

CDM VALIDATION REPORT

National Forestry Financing Fund (FONAFIFO),
International Bank for Reconstruction and Development as Trustee for
the BioCarbon Fund and Government of Canada

VALIDATION OF THE PROJECT ACTIVITY:

Carbon Sequestration in Small and Medium Farms in the Brunca Region,
Costa Rica (COOPEAGRI Project)

AENOR REFERENCE: 2010/0018/CDM/03

VERSION:2

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

Validation Report:	AENOR Reference No.:		Version of this report:		Date:	
	2010/0018/CDM/03		2		2012/09/24	
PDD:	Title:		GSC publication date:		Comments received:	
	Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)		23/07/2010		<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	
Parties involved:	Host Party:		Other involved Parties:			
	Costa Rica		Canada			
Project Participant(s):	In host Party:		In other involved Parties:			
	National Forestry Financing Fund (FONAFIFO)		International Bank for Reconstruction and Development as Trustee for the BioCarbon Fund and the Government of Canada-Ministry of Foreign Affairs and International Trade-			
Size of the project activity:	<input type="checkbox"/> Small scale <input checked="" type="checkbox"/> Large scale					
Applied methodology/ies:	Title:		Code:		No. version Scope:	
	Reforestation or afforestation of land currently under agricultural use"		(AR-AM0004)		4 14	
Applied tools:	Title:		Version:			
	Tool for the Demonstration and Assessment of Additionality in A/R CDM Project Activities		Version 02			
	Title:		Version:			
Estimated net anthropogenic GHG removal:		GSC PDD:		Final PDD:		
		238,239		176,050		
<input type="checkbox"/> Annual average (tCO ₂ e) <input checked="" type="checkbox"/> Total (tCO ₂ e)						
Previous versions of this document:			Version:		Date:	
			1		3/04/2012	
			2			
			3			
			4			
Report prepared by:		Climate Change Unit. AENOR				

* The comments are detailed in Section 4 of this Validation Report

ABBREVIATIONS

AR-ACM	Approved Consolidated Methodology for Afforestation and Reforestation
AR-AM	Approved Methodology for Afforestation and Reforestation
AR-AMS	Approved Methodology Small Scale for Afforestation and Reforestation
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM-EB	CDM Executive Board
CMP	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
CR / CL	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EF	Emission Factor
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission Reduction
FAR	Forward Action Request
FSC	Forest Stewardship Council
GHG	Greenhouse Gas(es)
GIS	Geographic Information System
GPG	Good Practise Guidance
GPS	Global Positioning System
IPCC	Intergovernmental Panel on Climate Change
IRL	Information Reference List
IRR	Internal Rate of Return
KP	Kyoto Protocol
LULUCF	Land-Use, Land-Use Change and Forestry
MP	Monitoring Plan
NGO	Non Governmental Organisation
PDD	Project Design Document
PP	Project Participant
PSA	Program of Payments for Environmental Services
tCER	temporary Certified Emission Reduction
TARAM	Tool for Afforestation and Reforestation Approved Methodologies (spreadsheet based calculation tool)
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

TABLE OF CONTENTS

Page

1	INTRODUCTION.....	6
1.1	Objective	6
1.2	Scope	6
2	METHODOLOGY.....	7
2.1	Appointment of team members and technical reviewers	8
2.2	Document review	9
2.3	Follow-up actions	9
2.4	Findings	10
2.5	Internal Quality Control	10
3	VALIDATION FINDINGS.....	11
3.1	Approval	11
3.2	Participation	11
3.3	Project Design Document	12
3.4	Project description	12
3.5	Baseline methodology	13
3.5.1	Applicability of the selected methodology to the project activity	13
3.5.2	Project boundary	15
3.5.3	Baseline identification	17
3.5.4	Algorithms and/or formulae used to determine emission reductions	19
3.5.5	Baseline stocks and greenhouse gas removals by sinks	19
3.5.6	Project emissions	20
3.6	Additionality	21
3.6.1	Starting date of the project activity and prior consideration of the CDM	21
3.6.2	Analysis of the additionality	23
3.7	Monitoring Plan	25
3.8	Comments by Local Stakeholders	26
3.9	Sustainable Development	27
3.10	Environmental and socio-economic impacts	27
4	COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS.....	28
5	VALIDATION OPINION.....	29

6

REFERENCES

30

Annex 1: VALIDATION PROTOCOL

Annex 2: QUALIFICATIONS CERTIFICATES

1 INTRODUCTION

1.1 Objective

The validation objective is an independent assessment by a Third Party, a Designated Operational Entity (DOE) of a proposed project activity against all defined criteria set forth by the registration under the Clean Development Mechanism (CDM). Validation is part of the CDM project cycle and results in a conclusion by the executing DOE whether or not a project activity is valid and should be submitted for registration to the CDM Executive Board (CDM-EB). The ultimate decision on the registration of a proposed project activity rests with the CDM-EB and the Parties involved.

The project activity covered by this validation report was submitted under the following project title: "Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)".

The International Bank for Reconstruction and Development as Trustee for the BioCarbon Fund has commissioned AENOR to validate this project activity.

1.2 Scope

The scope of the validation covers the additionality assessment, the Environmental Impact Study and stakeholder consultation. In addition, it covers the baseline methodology, the calculation of the emission reductions and the monitoring methodology.

The following documents were reviewed as part of the scope of the activity:

- PDDs (First version /1/ and final version /2/).
- Approved Methodology: AR-AM0004 (Version.4) /3/
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Guidelines for Completing the Project Design Document (CDM-AR-PDD), and the Proposed New Baseline and Monitoring Methodology (CDM-AR-NM)
- Associated documentation (environmental requirements, investment analysis, etc.)
- Letters of approval from the DNAs of Costa Rica and Canada.

The validation scope is defined as an independent and objective review of the PDD, the project's baseline study and Monitoring Plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. AENOR, based on the Specific Instruction for the Processing and Conducting of Validation, Registration, Verification and Certification of Kyoto Protocol CDM Project Activities (IE/DTC/0039)/4/, has used a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation is not meant to provide any consultancy services to the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the PDD.

2 METHODOLOGY

The project assessment aims at being a risk based approach and is based on the methodology developed in the Validation and Verification Manual (version 01.2) /5/, an initiative of Designated and Applicant Entities, which aims to harmonise the approach and quality of all such assessments.

The validation of the project began in July 2010 and concluded in September 2012. The validation was performed in several phases, starting with a desk review of the PDD against the approved methodology and CDM and other relevant criteria. The desk review was followed by a site visit to the project site and main stakeholders in Costa Rica.

In order to ensure transparency, a validation protocol was customized for the project, according to Specific Instructions IE/DTC/039. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results derived from validating the identified criteria.

The sequence of the validation is given in the table below:

Topic	Date
Submission of PDD for global stakeholder consultation process	23/07/2010
On-site visit	21-23/09/2010
Validation Protocol - Version 01.	20/10/2010
Final Validation Report	24/09/2012

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

2.1 Appointment of team members and technical reviewers

The list of involved personnel and the qualification status are summarised in the following table:

Name	Qualification	
	Position in the team	Technical areas
Jose Luis Fuentes Pérez	Chief validator and technical expert	TA 14.1
Marcelino Pellitero Martínez	Validator/ Financial expert	
Manuel García Rossel	Technical expert and technical reviewer.	TA. 14.1
Mercedes García Madero	Technical reviewer	
Jose Antonio Gesto Vilacoba	Financial expert/ Technical reviewer	

Technical areas (TA) mentioned above correspond to the following:

TA code	Technical area
TA 1.1	Thermal energy generation from fossil fuels and biomass including thermal electricity from solar (COMPLEX);
TA 1.2	Energy generation from renewable energy sources.
TA 2.1	Electricity distribution;
TA 2.2	Heat distribution
TA 3.1	Energy demand
TA 4. 1	Cement sector (COMPLEX);
TA 4.2	Aluminium (COMPLEX);
TA 4.3	Iron and steel (COMPLEX);
TA 4.4	Refinery (COMPLEX)
TA 5.1	Chemical process industries (COMPLEX).
TA 6.1	Construction.
TA 7.1	Transport.
TA 8.1	Mining and mineral processes, excluding those included in TA 8.2 below;
TA 8.2	Oil and gas industry, coal mine methane recovery and use (COMPLEX).

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

TA 9.1	Metal production.
TA 10.1	Mining and mineral processes, excluding those included in TA 10.2 below;
TA 10.2	Oil and gas industry, coal mine methane recovery and use (COMPLEX).
TA 11.1	Chemical process industries (COMPLEX);
TA 11.2	GHG capture and destruction.
TA 12.1	Chemical process industries (COMPLEX).
TA 13.1	Waste handling and disposal;
TA 13.2	Animal waste management.
TA 14.1	Forestry
TA 15.1	Agriculture
TA 15.2	Animal waste management.

2.2 Document review

The Project Design Document submitted by the PPs was reviewed against the approved methodology and against CDM and other relevant criteria. Additional background documents related to the project design, baseline and additionality were also made available before and during the on-site visit in Costa Rica.

To address the corrective actions and clarification requests that arose from the desk review and on-site visit, the consultants revised the project design document submitted in July 2010 and developed a final version (version 2).

2.3 Follow-up actions

The AENOR validation team composed of José Luis Fuentes Pérez and Marcelino Pellitero Martínez conducted interviews with project developers in Costa Rica to confirm selected information and to resolve issues identified in the document review.

On 21, 22 and 23 September 2010, the AENOR validation team carried out the visit to the project site. During these days, representatives from Project Participants were interviewed, in addition to relevant local stakeholders such as local farmers affected by the project.

The main topics of the interviews are summarised in Table below.

Interviewed organisation Person/Position	Interview topics
--	------------------

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

Interviewed organisation Person/Position	Interview topics
<p>Project Participants and consultants</p> <ul style="list-style-type: none"> Saima Qadir: Deal Manager BioCarbon Fund Marco Van der Linden: Carbon Finance Specialist World Bank, BioCarbon Fund. Juan Pablo Ruiz: Task Team Leader LCSN Luis Diego Zuñiga: Forestry personnel of Coopeagri Freizelh Vargas Fallas: Forestry personnel of Coopeagri Gilmar Navarrete Chacón: Fonafifo Jennifer Hernández Sánchez: Fonafifo Victor Sojo Chavez: Fonafifo Donald Córdoba Aguilar: Coopeagri Néstor Badilla: Coopeagri Hugo Cervantes Molina: Farmer. Amparo Navarro Castro: Farmer Rodrigo Padilla Gamboa: Farmer 	<ul style="list-style-type: none"> ➤ Project design. ➤ Emission reductions calculations. ➤ Compliance with environmental law. ➤ Permits and authorisations applicable to the farmers and the project. ➤ Additionality assessment ➤ Consultation with land owners and other stakeholders.

2.4 Findings

As an outcome of the validation process, the team can raise different types of findings according to the CDM Validation and Verification Manual.

A Clarification Request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

When a non-conformance arises the validation team shall raise a Corrective Action Request (CAR). A CAR is issued, when:

- The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- The CDM requirements have not been met;
- There is a risk that emission reductions cannot be monitored or calculated.

Failure to address a CL may result in a CAR. Information or clarifications provided as a result of a CL may also lead to a CAR.

A Forward Action Request (FAR) is raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs shall not relate to the CDM requirements for registration.

The project participants were requested to address all validation findings and finally provided the validation team with sufficient evidence to determine that the applicable CDM requirements have been met. The project participant modified the initial PDD to resolve the validation team concerns and resubmitted a final version of the PDD. AENOR has prepared this report based on the final PDD.

All the validation findings are summarised in section 3 below and documented in more detail in section 6 and in the validation protocol included in Annex 1.

