestre Privada Domitila	<a href="mailto:info@domitila.org">info@domitila.org</a> (505) 881 1786	Interview
Suzanne Hagell	Primatologist, Northern Arizona University		Interview