2.5 Internal Quality Control

As the final step of the validation, the validation report and the protocol have to undergo an internal quality control by means of a technical review following the procedures of AENOR. The technical reviewer is a competent staff member from AENOR, independent of the team that carried out the validation of the project activity.

3 VALIDATION FINDINGS

3.1 Approval

Approval requirements have been validated with evidence of Letters of Approval.

The Letter of Approval /6/ from Canada DNA has been provided to the validation team directly from the Project Participants. The LoA was issued on 21 April 2011 by the Ministry of Foreign Affairs and International Trade of Government of Canada. AENOR confirms that the LoA is unconditional with respect to the following:

- Canada is a Party of the Kyoto Protocol. Canada ratified the Kyoto protocol on 17 December 2002.
- The LoA approves and authorizes the voluntary participation of the International Bank for Reconstruction and Development as Trustee for the BioCarbon Fund.
- The Government of Canada authorizes the participation of the Ministry of Foreign Affairs and International Trade as project participant of the Government of Canada.
- The LoA refers to the precise proposed CDM project activity title in the PDD being submitted for registration.

The Letter of Approval /7/ from Costa Rica DNA has been provided to the validation team directly from the Project Participants. The LoA was issued on 26 July 2012 by the Ministry of Environment, Energy and Telecommunications (MINAET) of Costa Rica. AENOR confirms that the LoA is unconditional with respect to the following:

- Costa Rica is a Party of the Kyoto Protocol. Costa Rica ratified the Kyoto protocol on 6 June 1994 and 3 July 2002, respectively.
- The LoA authorises the voluntary participation of National Forestry Financing Fund (FONAFIFO) as project participant.
- The project activity contributes to the Costa Rica's achievement of sustainable development and the project activity as proposed complies with relevant national legislation.
- The LoA refers to the precise proposed CDM project activity title in the PDD being submitted for registration.

No additional specifications of the project activity are contained in the LoAs.

The validation did not reveal any information that indicates that the project can be seen as a diversion of ODA funding towards Costa Rica.

3.2 Participation

Two Parties, Costa Rica and Canada are involved in the project.

The Government of Canada ratified the Kyoto Protocol on 17 December 2002 and has also appointed a DNA. The Government of Costa Rica ratified the Kyoto Protocol on 6 June 1994 and 3 July 2002, respectively, and has also appointed a DNA.

AENOR confirms that participation of the International Bank for Reconstruction and Development as Trustee for the BioCarbon Fund and the Government of Canada-Ministry of Foreign Affairs and International Trade, have been approved by a party involved in the Kyoto Protocol, by means of the LoA issued from Canada. Likewise, AENOR confirms that participation of the FONAFIFO has been approved by a party involved in the Kyoto Protocol, by means of the LoA issued from Costa Rica. AENOR checked the website of the countries' DNA and the website of UNFCCC, and confirms that both LoAs from Canada and Costa Rica have been issued by the respective Parties' designated national authorities and does not doubt the authenticity of the letters of approval received from

PPs, hence AENOR confirms that LoAs are valid for the proposed CDM project activity and AENOR confirms that LoAs are in compliance with paragraphs 45-48 of the VVM v.1.2.

All project participants have been listed in section A.3 of the final PDD. This information is consistent with the information provided in Annex 1. AENOR confirms that no entities other than those approved as project participants are included in these sections of the final PDD [2].

3.3 Project Design Document

Due to the clarifications and corrective actions requested during the validation process, the Project Participants have made a new version of the PDD, version 2 dated on 16/03/2012, which includes all issues raised to the PPs either corrected or clarified.

The PDD is in compliance with relevant forms and guidance stated by the CDM documentation. Version 04 of the AR-CDM PDD template was used, which is still accepted for Registration as per paragraph 9 of the "Guidelines for Completing the CDM A/R Forms for the Project Design Document (CDM-AR-PDD) and the Proposed New Baseline and Monitoring Methodology (CDM-AR-NM)" (EB56, Annex 14). The PDD was submitted to GSC on 23 July 2010 while version 5 of the PDD Form is from EB 55, 30 July 2010.

AENOR considers that the correct guidelines for the completion of the PDD were followed. Relevant information was provided by the participants in the applicable PDD sections. Completeness was assessed through the checklist included in Annex 1 of this report.

3.4 Project description

The project activity consists of the implementation of three activities (agroforestry systems, assisted natural regeneration and forest plantation) over 892.42 Ha of lands belonging to farmers associated with the farmers' cooperative COOPEAGRI and that signed a contract with FONAFIFO. The PPs have the control of the total area under the proposed project activity at validation.

The reforestation activities will be carried out with native species, such as: Amarillón (*Terminalia amazonica*), Pilon (*Hieronyma alchorneoides*), and Cedro amargo (*Cedrela odorata*), etc, and non-native species, such as: Melina (*Gmelina arborea*) and Teak (*Tectona grandis*), and Eucalyptus (*Eucalyptus deglupta*). Technical literature [8][44][45] on native and non-native species has been provided to AENOR.

The project area is located in the three subregions (North Hillsides, South Hillsides and the Valley) of the Perez Zeledon County, San Jose Province, in Costa Rica. The geographic location of the project is 9.37 to 9.67 North Latitude, -83.47 to -83.97 West Longitude (Datum WGS84). Furthermore, the PDD states in its annex 5 the geo-referenced A/R parcels under the project boundary.

The proposed A/R CDM project activity will be promoted by FONAFIFO (Fondo Nacional de Financiamiento Forestal) while Coopeagri will provide technical assistance to and work with the farmers, given its relationships in the project region.

In order to address the non-permanence of AR-CDM projects, the Project participants have chosen the issuance of temporary Certified Emission Reductions (tCERs) for the net anthropogenic GHG removals by sinks achieved by the proposed A/R CDM project activities.

A complete description of geological, topographical, soils, climate, and land use conditions are provided in section A.5.1 of the PDD, along with the species and their habitats in the region in section A.5.2. The AENOR validation team checked the data sources provided [9][10][11][12][13][14][15][16] to describe these different conditions. The most relevant environmental conditions are the following:

The North Hillside sub-region has slopes ranging from 60% to 80% or even more in some areas. The Valley has rolling hills, with slopes ranging from 0% to 30% with an elevation of 400 to 800 m and

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

the South Hillsides sub-region presents elevations from 700 to 1200 m and very steep areas (slopes greater than 60%) are less frequent than in the North Hillsides. These topographical conditions were clearly visible by the AENOR team during the site visit.

Regarding the hydrological conditions, section A.5.1 of the PDD shows that five principal rivers cross Perez Zeledon County, all of them originating in the North Hillsides or the South Hillsides, flowing into the Valley sub-region to the Rio General. The water is intensely used by local communities in the county.

In the North Hillsides sub-region, the average precipitation ranges from 3,000 to 4,500 mm per year with a dry regimen of 1 to 2 months. In the Valley, the average precipitation ranges from 2,000 to 3,000 mm per year with a dry regimen of 3 to 4 months, and in the South Hillsides sub-region, the average precipitation ranges from 2,000 to 2,500 mm per year with a dry regimen of 3 to 4 months. Concerning the temperature in the North Hillsides sub-region, the annual temperature ranges from 15 to 20 °C. In the Valley sub-region, the annual temperature ranges from 24 to 28 °C and in the South Hillsides sub-region, the annual temperature ranges from 20 to 24 °C.

In the baseline setting the areas are pastures lands followed by agriculture activities. According to the study by CCAD and FAO [17] provided to AENOR a total of 60,200 ha were converted to non forested lands before December 31 1989. The North Hillsides is the sub-region with greater percentage of forest cover compared to the South Hillsides and the Valley sub-regions; however its forest cover is still less than the area for agriculture and pastures. The South Hillsides and Valley sub-regions have most of the area dedicated to agriculture and pasture.

Section A.5.4 of the PDD details the main practises to be implemented during the operation of the proposed project activity, i.e., for the establishment and management of the forest plantations for every stand model. The schedule of thinning and harvesting is not designed to follow the 5-year verification cycle and maximise carbon stocks at the time of verification. Thus, there is no coincidence of verification and peaks in carbon stocks.

The purpose of the project activity and its contribution to sustainable development are described in the PDD. The information provides the reader with a clear understanding of the proposed CDM project activity. The information presented in the PDD on the technical design is consistent with the actual planning and implementation of the project activity as confirmed by:

- Review of data and information (see Annex 1), which was verified with other sources if available.
- An on-site visit was performed and relevant stakeholder and personnel with knowledge of the project were interviewed. If doubts arose, further investigations and additional interviews were conducted and CARs and CLs were opened during the validation process. They all were correctly closed.

In conclusion, AENOR confirms that the project description, as included to the PDD, is sufficiently accurate and complete in order to comply with the requirements of the CDM.

3.5 Baseline methodology

3.5.1 Applicability of the selected methodology to the project activity

The final PDD states all evidence used to demonstrate each condition of the applicable methodology AR-AM0004 v04, as well as complete explanations are included in section C.2. In opinion of AENOR, the evidence and explanations confirm the fulfilment of the project with the methodology. The assessment was carried out for each applicability criterion and included, among others, the review of evidence and sources provided in the PDD and the compliance check of the local project setting with the applicability conditions in regard to baseline setting and eligible project measures as follows:

1. Lands to be afforested or reforested are degraded and the lands are still degrading or remain in a low carbon steady state;

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

PDD states in its section C.5.1 step 3 b the following evidence which demonstrates the fulfilment of the condition:

- Leiva, M.; Alfaro, M; Hidalgo, M. and Mendez, A. 2003. Costa Rica in the Face of Climate Change. Centroamerican Series of Forest and Climate Change. Central American Commission of Environment and Development (CCAD/FAO) /17/
- Baltissen, G. 1988. Effects of forest clearing and land use on soil properties of two land use sequences in Cocorí, Atlantic Zone of Costa Rica. Editorial Turrialba, CATIE / Agricultural University Wageningen, Atlantic Zone Programme / MAG, CR. /18/
- Von Patten, H. 1985. Appropriate land use systems of smallholder farms on steep slopes in Costa Rica: a study on situation and development possibilities. Hohenheimen Universitat, DE. /19/
- Sifuentes, M. 2009. Assessing the Design of Mixed Small-farms and the Condition of Improved Grasslands in the South of Costa Rica. Master Thesis. Turrialba, Costa Rica. /20/

These studies confirm that land that has been converted to pastures or agricultural lands remains as such and does not revert back to forest. These lands are likely to remain in a low carbon state or are subject to further degradation. This degradation was clearly visible during the on site assessment with indicators such as soil degradation and soil erosion.

2. Site preparation does not cause significant longer-term net decreases of soil carbon stocks or increases of non-CO₂ emissions from soil;

According to technology to be employed by the project indicated in section A.5.4 of the PDD, site preparation will be limited to making a hole with a tree planting shovel and keeping a circle of 35 cm radius free of weeds around the seedlings. Hence site preparation does not cause significant longer-term net decreases of soil carbon stocks or increases of non-CO₂ emissions from soil. This practise also was confirmed during the interviews with PPs.

3. Carbon stocks in soil organic carbon, litter and dead wood can be expected to further decrease due to soil erosion and human intervention or increase less in the absence of the project activity, relative to the project scenario;

According to explanations in Section C.5.1 step 3 b of the PDD and confirmed by studies provided and checked by AENOR /17/,/18/,/19/ and /20/, a phenomenon of vegetation degradation is occurring in the region because land was forest at times in the past and has been non-forest in more recent times. Because of the land use pattern and the pressure on the land, self-encroachment of trees will not occur. PDD states a table 12 which shows that land that has been converted to pastures or agricultural lands remains as such and does not revert back to forest. Moreover, during the site visits to some parcels, indicators such as soil erosion were detected in the area. Hence, carbon stocks in soil organic carbon, litter and dead wood can be expected to further decrease in the absence of the project activity.

4. Flooding irrigation is not permitted

Flooding irrigation or soil drainage will not be used in this project. This matter was confirmed during the site visit and PDD does not consider this practise for the proposed project activity.

5. Soil drainage and disturbance are insignificant, so that non CO₂-greenhouse gas emissions from these types of activities can be neglected;

Based on technology to be used by the project, the site preparation will be limited to making a hole with a tree planting shovel and keeping a circle of 35 cm radius free of weeds around the seedlings and can therefore be considered insignificant.

6. The A/R CDM project activity is implemented on land where there are no other on-going or planned A/R activities (no afforestation/reforestation in the baseline).

Land that will be reforested is owned by small and medium farmers who were not implementing A/R activities on their lands by themselves. Evidence below mentioned in Section C.5.1, step 3 (e) and section C.6 show that without the CDM project activity, it is very unlikely that these farmers would have implemented A/R activities.

- DECREE No.26141-H-MINAE, approved on July 11, 1997 /21/
- Pagiola, S. 2006. Payments for Environmental Services in Costa Rica. MPRA Paper No. 2010, posted 07. November 2007. Available at http://mpra.ub.uni-muenchen.de/2010/1/MPRA_paper_2010.pdf /22/
- Letter of understanding from COOPEAGRI to FONAFIFO, dated July 20, 2004. /23/
- La Gaceta No. 151 – 8 August 2006 /24/

On the other hand, following the requirements of the methodology, among others, the following tools and procedures were correctly applied

- Procedures to demonstrate the eligibility of lands for afforestation and reforestation CDM project activities. v.1 Annex 18, EB 35. /25/
- Guidance on the application of the definition of project boundary to A/R CDM project activities, Version 01. EB 44, annex 16/26/
- Guidance on accounting GHG Emissions in A/R CDM Project Activities (paragraph 35 in the report of the EB 42 meeting). /27/
- Tool for the demonstration and assessment of additionality in A/R CDM project activities, Version 02./28/
- Guidance on conditions under which the change in carbon stocks in existing live woody vegetation are insignificant, Version 01 (EB46, Annex 16). /29/
- Guidelines on conservative choice and application of default data in estimation of the Net Anthropogenic GHG Removals by Sinks. Version 02. (EB 50, Annex 23). /30/

Based on site visits, interviews with stakeholders and relevant documents provided by PPs during the validation process, AENOR confirms the applicability conditions of the selected methodology to the project activity, as well as, the version of this methodology used.

AENOR confirms that the chosen baseline and monitoring methodology is applicable to the project activity. Emission sources, which are not addressed by the applied methodology, and are expected to contribute more than 1% of the overall expected average annual emission reductions, were not identified.

3.5.2 Project boundary

The **project boundary** was assessed in the context of physical site inspection, interviews, and on the evidence received on the design of the project. The project area covers 892.42 ha; it consists of 204 parcels, distributed over the Perez Zeledon County.

PPs have correctly applied the “Guidance on application of the definition of the project boundary, annex 16, EB44) to the proposed project, providing the evidence and documentation necessary to validate the information in the PDD.

TARAM spreadsheets /31/ and supporting information (GIS files) /32/ were provided. Once, AENOR checked all documentation could validate that information in PDD is consistent. Thus, only 892.42 ha of the 1337 ha initially taken has been considered within the project boundary. This new area represents the entire area of the project activity that is already established, under the control of the

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

project participants and fulfils with the CDM requirements, at validation. The **control** is carried out by means of contracts signed between FONAFIFO and owners of parcels as AENOR could confirm during the site visit. PPs have provided a database of contracts /33/ signed between the parties. All contracts signed are listed in annex 5 of the PDD.

These contracts govern the land use and the transfer and sale of the carbon credits generated by the project. Thus, control over the project area by the PP is considered to be fully established, under the legal system of the host country.

The section A.4.2 of the PDD states the decimal coordinates of the project in decimal format: 9.37 to 9.67 North Latitude and -83.47 to -83.97 Longitude West:. Separately, each parcel has been geo-referenced using GPS (The list of geo-referenced A/R parcels is attached in annex 5 of the PDD) and the shape files have been provided for all polygons.

The boundary delineation was carried out by the AENOR team cross-checking the GIS information /32/ provided by the PPs and the field information /34/ gathered during the site visit, as well as checking the TARAM calculation, contracts and overview maps /35/ of the location of the project area and boundaries showed during the visit and also included in the final PDD. Based on this, AENOR deems that project boundary defined in the final PDD is appropriate and consistent with evidence provided.

Regarding the **carbon pools** and the relevant emissions sources and gases, they were selected and considered in line with the applicable methodology. This information is included in section C.3 of the PDD.

Carbon pools chosen by the proposed project are in compliance with the methodology and correspond to the carbon stocks in the above ground and below ground biomass. Carbon stocks in litter, dead wood and soil organic carbon are discarded as PDD explains for sake conservativeness as methodology states.

In regard to **eligibility of lands**, the tool of eligibility of the land (annex 18 EB35) has been correctly applied. The PDD shows the different steps to prove the eligibility in compliance with the tool and address the evidence used for this purpose.

The PPs have provided the project GIS information which includes:

- Aerial photographs from 2003 .
- Forest cover maps from 1990, and 1997 which were used to evaluate land use at 31 December 1989 deadline. The 1990 forest cover map was prepared by the University of Alberta, EOS Laboratory using 1990 Landsat remote sensing imagery. All forest cover maps (1990, 1997, 2000, and 2005) were prepared using Landsat images and are available in digital form.
- Overview maps of the location of the project area and boundaries which are also detailed in the PDD.

Apart from these sources, the AENOR team has used to test the eligibility of the parcels other sources such as Google Earth; the field information taken during the onsite visits to a sample of parcels, the interviews with local stakeholders, especially COOPEAGRI and, the information related to the land use and land cover gathered in the contracts between PPs and owners.

Based on this evidence checked by AENOR it was confirmed that the land at the moment the project starts was not forest and the vegetation at that time was below the thresholds adopted by the Costa Rica's DNA and the vegetation prior to the project start would not have overcome the thresholds at maturity without the project activity.

Thresholds were checked by AENOR in UNFCCC website /36/, and they correspond to a minimum area of land of 1 Ha, with tree crown cover of 30% with trees with the potential to reach a minimum height of 5 metres.

Evidence confirms that these conditions mentioned were also applied to the land on 31 December 1989, and that the land has not been forest land at any time since 1 January 1990 according to the

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

national forest definition communicated by the DNA within the project boundary of the proposed project activity.

Moreover, for the parcels affected by the PSA program, i.e, the Program of Payments for Environmental Services empowered by the Forestry Law N°.7575, AENOR has checked with the shapes files /37/ and the contracts of these parcels /38/ under the PSA program, provided by FONAFIFO and shapes files of the areas involved in the proposed project and their contracts also provided by FONAFIFO, that areas under the PSA program have not been included in the project boundary of the proposed project activity.

Thus, AENOR confirms that all discrete areas within the project boundary are eligible for a proposed AR/CDM project.

3.5.3 Baseline identification

The PDD has been updated as requested (see annex 1) to be in compliance with the applicable methodology, including all required information and explanation to identify the baseline, hence, the following steps have been addressed in the PDD:

Step 1. Demonstration that the proposed AR CDM project activity meets the conditions under which the methodology is applicable and that baseline approach 22(a) can be used.

Step 2. Delineation of the project boundary.

Step 3. Analysis of historical land use, local and sector land-use policies or regulations and land use alternatives.

Step 4. Stratification of the AR CDM project area

Step 5. Determination of the baseline land-use / land-cover for each stratum.

After the analysis of all these steps, the PDD identifies the baseline scenario as the "Continuation of the existing and historical land use leading to further land degradation and carbon stock decrease".

The PDD identifies a complete list of policies and regulations adopted before 11 November 2001. None of them influence in the land use/land-cover change.

In the case of the Forestry Law No. 7575, 1996 which could affect to the land use, AENOR has checked that, according to the information /37/, /38/ provided by FONAFIFO in step 3c) of the PDD and, explanations received during the site visit from people of FONAFIFO and COOPEAGRI, forest plantations carried out, prior to the project start date, under the PSA program as a result of the Forestry Law in the project region of Perez Zeledon County (117,321 Ha) accounts 0.1% of the total area in the region, none of them under the project boundary, hence, AENOR deems that this law has a negligible effect on the project area.

Three alternatives scenarios are identified in the PDD as follows:

Scenario 1: Current situation, i.e., Land uses in the project sites may change from pastures to crops and vice versa, depending on the market price fluctuations of cattle and crops. Pasture lands are maintained and traditional grassland management (slash and burn) prevent the development of second growth forests.

Scenario 2: Farmers improve their agriculture production systems adopting improved technology for cash crop and meat production, therefore they require less land for these activities allowing natural regeneration to develop in the remaining lands.

Scenario 3: The project activity without the CERs.

All of them fulfils with the policies and regulations in the country, however scenario 2 and 3 are discarded as baseline scenario due to the high investment costs, in case of scenario 2 and barriers (see additionality section) that provoke a low uptake of reforestation activities in the project area, in case of scenario 3.

Concerning the stratification of the project, based on climatic conditions and landscape topography of the area, the ex-ante stratification for baseline net GHG removals by sinks remains as follows:

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

Index	Description	Code	Area (ha)	Number of discrete areas	Baseline land use
1	North Hillsides	BLS1	340.56	17	Pastures in steep terrain with some agricultural activities
2	Valley and South Hillsides	BLS2	551.86	187	Mixed agricultural lands and pasture lands in rolling hills
	Total		892.42	204	

For the calculation of the actual net GHG removals by sinks and considering that 3 types of A/R activities will be implemented: assisted natural regeneration (ANR); forest plantation (FP) and agroforestry system (AFS), the following stand models have been defined:

1. Stand model 1: *Gmelina arborea* (SM1)
2. Stand model 2: *Tectona grandis* and/or *Eucalyptus* (SM2)
3. Stand model 3: Assisted Natural Regeneration (SM3)
4. Stand model 4: Agroforestry- Trees mixed with crops (SM4)
5. Stand Model 5: Silvopastoral -. Trees in Pastures (SM5)

Thus, the following ex-ante strata have been identified for the project scenario:

Index	Name	Code	Area	Number of discrete areas
1	North Hillsides/ANR	BLS1-SM3	322.24	13
2	North Hillsides/Melina	BLS1-SM1	18.32	4
3	Valley Lands and South Hillsides/Melina plantations	BLS2-SM1	72.08	19
4	Valley Lands and South Hillsides /Teak and/or Eucalyptus plantations	BLS2-SM2	17.81	4
5	Valley Lands and South Hillsides /Agroforestry Trees+Crops	BLS2-SM4	227.07	92
6	Valley Lands and South Hillsides /Silvopastoral Trees + Pastures	BLS2-SM5	160.44	69
7	Valley Lands and South Hillsides/ANR	BLS2-SM3	74.46	3
	Total		892.42	204

AENOR has checked that the stratification, including the areas and discrete areas, is consistent with TARAM calculation and deems reasonable and appropriate based on environmental conditions of the project area. In addition, the baseline scenario identification has been validated by checking the documents addressed in the PDD, and the interviews with local stakeholders during the on-site visit, especially people from COOPEAGRI who works directly in the project area. The sources referenced in the PDD were quoted correctly. The information was verified against credible sources, such as:

- R-PIN by the Costa Rican Government to the Forest Carbon Partnership Facility. /39/
- References /9/, /10/, /11/, /13/, /14//17/, /18/, /19/ and /20/.
- Map and data of pre-projects forest plantations implemented from 1997 to 2005 within the project area by FONAFIFO and MINAET /37/, /38/.

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

- Cost-Benefit Analysis to Determine Additionality for the COOPEAGRI Carbon Sequestration Project. Mejías Esquivel, Ronald. 2005. /40/
- DECREE No.26141-H-MINAE, approved on July 11, 1997. /21/
- Pagiola, S. 2006. Payments for Environmental Services in Costa Rica. MPRA Paper No. 2010, posted 07. November 2007. /22/
- Letter of understanding from COOPEAGRI to FONAFIFO, dated July 20, 2004. /23/
- La Gaceta No. 151 – 8 August 2006. /24/

Field visits and interviews sustained the chosen baseline approach as per CDM Modalities and Procedures “Existing or historical, as applicable, changes in carbon stock in the carbon pools within the project boundary”. In the case of this project, the historic land use of the project area prior to project start would be also the likely future land use in absence of the project.

AENOR confirms that no reasonable alternative baseline scenario was excluded in the analysis of baseline scenarios. A verifiable description of the baseline scenario was included in the PDD.

Therefore, taking into account the evidence and data provided by the PP, it is the opinion of AENOR that all documentation used is relevant for establishing the baseline scenario and is correctly quoted and interpreted in the final PDD. The assumptions and data used in the identification of the baseline scenario are appropriately justified, supported by evidence and can be deemed reasonable. In addition, relevant national and/or sectoral policies and circumstances are considered and listed in the final PDD.

The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

All the assumptions and data, including their references and sources, used by the project participants are listed in the PDD.

3.5.4 Algorithms and/or formulae used to determine emission reductions

AENOR assessed the calculations of baseline stocks and removals, project emissions, leakage and the expected net anthropogenic GHG removals by sinks. Corresponding calculations were carried out based on TARAM spreadsheets. Correctness of calculations can be confirmed as they were replicated by the audit team using the information provided.

The values and estimates presented in the PDD are considered reasonable based on the documentation reviewed, further references and the result of the interviews during the onsite visit.

Based on the information reviewed it can also be confirmed that the sources used are correctly quoted and interpreted in the PDD. All assumptions and data indicated in the PDD and all relevant sources were checked and confirmed /17//18//19//20//41//42//43//44//45//46//47//48//49//50//51//52/. Detailed information on the verification of parameters used in the equations is presented in Annex 1 of this report.

In essence, the methodology was correctly applied following the requirements. All values in the PDD are considered reasonable in the context of the proposed CDM project activity. Data sources are quoted correctly. Hence, the calculation of baseline stocks and removals, project emissions, leakage and the expected net anthropogenic GHG removals by sinks are considered correct.

3.5.5 Baseline stocks and greenhouse gas removals by sinks

The stratification process distinguishes two baseline strata, which is considered acceptable under the environmental conditions of the project area as documented through the technical description of the Project, land use and eligibility assessment.

As discussed in section C.2 and C.5 of the PDD, the lands to be reforested within the Project boundary are still degrading lands or remain in a low carbon steady state.

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

The historical land use of the project area consists of mixed agriculture crops and pastures. The continuation of these activities ensures degraded lands or remaining in a low carbon steady state which was verified during the site visit with indicators such as soil degradation, or erosion. On the other hand, the vegetation in area is below the thresholds used in the national definition of forest as demonstrated with evidence in section 3.5.2 of this report.

Considering this situation as per the methodology, in all baseline strata the baseline net greenhouse gas removals by sinks are expected to be negative, however for conservativeness sake baseline carbon stocks are zero.

The parameters and equations presented in the PDD and further documentation were crosschecked and compared with the requirements and guidelines of the applied methodology and respective tools. The review of the equation included all formulae presented in the PDD and the calculation files.

3.5.6 Project emissions

The methodology considers emissions from biomass burn. These sources were discussed in the PDD and respectively in the audit process. Respective data and calculations were reviewed by the DOE.

Biomass burning as potential source according to the methodology was considered by the participant; however it was not found to be relevant as no burning for site preparation is allowed during the Project activity. This issue was considered during the field visits of the AENOR team. Furthermore, in line with the technology to be employed by the project, no biomass burning for site preparation will occur, which is considered credible. However, section E.4.1 of the PDD considers the increase in GHG emission as a result of biomass burning to be monitored during the operational lifetime of the project.

Regarding Emissions from biomass loss are considered zero as explained in section D.1 of the PDD. Based on annex 21 of EB 50, the following condition "The baseline scenario is degrading land involving decline in woody vegetation cover" is complied with by the project, then, GHG emissions from felling, clearance, decay or burning of existing woody biomass during site preparation are insignificant and $E_{biomasslos} = 0$.

3.5.7 Leakage

The leakage sources according to the chosen methodology are GHGs emissions from displacement of pre-project grazing, cropland displacement and fuelwood collection activities.

Leakage due to conversion of land to grazing land was estimated to be zero based on Annex 13 of EB 51, as grazing animals can be displaced to existing grazing lands, which still have sufficient grazing capacity to maintain these additional cattle. Based on evidence/53/,/54/,/55/ provided and checked, AENOR deems as appropriate the approach considered.

The capacity of the pasture lands in the project area varies from 1.5 to 2.5 head animals/ha as AENOR checked with evidence /54//55/. With a pre-project animal population in the project area estimated at 0.64 animals/ha (data source of CORFOGA/53/), farmers have enough land, even to reforest more than half of their pastures without exceeding the carrying capacity of the land to which animals are displaced. Moreover, during the interviews on site visit with COOPEAGRI and farmers, AENOR confirmed that farmers generally only reforest a small part of their lands and maintain silvo-pastoral systems as main source of revenues, thus, pre-project grazing activities would not lead to displacement as the carrying capacity will not be exceeded.

Regarding leakage due to conversion of land to cropland, and based on Annex 14 of EB 51 cropland displacement will not occur as a consequence of the project activity as the condition 4(b)(i) of the EB guidelines is complied. The condition states that "the increase in GHG emissions due to displacement of pre-project crop cultivation activities is insignificant if the pre-project crop cultivation activities are expected to be displaced to areas of land that have been subjected to crop cultivation activities during at least one year within a timeframe of five years before the year of the project start or the year of signing contractual agreement for validation, whichever comes earlier".

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

The existing land use for the farmers includes cattle activities, coffee and other agricultural activities. This means that any crop activities that are displaced would therefore be displaced to existing croplands or to pastures (that would be converted to croplands) owned by the same farmers and, considering as per Forestry Law of Costa Rica 7575 /56/ that any existing forest area is protected and that forested areas owned by the farmers could be eligible for PSA payments, then, they don't require the initial investments required for afforestation/reforestation, thus it is unlikely the conversion of land to cropland.

Moreover, the analysis of the historic and existing land use/land-cover changes presented in PDD shows that 100% of the sample areas analysed maintained their current land use during the last years (from 1992 to 2003), and that 90.7 % of the areas have maintained pastures or crops for more than 20 years (from 1980 to 2003). Therefore, under option (b) (i) of the guidelines this means that leakage can be considered as insignificant.

The leakage due to fuel wood collection was estimated to be zero. According to the "World Bank Human Opportunity Index" /41/ in Costa Rica, most of the households (98 %) have access to electricity. Then, the use of firewood is minimal in the country. However, if firewood is used in the project area, it mainly comes from coffee plantations. As a result of the implementation of the project activity, the reforestation areas will have higher biomass and firewood collection potential than the coffee plantations and there are no limitations for the farmers to collect the firewood from their own forests, then, it assumes that $FGBL < FGAR_t$ and then $LK_{fuel-wood} = 0$.

Leakage due to fencing is considered insignificant as per guidelines of EB44 (paragraph 37) which is considered in the applicable version 4 of the methodology.

Since, leakage in this project is considered insignificant, the will not be monitored.

3.5.8 Net anthropogenic greenhouse gas removals by sinks

The estimates of the ex-ante actual net GHG removals by sinks are calculated by the Carbon gain-loss method, using the formulae in compliance with the applicable methodology. Values for Biomass Expansion Factors were taken from published sources /46/,/52/ and 2003 IPCC-Good Practise Guidance for LULUCF, a default value of 0.14 is used for Root-to-Shoot ratio from 2003 IPCC-Good Practise Guidance, Carbon fraction of 0.5 also from 2003 IPCC is used, Mean Annual Increments are taken from published sources /43,44,45,46/, Wood densities from /43,42,44,45,46/. The sources were requested and provided by PPs. AENOR have checked them and deems that data used in calculation are consistent with the credible data sources. In opinion of AENOR, the default values used in calculations avoid an overestimation of the net anthropogenic GHG removals by sink. Over the first crediting period of 20 years, starting on 1 August 2006, the total net anthropogenic removals of 176,050 t CO₂-e are expected which are well below regarding the 238,239 t CO₂ considered in the PDD to GSC.

The calculations of the net anthropogenic GHG removals were carried out with an Excel based tool provided by World Bank (TARAM). All calculations are in compliance with the applied AR-CDM methodology. The steps of the calculations are fully traceable and adequate for the project conditions.

In summary, the calculations for net anthropogenic GHG removals are considered correct.

3.6 Additionality

3.6.1 Starting date of the project activity and prior consideration of the CDM

The project started on 01 August 2006. This date is determined by the first planting occurred on lands under the project boundary. The PPs provided the first certification letter dated on 28 August 2006 /57/ by the Forestry Engineer D. Luis Salazar Salazar confirming the first plantations (*Gmelina Arborea*) in August 2006 in lands of the farmer D. Rodrigo Padilla Gamboa.

All lands under the project must first be certified, and only after this certification a farmer can sign a contract with FONAFIFO to participate in the proposed CDM project. Thus, this first certification was the basis of the first contract (SJ-02-20-0050-2006) between FONAFIFO and D. Rodrigo Padilla Gamboa which was signed on 7 November 2006.

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

Thus, the date of first plantation of the project represents the earliest date at which either implementation or construction or real action of the CDM project begins, according to the glossary of CDM Terms. The first certification letter and first contract were provided and checked by AENOR team. Then, in the opinion of AENOR, it is considered reasonable and appropriate based on the AR/CDM requirements for starting date as comply with the AR/CDM requirements.

This new starting date replaces to the initial one considered in the PDD submitted to GSC (1/1/2006) as that date was originally considered because it represents the date when first farmers eligible to apply for the project were identified, but it was discarded as it does not really represent a date at which either implementation or real action of the project occurs.

The prior consideration of the Project activity is documented in section C.6 of the PDD. The following milestones of the Project are described in the PDD along with reliable evidence that were provided and checked by AENOR.

- Project Idea Note to the World Bank BioCarbon Fund prepared by FONAFIFO dated in 2004 and support letter of the Costa Rican DNA to the proposed Project dated on 27 July 2004 /58/ included in the PIN submission.
- PIN was selected for receiving preparation funds. World Carbon Finance Document dated on 25 October 2004 /59/ which documents the discussion between FONAFIFO and World Bank on the planned purchase of emission reductions.
- The Government of Costa Rica and the World Bank began to discuss the design of a World Bank-supported project. World Bank, "Report No. AB1913: Project Information Document (PID) – Concept Stage for Scaling up and Mainstreaming Payment for Environmental Services in Costa Rica Project," 15 November 2005. /60/.
- World Bank, "Report No. 36084-CR: Project Appraisal Document for Mainstreaming Market-Based Instruments for Environmental Management Project," May 10, 2006. /61/
- Emission Reduction Purchase Agreement (ERPA) signature dated in April 2006 and the amendment of the ERPA in 2009.
- Submission of the new methodology for the proposed project activity ANM0026 dated on 14 June 2006. Submission was not approved.
- First planting occurred on 1 August 2006 on lands belonging to D. Rodrigo Padilla Gamboa (Contract: SJ-02-20-0050-2006).
- Revised new methodology submitted for the proposed project activity ARNM0026 dated on 09 March 2007.
- Contract between World Bank and the consultant (Edgard Ortiz) /62/ for the PDD development using the AR-AM0004 from 01 February 2008 to 30 June 2008.
- Consultant contract extended for PDD development from 01 July 2009 to 30 June 2010 /63/.
- Submission of the PDD for GSC dated on 23 July 2010.

Taking into account the "Guidelines on the demonstration and assessment of prior consideration of the CDM" version 4 EB62/64/, as the project starting date is before 02 August 2008 and, the PDD has been submitted for global stakeholder consultation in July 2010, i.e. after the project starting date, the PPs have to demonstrate that the CDM was seriously considered in the decision to implement the project activity.

In this regard, AENOR has validated that support letter of Costa Rican DNA /58/ already mentions the involvement to FONAFIFO in searching the project as CDM. This support letter was included in the Project Idea Note sent to the World Bank. But also, the PIN prepared by FONAFIFO was made using the templates and requirements of a CDM project, thus, evidence demonstrates the awareness of the CDM prior to the start date. Furthermore, the consideration of carbon credits as a key factor in the design of the proposed project activity is clearly gathered in the World Bank Carbon Finance Document /59/ and reports /60//61/. Thus, AENOR deems that it is demonstrated that the benefits of the CDM were a decisive factor in the decision to proceed with the project.

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

On the other hand, AENOR has assessed the milestones above stated to secure the CDM status for the project in parallel with its implementation. AENOR considers that continuing and real actions have been taken based on real documented evidence provided. AENOR has crosschecked them and does not doubt of their authenticity, they are reliable and credible. In addition, there is less than 2 years of gap between the documented evidence, then; AENOR concludes that continuing and real actions have been taken to secure the CDM status of the project activity.

3.6.2 Analysis of the additionality

Additionality

The additionality of the Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI project) as required by AR-AM0004 version 04 is demonstrated by applying the "Tool for the Demonstration and Assessment of Additionality in A/R CDM Project Activities" version 02 using the barrier analysis./65/.

The approach used in the PDD was assessed based on a document review, where following relevant documents were reviewed:

- Costa Rica in the face of Climate Change. Central American Series of Forest and Climate Change /66/.
- The social impacts of payments for environmental services in Costa Rica: A quantitative field survey and analysis of the Virilla watershed /67/
- Cost-Benefit Analysis to Determine Additionality for the COOPEAGRI Carbon Sequestration Project /40/.

Furthermore, the additionality analysis was discussed onsite with the project team of FONAFIFO as project participant, as well as with the consultants involved in PDD development. Interviews on this topic were also carried out with stakeholders during the onsite visit. The data, rationale, assumptions, justifications and documentation provided were checked using local knowledge and sectoral and financial expertise.

Based on the aforementioned approach, AENOR confirms that the documentation provided is appropriate for this project. Further analysis of the additionality is summarised in the sections below.

In essence, the project is considered additional as lands are reforested which otherwise would have remained croplands or grasslands - among others due to unavailability of funding for such reforestation activities.

Identifications of alternatives

The output of the project is long-term managed reforestations, contributing to biodiversity, prevention of land degradation and soil conservation, diversification of incomes for small scale farmers and new jobs generation.

Applying Step 1 of the tool, three alternative land use scenarios to the project have been identified and discussed in the final PDD. These are:

Alternative 1: Continuation of the existing and historical land use (pre-project land use)

Alternative 2: Farmers improve their agriculture production systems, adopting improved technology for cash crop and meat production allowing natural regeneration to develop in the remaining lands.

Alternative 3: Implementation of project without being registered as an A/R CDM project activity

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

The presented alternatives include all plausible scenarios taking into account local and sectoral circumstances and comply with the regulation in place [68,69,70,71,72,73]. Hence the list of alternatives is considered to be complete.

Based on the evidence provided and the discussion held with the project participants during the onsite visit, it is clear that the continuation of the current and historical land use is the most likely scenario in the absence of the project activity.

Barrier analysis The project participants used the barrier analysis in order to demonstrate the additionality of the project. The presented barriers are

- Barriers related to local tradition
- Barriers related to land
- Technological barriers
- Investment barriers

The **barriers related to local tradition** were sustained with published documents such as:

- Costa Rica in the face of Climate Change. Central American Series of Forest and Climate Change [17]
- International Coffee Organisation. Coffee Market Report 2007 [74].
- National Production Council of Costa Rica. Average price of cattle in Costa Rica [75].

The evidence provided and the field visit allowed the audit team to verify that there is a lack of knowledge about technology and market conditions for forest products of the farmers located in the area of the proposed project activity. These farmers are familiar with cattle farming, coffee plantations and pasture for cattle. In addition, market prices for cattle and coffee have been increasing during the previous years to the start of the project activity resulting in a reinforcement of the existing land uses.

The barriers related to land are associated to the local tradition barriers previously described. As evidenced by the report "Costa Rica in the face of Climate Change. Central American Series of Forest and Climate Change" [17], the farmers located in the area of the proposed project activity cannot sell forest products by themselves due to the fact that they don't have the required infrastructure and equipment to access to market centres. Thus, they will rely on intermediaries that take most of the profit, eroding the competitiveness and profitability of the proposed project activity. In the specific case of the proposed project activity, these barriers will be overcome with the participation of COOPEAGRI that will provide technical and legal assistance to the participating farmers.

The technological barriers were discussed considering the lack of technical knowledge, lack of information, low motivation plus the lack of training of the local farmers for conducting forestry activities as documented in the evidence provided. In the specific case of the proposed project activity, these barriers will be overcome with the participation of COOPEAGRI that will provide technical and legal assistance to the participating farmers.

These barriers were assessed against documents such as:

- The social impacts of payments for environmental services in Costa Rica: A quantitative field survey and analysis of the Virilla watershed.[67]

The investment barriers were discussed considering the lack of financial attractiveness of the proposed project activity for small and medium farmers due to the long-term period of repayment, high up-front costs and uncertainty of cash flows. In the specific case of the proposed project

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

activity, these barriers will be partly alleviated because payments offered to farmers participating in the proposed project activity are distributed over five years, but with the 70% of the total amount distributed during the first two years.

These barriers were assessed against documents such as:

- Cost-Benefit Analysis to Determine Additionality for the COOPEAGRI Carbon Sequestration Project./40/

The result of this assessment shows clearly that the barriers presented in the PDD can be considered real. These barriers prevent the project activity from being implemented while it would not prevent at least the baseline of the project. This was confirmed based on the documentation review, interviews and local and sectoral expertise of the assessment team. The latter was confirmed by the interviewed stakeholders.

Taken into account the description of the validation of the barriers presented above, the assessment team can confirm that the barrier and credible and correctly presented to demonstrate the additionality of the Project.

Common practise analysis

The region for the common practise analysis was defined as the geographical area of three sub-regions, i.e., North hillsides, Valley and South Hillsides of Perez Celedon County where the reforestation will occur. The assessment team reviewed the approach presented in the PDD and can confirm that relevant parameters such as location, ecological and soil conditions, economical situation, and development were taken into account in order to define the region /76,53,77,78,79/. The chosen region has unique characteristics in regard to forest structure, population structure and ethnic minorities. Therefore, the presented approach can be considered appropriate for the common practise analysis.

The evidence provided /22,80,81,82/ shows that the PSA programme only reached the 0.1% of the region prior to the start date of the proposed project activity due to the fact that the bulk of the PSA programme benefits tended to go to better educated wealthier farmers who posses large farms. In fact, the average size of the farms included in the PSA programme is significantly larger than the average size of farms participating under the proposed project activity 100.40 hectares vs. 8.81 hectares or 1,040% higher, showing that reforestation activities for small (<20 hectares) and medium (20<X<100 hectares) farmers are not common practise.

Therefore, it can be confirmed that the proposed CDM activity is not a common practise in the defined region, while considering the specific project design.

3.7 Monitoring Plan

The Monitoring Plan presented in the PDD complies with the requirement of the methodology.

The assessment team checked all parameters presented in the Monitoring Plan against the requirements of the methodology. For the monitoring of carbon stock changes the requirements and parameter list as per methodology were followed. Monitoring of GHG emissions and leakage was excluded due to non-relevance (see section 3.5.6).

The Monitoring Plan is included in the PDD. The boundary and forest management monitoring was defined specifically for the project context. The procedures described in section E of the PDD were reviewed by the AENOR Team on paper and through communications with the PPs and cross-checked against the applicable methodology and found to be in compliance with methodological requirements, and good practise as defined, e.g., in the IPCC GPG LULUCF.

VALIDATION REPORT**Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)**

The major parameters to be monitored were discussed with the PPs, as well as main processes, data management, quality assurance and quality control procedures that will be implemented in the context of the project.

In the opinion of the AENOR team all necessary parameters required by the selected approved methodology are contained in the Monitoring Plan. They are clearly described and the means of monitoring described in the plan comply with the requirements of the methodology. Tables in section E.3 and E.4 of the PDD detailed the different data variable to monitor along with the data unit, recording frequency, proportion of data monitored, if data is calculated, measured or default and comments, if applicable. Thus, the Monitoring Plan is in compliance with the applicable methodology.

The chosen monitoring frequency of the parameters is in line with the methodology (frequency in years). Under consideration of the pre-fixed verification frequency of every 5 years (after first verification) and the defined forest management and harvesting system it is considered that there will be no systematic coincidence of verifications with peaks in carbon stocks.

The sampling design and stratification is detailed in section E.2 of the PDD. Equations for the estimation of the sample size have been addressed in the PDD considering that costs are equal for each strata. A 500m² is used as plot size, taking into account a minimum of 4 sample units per strata, a target precision level of $\pm 10\%$ of the mean at 90% confidence level. Considering the area under the project activity (892.42 ha) and the seven ex-ante strata, the total sample size is 77. Data of tables in section E.2 of the PDD have been crosschecked with the Winrock spreadsheet calculation /83/ provided to AENOR. In opinion of the AENOR assumptions considered for sampling design are reasonable and credible and consistent with calculation, thus, AENOR deems correct. Moreover, AENOR has checked other similar project such as /84/ which used equal plot size and precision level.

After the review of evidence provided by the PP, the interview and communications with PP, AENOR confirms that monitoring arrangements described in the Monitoring Plan are feasible within the project design and that the means considered for the implementation, including data management, quality and assurance control procedures, are sufficient to ensure that the GHG net anthropogenic removals achieved resulting from the proposed CDM project activity can be reported ex post and verified.

Therefore, in opinion of the AENOR validation team the PP will be able to implement the Monitoring Plan.

3.8 Comments by Local Stakeholders

In order to assess the adequacy of the local stakeholder consultation, during the on-site visit the AENOR team requested the PP not only provide evidence about the consultation process, but also to hold interviews with the local stakeholders relevant for the project activity such as farmers and COOPEAGRI people. Evidence of the process were provided /85//86//87/ and they confirm that information in PDD is credible and consistent.

The main steps followed are described in the PDD. On 03 August 2005 an initial presentation was made to William Alpizar from the OCIC – MINAE (Ministry of Environment and Energy) to inform them about FONAFIFO's initiative to submit a CDM project for carbon certification registration. On 16, 17 and 18 August 2005 project presentations were made to potential participants such as COOPEAGRI affiliates in the project area. Thus, the stakeholder consultation process was carried out before the project start date.

Thus, relevant local and national stakeholders were invited to the consultation process for the proposed CDM project activity. During the on-site visit, the AENOR team held interviews with some of the local stakeholders affected by the project activity in order to know their opinions about the implementation of the project. By means of documents reviewed and the interviews performed, AENOR considers that the summary of the comments received during the consultation process

included in section H of the PDD is complete. The main conclusions of the meetings and opinions collected from meetings are included in the PDD. A complete summary of the comments received during the process is included in the PDD, even, a summary of how the comments received from local stakeholders were considered.

Hence, in the opinion of the AENOR team the local stakeholder consultation process was suitability performed.

3.9 Sustainable Development

The LoA of the Host Country Costa Rica has been provided. AENOR has checked that LoA clearly mentions that the project contributes to the sustainable development of the Host Party.

3.10 Environmental and socio-economic impacts

The PP undertook an analysis of environmental and socio-economic impacts according to the requirements of the guidelines for PDD completion which is well detailed in sections F and G of the PDD.

No Environmental Impact Assessment is required by the Government of Costa Rica for the proposed project as per Executive Decree 31849.

On the other hand, The PDD in its section F details the main environmental impacts of the baseline scenario and project scenario. They were evaluated based on the judgement of a forestry expert such as the Director from the Technological Institute of Costa Rica (Instituto Tecnológico de Costa Rica (ITCR)) and the results for the baseline evidence relevant negative impacts in water and soil as a result of the current land uses. In regard to the impacts on the project scenario, relevant negative impacts on the baseline scenario improve and change to be positive in long terms as a result of the project implementation although in a short time negative water impacts and fauna impacts could appear as a result of harvesting activities and wood hauling.

The project is not expected to have negative impacts outside the project area. Reforestation activities are expected to have a positive impact on water and fauna. The non-native species used in the proposed project have already been planted in many other regions of Costa Rica. There are no reports of negative impacts when the plantations are established on terrain with low slope and proper management (especially in the case of Teak). Also there aren't any reports of invasiveness for these two species in the country.

On the other hand, the most important impacts of the project in socio-economic conditions of the area are presented in the PDD and they were widely treated in the interviews with farmers and representative of COOPEAGRI. AENOR considers that information in PDD is consistent with the information of the following reports and studies provided to AENOR:

- Study of the cost-benefit analysis prepared by Mejias./40/
- Impact of Program Payments for Environmental Services in Costa Rica as a means of reducing poverty in rural areas, Ortiz et al, 2003. /80/
- Socioeconomic Impact of a Financial Mechanism for Forest Plantations: The Case of Payment Program for Environmental Services in the Northern Zone of Costa Rica, Rojas V, 2005, Master Thesis, CATIE./88/
- Analysis of environmental and social benefits derived from using the Watershed Protection Mechanism of Payment for Environmental Services (PES) in Costa Rica. Tiffer, R. 2006./89/

These studies confirm that socio-economic impacts of the project are considered as positive for the region. Moreover, revenues from CERs will allow many farmers to improve the environmental conditions.

VALIDATION REPORT**Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)**

In conclusion, AENOR deems that no significant negative environmental and social impacts are expected due to the project. This conclusion was also sustained by the results of the field visit of the audit team as well as positive comments on the project by the consulted stakeholders.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to Decision 3/CMP.1, the validator shall make publicly available the PDD and receive, within 45 days, comments on the validation requirements from parties, stakeholders and UNFCCC accredited NGOs and make them publicly available.

AENOR published the project documents on CDM website (<http://unfccc.cdm.int>) on 23 July 2010 and invited comments by parties, stakeholders and non-governmental organisations. No comments were received.

5 VALIDATION OPINION

AENOR has performed a validation of the Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI project) in Costa Rica. The validation process was performed on the basis of all issues and criteria of UNFCCC for AR/CDM projects, the host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting. The conclusions of this report show, that the project, as it was described in the project documentation, is in line with all criteria applicable for the validation.

The validation consisted of the following three phases: i) a desk review of the project design and the baseline and Monitoring Plans; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final validation report and opinion. In the course of the validation process corrective actions and clarifications were raised; all have been successfully closed as explained in the validation protocol annexed to this report.

The Project participant used "Tool for the Demonstration and Assessment of Additionality in A/R CDM Project Activities" version 02 and the "Guidance on the demonstration and assessment of prior consideration of the CDM" version 04 to demonstrate the additionality of the Project. In line with this tool, the PDD provides a barrier analysis to determine that the project activity itself is not the baseline scenario. The methodology AR-AM0004 v.4 and associated tools and guidance were applied to determine the GHG net anthropogenic removals by sinks.

The barrier analysis demonstrates that the proposed project activity is not a likely baseline scenario. GHG net anthropogenic removals by sinks attributable to the project are hence additional to any that would occur in the absence of the project activity.

The review of the project design documentation and additional documents related to baseline and monitoring methodology; and the subsequent background investigation, follow-up interviews and review of comments by parties, stakeholders and NGOs have provided AENOR with sufficient evidence to validate the fulfillment of the stated criteria.

In detail the conclusions can be summarised as follows:

- The project is in line with all relevant host country criteria of Costa Rican DNA and all relevant UNFCCC requirements for AR/CDM.
- The project additionality is sufficiently justified in the PDD.
- The Monitoring Plan is transparent and adequate.
- The analysis of the project emissions and leakage has been carried out in a transparent and conservative manner, so that the calculated GHG net anthropogenic removals by sinks of 176,050 tCO₂e are most likely to be achieved within the first crediting period.

In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the AR/CDM and the relevant host country criteria.

The validation has been performed using a risk based approach, as described above. The only purpose of this report is its use during the registration process as part of the AR/CDM project cycle. Hence, AENOR cannot be held liable by any party for decisions made or not made based on the validation opinion, which goes beyond the purpose.

DATE 24/09/2012

Luis Robles Olmos



Authorized person

Jose Luis Fuentes Pérez



Validation Team Leader

6 REFERENCES

Number	Document Name
1	First PDD submitted to GSC. Version 1. 21 July 2010
2	Final PDD version 2. 16 March 2012
3	Approved methodology AR-AM0004 version 4. CDM
4	IE/DTC/0039). AENOR.
5	Validation and Verification Manual VVM.01.2. CDM
6	LoA from Canadian DNA. April 2011
7	LoA from Costa Rican DNA. July 2012
8	Solis, M. and Moya, R. 2000. <i>Terminalia amazonia</i> en Costa Rica. FONAFIFO and Solis, M. and Moya, R. 2000. <i>Hieronyma alchorneoides</i> en Costa Rica. FONAFIFO. Tropical Agricultural Research and Higher Education Centre (CATIE). 1997. <i>Cedrela odorata</i> . Costa Rica, Forestry Seeds Project (PROSEFOR). Technical Note on management of forestry seeds. No. 24. 2 p. CATIE 1994. Deglupta: <i>Eucalyptus deglupta</i> . Blume. Multiple-uses Tree Species in America Central /CATIE –Programa Integrated Management of Natural Resources. Turrialba, Costa Rica. (Technical Series. Technical Report No. 240) 43 pp
9	Schram, Albert. 1997. Socioeconomic study: Characterisation of the Perez Zeledon Canton. Central American Center of population. (CCP). University of Costa Rica (Schram, Albert. 1997.
10	Bergoeing, J.P. 1982. Geomorphology of some areas of Costa Rica, based on photointerpretation of Landsat MSS spectral Band 7. Ministry of Works and Transport. National Geographic Institute. 6p.
11	Maps by FONAFIFO.2006
12	Diogenes Cubero 2005.Ministry of Agriculture and Cattle of Costa Rica.
13	National Meteorological Institute. Climate in Costa Rica, South Pacific (Instituto Meteorológico Nacional. Clima en Costa Rica. Pacifico Sur).
14	National Meteorological Institute. Climate in Costa Rica, South Pacific (Instituto Meteorológico Nacional. Clima en Costa Rica. Pacifico Sur).
15	Data base from web site of National Biodiversity Institute.
16	Study by the Scientific Tropical Center. Lopez Vargas. W.2004.
17	Leiva, M.; Alfaro, M; Hidalgo, M. and Mendez, A. 2003. Costa Rica in the face of Climate Change. Central American Series of Forest and Climate Change. Central American Commission of Environment and Development. (CCDA)/FAO. 60 pp.(Leiva, M.; Alfaro, M; Hidalgo, M. and Mendez, A. 2003.

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

18	Baltissen, G. 1988. Effects of forest clearing and land use on soil properties of two land use sequences in Cocorí, Atlantic Zone of Costa Rica. Editorial Turrialba, CATIE / Agricultural University Wageningen, Atlantic Zone Programme / MAG, CR.
19	Von Patten, H. 1985. Appropriate land use systems of smallholder farms on steep slopes in Costa Rica: a study on situation and development possibilities. Hohenheimen Universitat, DE.
20	Sifuentes, M. 2009. Assessing the Design of Mixed Small-farms and the Condition of Improved Grasslands in the South of Costa Rica. Master Thesis. Turrialba, Costa Rica.
21	DECREE No.26141-H-MINAE, approved on 11 July 1997
22	Pagiola, S. 2006. Payments for Environmental Services in Costa Rica. MPRA Paper No. 2010, posted 07. November 2007.
23	Letter of understanding from COOPEAGRI to FONAFIFO, dated July 20, 2004.
24	La Gaceta No. 151 – 8 August 2006
25	Procedures to demonstrate the eligibility of lands for afforestation and reforestation CDM project activities. v.1 Annex 18, EB 35.
26	Guidance on the application of the definition of project boundary to A/R CDM project activities, Version 01. EB 44, annex 16
27	Guidance on accounting GHG Emissions in A/R CDM Project Activities (paragraph 35 in the report of the EB 42 meeting).
28	Tool for the demonstration and assessment of additionality in A/R CDM project activities, Version 02.
29	Guidance on conditions under which the change in carbon stocks in existing live woody vegetation are insignificant, Version 01 (EB46, Annex 16).
30	Guidelines on conservative choice and application of default data in estimation of the Net Anthropogenic GHG Removals by Sinks. Version 02. (EB 50, Annex 23).
31	TARAM excel spreadsheets. Project participants.
32	Digital boundary files in a project Geographic Information System (GIS)
33	Database of land tenure and contracts between FONAFIFO and Farmers. FONAFIFO.
34	Field information collected during the onsite visits including coordinates, project activities implemented, etc. AENOR. September 2010
35	Overview maps of the location of the project area and boundaries gathered in the final PDD. FONAFIFO.
36	UNFCCC website for checking the forest thresholds in Costa Rica.
37	Shape files of areas under PSA in Perez Zeledon County. FONAFIFO.
38	Contracts between FONAFIFO and farmers under the PSA in Perez Zeledon County.
39	R-PIN by the Costa Rican Government to the Forest Carbon Partnership Facility.
40	Cost-Benefit Analysis to Determine Additionality for the COOPEAGRI Carbon Sequestration Project. Mejías Esquivel, Ronald. 2005

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

41	World Bank Human Opportunity Index.
42	2003 IPCC-Good Practise Guidance for Land Use, Land - Use Change and Forestry.
43	Fonseca, W. 2006. <i>Estimation of growth rates in degraded pastures in the Central Pacific of Costa Rica. Project Ecomercados II (FONAFIFO-GEF-BM)</i> .
44	Rojas, F. et al, 2004. Manual for the production of <i>Gmelina arborea</i> trees in Costa Rica. FONAFIFO.
45	Fonseca, W. 2004. Manual for the production of <i>Tectona grandis</i> in Costa Rica. FONAFIFO.
46	Growth rates for <i>Terminalia amazonia</i> from Montero M., Marcelino and Kanninen, M. 2003. Biomass and carbon in plantations of <i>Terminalia amazonica</i> in the southern zone of Costa Rica. Comunicación Técnica. Revista Forestal Centroamericana figure 1.
47	Cubero, J. y Rojas, S. 1999. Carbon fixation in plantations of melina (<i>Gmelina Roxb</i>), teak (<i>Tectona grandis</i> L.f) and pochote (quinata <i>Bombacopsis</i> Jacq.) in the cantons of Hojancha and Nicoya, Guanacaste, Costa Rica.
48	Thesis Degree in Forest Sciences with concentration in Forest Handling. Faculty of Sciences of the Earth and the Sea. School of Environmental Sciences. Universidad Nacional. Heredia Costa Rica. 95 p.
49	CARPENTER F. LYNN, NICHOLS J. D.,y, SANDI E. 2004. Early growth of native and exotic trees planted on degraded tropical pasture. En: Forest Ecology and Management 196.
50	Delgado, Adrian. 2002. Growth of plantations of native species and their relationship to the motivation of farmers to reforest the northern Huetar region of Costa Rica. Specialised Practise Report. Technological Institute of Costa Rica, Costa Rica.
51	Pérez Cordero, L.D.; Kanninen, M. Aboveground biomass of <i>Tectona grandis</i> plantations in Costa Rica. 2003. Journal of Tropical Forest Science v. 15(1) p. 199-213).
52	Fuwape, J.A et all, 2001. Biomass equations and estimation for <i>Gmelina arborea</i> and <i>Nauclea Diderrichii</i> stands in Akure forest reserve. Biomass and Bioenergy No.21: 401-405.
53	CORFOGA 2000. Cattle census (original title Informe del Censo Ganadero del 2000) Figure 2, average for Brunca region.
54	Personal communication: Ing. Agr. Horacio Chi. Livestock coordinator Brunca region Directorate within the Ministry of agriculture (Coordinador Pecuário, de la Dirección Regional Brunca, del Ministerio de Agricultura y Ganadería).
55	Mora, V. 2007. Description of the value chain of livestock activity in the Atlantic Region of Costa Rica. Ministry of Agriculture and Livestock. Board of the Atlantic Region.
56	Legislative Assembly of the Republic of Costa Rica. 1996. Forestry Law 7575. Title three, article 19.
57	First Certification letter by Forestry Engineer by D. Luis Salazar confirming first plantations of the project in August 2006.
58	Project Idea Note to the World Bank prepared by FONAFIFO dated in 2004 and support letter of the Costa Rican DNA. 27 July 2004.
59	World Carbon Finance Document dated on 25 October 2004.
60	World Bank, "Report No. AB1913: Project Information Document (PID) – Concept Stage for Scaling up and Mainstreaming Payment for Environmental Services in Costa Rica Project," 15 November 2005.
61	World Bank, "Report No. 36084-CR: Project Appraisal Document for Mainstreaming Market-Based Instruments for Environmental Management Project," 10 May 2006.
62	Contract between World Bank and the consultant (Edgard Ortiz) from 01 February 2008 to 30 June 2008.

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

63	Consultant contract extended for PDD from 01 July 2009 to 30 June 2010.
64	Guidelines on the demonstration and assessment of prior consideration of the CDM ^a version 4 EB62.
65	Tool for the Demonstration and Assessment of Additionality in A/R CDM Project Activities.19/10/2007.CDM – Executive Board
66	Costa Rica in the face of Climate Change. Central American Series of Forest and Climate Change. 2003. Leiva, M.; Alfaro, M; Hidalgo, M. and Mendez, A. / Central American Comission of Environment and Development. FAO
67	The social impacts of payments for environmental services in Costa Rica: A quantitative field survey and analysis of the Virilla watershed. Markets for Environmental Services.2003. Miranda, M., Porras, I.T., and Moreno, M.L/ International Institute for Environment and Development
68	The Political Constitution.1949.Government of the Republic of Costa Rica
69	The Soil Use, Management and Conservation Law (No. 7779, 1998), 1998. Government of the Republic of Costa Rica
70	The Forestry Law (No. 7575, 1996), 1996. Government of the Republic of Costa Rica
71	The Biodiversity Law (No 7788, 1997), 1997. Government of the Republic of Costa Rica
72	The National Plan of Forestry Development (2001-2010). 2007.Ministry of Environment, Energy and Telecommunications
73	National Development Plan 2006-2010.2006. Ministry of Planning and Economic Policy
74	Coffee Market Report. Various years. International Coffee Organisation
75	Average price of cattle in Costa Rica. Various years. National Council of Production (CNP).
76	Digital Atlas of Costa Rica. 2004.Costa Rica Institute of Technology
77	Socio-economic study: Characterisation of the Perez Zeledon Canton. 1997. Schram, Albert/ University of Costa Rica.
78	Bird Count. 2004. Lopez-Vargas, W/Tropical Science Centre (CCT)
79	INBIO database. National Biodiversity Institute of Costa Rica (INBIO)
80	Impact of the Payment for Environmental Services Program in Costa Rica as a Tool for Poverty Alleviation in the Rural Areas. 2002. Ortiz Malavasi, R., Sage Mora, L.F., and Borge Carvajal, C./ RUTA,

VALIDATION REPORT

Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)

81	Paying for environmental services: An analysis of participation in Costa Rica's PES Program. 2005. Zbinden, S., and Lee, D./World Development
82	PSA programme database. 2006-2001. SIAP reports/FONAFIFO
83	Winrock spreadsheet calculations.
84	Registered AR-CDM project 4861
85	Participants' List of stakeholders. August 2005. COOPEAGRI
86	CDM Project presentation. August 2005. FONAFIFO
87	Minutes of meetings. August 2005. FONAFIFO/COOPEAGRI
88	Socioeconomic Impact of a Financial Mechanism for Forest Plantations: The Case of Payment Program for Environmental Services in the Northern Zone of Costa Rica, Rojas V, 2005, Master Thesis, CATIE.
89	Analysis of environmental and social benefits derived from using the Watershed Protection Mechanism of Payment for Environmental Services (PES) in Costa Rica. Tiffer, R. 2006.

VALIDATION PROTOCOL

PROJECT: "Carbon Sequestration in Small and Medium Farms in the
Brunca Region, Costa Rica (COOPEAGRI Project)"

PROJECT PARTICIPANT:

National Forestry Financing Fund (FONAFIFO) and International
Bank for Reconstruction and Development as Trustee for the
BioCarbon Fund

Validation Type	
<input checked="" type="checkbox"/> Validation of a Project Activity	
Validation Team:	
Jose Luis Fuentes Perez	
Marcelino Pellitero Martinez	
Version of this Validation Protocol: 02	Date: 24/09/2012

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

CHECKLIST TOPIC / QUESTION	MoV/Ref.*	COMMENTS	Draft Conclusion	Final Conclusion
A. GENERAL DESCRIPTION OF PROJECT ACTIVITY				
A.1. Approval				
A.1.1 Have all the Parties involved in the project activity provided a written Letter of Approval of the project activity?	DR/I	CAR 1 Letters of approval by the DNAs of Costa Rica and Canada have to be provided. LoAs have been provided, then, CAR 1 is closed.	CAR 1	OK
A.1.2 Do the Letters of Approval confirm that: <ul style="list-style-type: none"> • The Party is a Party to the Kyoto Protocol • The participation is voluntary • The CDM project activity contribute to the sustainable development (host Party) • The title of the project activity is precise and coincides with the title included in the PDD? 	DR	To assess when CAR 1 is solved. LoAs confirm that: <ul style="list-style-type: none"> • The Parties are a Party to the Kyoto Protocol • The participation is voluntary • The CDM project activity contribute to the sustainable development (host Party) The title of the project activity is precise and coincides with the title included in the PDD in both LoAs.	CAR 1	OK
A.1.3 Has the Letter of Approval be obtained from the project participants or directly from the DNA? In case it has been obtained from the project participant, how has its authenticity been assessed?	DR	To assess when CAR 1 is solved. LoAs have been provided directly from PPs.	CAR 1	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

A.2. Project participants				
A.2.1. Is the form of required for the indication of project participants correctly applied in the PDD?	DR	Yes. The project participants and Party(ies) involved are listed.	OK	OK
A.2.2. Do all participating Parties fulfil the participation requirements as follows: <ul style="list-style-type: none"> • Ratification of the Kyoto Protocol • Designated a National Authority • Host Party DNA communicated minimum values for forest definition 	DR	To assess when CAR 1 is solved. All parties ratified the Kyoto Protocol, they have designated a DNA and the host party has defined the minimum values for forest definition.	CAR 1	OK
A.2.3. Is all information on participants / Parties provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	DR	To assess when CAR 1 is solved CAR 2 Information regarding Canadian DNA in annex 1 is wrong. CAR 2 is closed. Information has been corrected and it is consistent throughout the PDD.	CAR 1 CAR 2	OK
A.3. Project Design Document				
A.3.1. Does the used project title clearly enable to identify the unique CDM project activity? Is it consistent in all section of the PDD and in all documents?	DR	The title is clearly identified and it is consistent throughout the PDD.	OK	OK
A.3.2. Is there any indication concerning the version number and the date of the version? <i>(Note: PDDs older than 6 months are</i>	DR	No, there is no special indication on this matter.	OK	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

<i>not acceptable)</i>				
A.3.3. Is this consistent with the time line of the project's history?	DR	Yes. The PDD is consistent with the timeline of the project's history.	OK	OK
A.3.4. Is the PDD prepared in accordance with the latest template and requirements from the CDM Executive Board?	DR	PDD has been prepared according to the version 4 of template for AR/CDM-PDD which is applicable to the proposed project activity at the time of PDD was submitted to AENOR for validation (July 2010) as per paragraph 9 of the EB 56, Annex 14.	OK	OK
A.3.5. Has the PDD published for Global Stakeholder Consultation (GSC) in UNFCCC website?	DR	Yes. The PDD was published for GSC on 23 July 2010.	OK	OK
A.3.6. Have there been any comments during the GSC process?	DR	No comments have been received	OK	OK
A.3.7. Have them correctly addressed by the validation team?	DR	Not applicable.	OK	OK
A.4. Description of the project activity				
The PDD (section A.2) shall contain a clear description of the project activity that provides the reader with a clear understanding of the precise nature of the project activity.				
A.4.1. Is the description delivering a transparent overview of the project activities?	DR	Yes. The description delivers a transparent overview of the project activity	OK	OK
A.4.2. What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	DR	It was assessed during the on-site visit done by the validation team and after desk-review of evidence requested from PPs.	OK	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

A.4.3. Is the information provided by these proofs consistent with the information provided by the PDD?	DR/I	Yes. The information provided by the proofs that the audit team reviewed during on site visit and after desk-review is consistent with the information included in the PDD.	OK	OK
A.4.4. Has the validation team conducted a physical site inspection to confirm the description of the PDD? If not, justify.	DR	Yes. The on site visit were carried out during 21 st -23 rd September 2010.	OK	OK
A.5. Technical description of the project activity The PDD (sections A.4 and A.5) shall contain a clear description of the project activity that provides the reader a clear understanding of the technical aspects of its implementation.				
<i>A.5.1. Location of the project activity</i>				
A.5.1.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)? Are the latitude and longitude on the site indicated (decimal points)?	DR	<p>The proposed CDM Project activity is within the administrative limits of the Perez Zeledon County, which belongs to the San Jose Province, Costa Rica</p> <p>The geographic location of the project is 9.22° to 9.40° North Latitude and -83.28° to -83.81° West Longitude.(Datum WGS84). It covers 1,337 ha, spread over 10 districts, 194 towns, and one municipality.</p> <p>CL1</p> <p>Decimal coordinates shall state in the PDD.</p> <p>CL 1 is closed. Decimal coordinates have been provided to be as per final PDD:</p> <p>The geographic location of the project is 9.37 to 9.67 North Latitude, - 83.47 to -83.97 West Longitude (Datum WGS84)</p>	CL1	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

A.5.1.2. Is the project boundary under control of the participants geographically delineated?	DR	<p>According to section A.2 of the PDD, the project will have a total area of 1337 ha. However, the annex 5 of PDD shows that only 892.42 ha are under the control of the PP at validation.</p> <p>CL 2</p> <p>The PPs shall demonstrate that for all areas of land planned for the A/R CDM project activity, the control over afforestation or reforestation as required by modalities and procedures for the A/R CDM activity is already established or is expected to be established and, that all areas of land planned for A/R CDM project activity comply with all A/R CDM requirements for validation and registration, except for the control. (Guidance on application of the project boundary, EB44, annex 16).</p> <p>The PPs shall clarify the area under the project boundary as different data are stated throughout the PDD.</p> <p>CL 2 is closed. Information has been clarified</p>	CL 2	OK
A.5.1.3. Does each discrete parcel of land have a unique identification?	DR	Each discrete parcel under control has a unique identification.	OK	OK
A.5.1.4. Have all corners of the polygons been measured and are they included to the PDD.	DR	<p>CL3</p> <p>The corners of polygons will be provided to AENOR in order to verify whether information included in the PDD is correct.</p> <p>CL3 is closed. Information has been provided.</p>	CL 3	OK
A.5.1.5 Are there discrete parcels of land that are currently not under the control of the project participants that are	DR	<p>To assess when CL 2 is closed.</p> <p>The annex 5 of the PDD gathers the geographically delineation for those 892.42 ha, under the control of the PPs. Finally, the project</p>	CL 2	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

included to the project? If yes, are the following conditions met? <ul style="list-style-type: none"> • Total area of these parcels clearly defined • Justification provided (why currently not included but will be under control in future) • Land areas from which parcels are chosen are defined in PDD with coordinates and maps • All areas have been included to the baseline study and it is shown that they are not different from areas already included (eligibility, baseline, removals, etc.) 		boundary will be limited to the 892.42 Ha under the control of the PPs. PPs have provided information of all discrete areas with their GPS coordinates, the polygons, the owner of each discrete area, the contract number signed with FONAFIFO and the identification of the baseline strata and project strata.		
A.5.1.6 Has a description of the present environmental conditions of the project area (including climate, hydrology, soils, ecosystems and land use) been included?	DR	Environmental conditions were checked during the visit. Climate, soils, and ecosystem are described in the PDD. CAR 3 Hydrology conditions shall be included in the PDD. CAR 3 is closed as information has been provided in the PDD.	CAR 3	OK
A.5.1.7 Have any rare or endangered species been defined as present?	DR	The PDD identifies in section A.5.2 the rare or endangered species and 26 new plants discovered in the project area. The four species are the following: <i>Guarea grandifolia</i> is an endangered tree species in all three project sub-regions; while <i>Hymenaea courbaril</i> , <i>Humiriastrum diguense</i> , and <i>Enterolobium</i>	OK	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

		<i>schomburgk</i> are endangered tree species in the Valley area.		
A.5.1.8 Have the species and varieties to be grown been adequately described?	DR	<p>The species to be planted have been indicated with a brief description of ecologic and silvicultural characteristics.</p> <p>The seedlings are obtained from COOPEAGRI's nursery, which use certified seeds (from CATIE's bank when available), with exception of reforestation by Assisted Natural Regeneration. AENOR visited the nursery installations and checked its activities.</p> <p>The description of the species to be grown is based on the FONAFIFO and CATIE studies addressed in the PDD, which were reviewed by AENOR.</p> <p>CL 4</p> <p>In section A.5.3 of the PDD is mentioned that four native species and two non native species will be used in the project activity, however, table 5 in that section is not in parallel with previous information regarding the number of species to be used.</p> <p>CL 4 is closed, as information has been clarified.</p>	CL 4	OK
A.5.1.9 Has the latest version of the AR eligibility tool been applied?	DR	<p>CAR 4</p> <p>Annex 18 of EB 26 is referenced in section A.7 of the PDD, however, the latest tool of eligibility of the land (EB 35 – Annex 18) has to be applied in conformance with the applicable methodology. Furthermore, evidence mentioned in the PDD to demonstrate the eligibility of the land shall be provided to the validation team.</p> <p>CAR 4 is closed as evidence has been provided and latest tool used.</p>	CAR 4	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

<p>A.5.1.10 Is adequate evidence provided which demonstrates that:</p> <ul style="list-style-type: none"> a) the land in the project boundary is not forest at project start b) the activity is an afforestation or reforestation by indicating historic land use (reforestation: unstocked by Dec. 1989; afforestation: unstocked >50 y) 	DR	<p>To asses when CAR 4 is solved.</p> <p>The assessment of the eligibility of the land has been mainly assessed by satellite images, maps and site visit. The eligibility of lands was discussed with people from FONAFIFO and World Bank. AENOR checked the GIS information provided by the PPs and cross-checked with Google Earth, and field information got during site visits.</p> <p>The evidence provided and quoted in section A.7 of the PDD has been provided to AENOR. They evidence that land has not been forested at project start date. The proposed project is a reforestation.</p>	CAR 4	OK
<p>A.5.1.11 Have details of the legal title to the land, land tenure and rights to issued tCERs/ICERs been described?</p>	DR	<p>Lands are owned by private farmers. The total area under the project boundary is already controlled by FONAFIFO.</p> <p>Initially, the PDD considered 1337 Ha, however, only areas under the control by FONAFIFO at validation were included in the project, i.e., 892.42 Ha</p> <p>According to the PDD, all farmers included in the proposed A/R CDM project will sign a contract with FONAFIFO. This contract establishes that farmers give the rights of access of the sequestered carbon (tCERs) to FONAFIFO, and that in exchange, the farmers will receive from FONAFIFO annual payments for the forest environmental services produced by them, including the carbon sequestration.</p> <p>A sampling of contracts signed between FONAFIFO and farmers were checked during site visit to confirm the requested issue. The complete documentation has been available to the auditors. The full list of contracts signed is attached in annex 5 of the PDD.</p>	OK	OK
A.5.2. Category of the project activity				

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

A.5.2.1. To which category(ies) does the project activity belonging to? Is this category correctly identified and indicated?	DR	The project activity belongs to the sectoral scope 14	OK	OK
A.5.2.2. Does the project qualify as a small scale CDM project activity as defined in paragraph 6 (c) of decision 3/CMP.1 on the modalities and procedures for the CDM?	DR	The project activity is qualified as a large scale project activity.	OK	OK
A.5.2.3. Does proposed project activity confirm to one of the project categories defined for small scale CDM project activities?	DR	n/a	OK	OK
A.5.2.4. In the case of a small scale project activity, is it justified that it is not a debundled component of a larger project activity?	DR	n/a	OK	OK
<i>A.5.3. Technology to be employed by the project activity</i>				
A.5.3.1. Does the description of the technology to be applied provide sufficient and transparent input/information to evaluate its impact on the greenhouse gas balance? And, is the explanation how the project will reduce greenhouse gas emission transparent and suitable?	DR	<p>The PDD describes in section A.5.4 the technology to be applied in the project for the detailed species.</p> <p>Furthermore, during on site visit, it was possible to visit the nursery and several discrete areas in which have already been implemented some of the forestry operations.</p> <p>To assess when CL 4 is solved.</p>	CL 4	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

		Section A.5.4 has been corrected and updated to gather all information requested during the validation process, the activities to be implemented during the operation of the project are well described in the PDD in a transparent and suitable manner.		
A.5.3.2. Does the project require extensive initial training and maintenance efforts in order to be carried out as scheduled during the project period? If so, does the project make provisions for meeting training and maintenance needs?	DR	Training actions and maintenance needs are considered in the PDD. Furthermore, the validation team could verify during the on site visit through the discussing with several farmers that training actions have been already performed.	OK	OK
<i>A.5.4. Estimated amount of emission reductions over the chosen crediting period</i>				
A.5.4.1. Is the form required for the indication of projected emission reductions correctly applied?	DR	The form required for the indication of projected emission reductions is correctly applied	OK	OK
A.5.4.2. Has the approach to address non-permanence been specified (tCER, ICER)?	DR	It is opted for tCER.	OK	OK
<i>A.5.5. Public funding of the project activity</i>				
A.5.5.1. In case of public funding from Annex I Parties is it confirmed that such funding does not result in a diversion of official development assistance?	DR	A brief description on project financing is included in section A.10 of the PDD and annex 2 of the PDD. No funding is expected from the Official Development Assistance and the Parties to the Annex I.	OK	OK
A.5.5.2. Is all information provided consistent with the details given in remaining chapters of the PDD (in particular annex	DR	To assess when CAR 2 is solved. All information provided consistent with the details given in remaining	CAR 2	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

2)		chapters of the PDD (in particular annex 2)		
B. DURATION OF THE PROJECT ACTIVITY / CREDITING PERIOD				
B.1. Starting date of the project activity and the crediting period				
B.1.1. Does the starting date reflects the date of implementation (or when real action began that resulted in changes to the actual net removals) and has it been adequately justified?	DR	CL 5 The starting date was defined on 01/01/2006 in the PDD submitted to GSC. With regard to this date evidence shall provide to the validation team in order to assess whether the starting date has been defined in compliance with the AR/CDM requirements, as well as the evidence of the main milestones of the project to assess whether CDM was seriously considered in the decision to proceed with the project activity. CL 5 is closed as evidence and milestones have been provided for assessing the starting date of the project. Final PDD states as starting date 1 August 2006 when the first plantation in the project occurred. This date replaced to the 1/1/2006 as this original date corresponds to the first farmers eligible to apply for the project.	CL 5	OK
B.2. Expected operational lifetime				
B.2.1. Has the expected operational lifetime been defined?		Yes. It is 60 years.	OK	OK
B.3. Choice of the crediting period and related information				
B.3.1. Is the project fixed or renewable and does it have an	DR/I	CAR 5 Yes. A renewable crediting period is defined in section B.3.1 of the	CAR 5	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

appropriate crediting period length defined?		PDD. However, section E.3 mentions a fixed crediting period of 30 years. Then, the project is inconsistent in this matter. CAR 5 is closed as the inconsistency has been solved and corrected.		
C. APPLICATION OF AN APPROVED BASELINE AND MONITORING METHODOLOGY				
C.1 Title and reference of approved methodology				
C.1.1. Has the approved methodology and any other methodologies or tools used been properly referenced (including version number)?	DR	The approved methodology is "Reforestation or Afforestation of land currently under agricultural use" AR-AM0004/v.04 as it is properly referenced in section C.1 of the PDD.	OK	OK
C.2 Assessment and justification of selected methodology				
C.2.1. Does the project use the baseline approach from paragraph 22 of the CDM A/R modalities and procedures.	DR	Yes, the baseline approach used is from paragraph 22 of the CDM A/R modalities and procedures.	OK	OK
C.2.2. Is the selected project activity an afforestation or reforestation of degraded land, which is subject to further degradation or remains in a low carbon steady state, through assisted natural regeneration, tree planting, or control of pre-project grazing and fuel wood collection activities (including in-site charcoal production)?	DR	As section C.2 of the PDD describes the selected project activity is a reforestation of degraded land, which is subject to further degradation or remains in a low carbon steady state.	OK	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

C.2.3. The project activity can lead to a shift of pre-project activities outside the project boundary, e.g., a displacement of grazing and fuelwood collection activities, including charcoal production.	DR	The project is carried out on lands dedicated to grazing cattle and agricultural activities, thus, the project activity could lead to displacement of grazing. However, these shifts are discarded as PDD summarises on leakage section.	OK	OK						
C.3. Applicability of the selected methodology to the project activity										
C.3.1. Are the chosen tools considered applicable in accordance with the design of the project and the provisions of the applied methodology?	DR	Yes. The chosen tools mentioned in the PDD are applicable in accordance with the designed project and the provisions of the applied methodology.	OK	OK						
Fill in the required amount of sub checklists for applicability criteria as given by the methodology applied and comment at least every line answered with "No"										
C.3.2. Criterion 1 Lands to be afforested or reforested are degraded and the lands are still degrading or remain in a low carbon steady state;	DR	<div>CL 6</div> <div>All the applicability conditions are mentioned in the PDD, however further explanations shall be provided and evidence to assess their applicability shall be provided.</div> <div>CL 6 is closed as evidence has been provided and further explanations included in the PDD for each condition.</div> <table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the PDD?	Yes	Evidence provided?	Yes	CL 6	OK
Applicability checklist	Yes/No									
Criterion discussed in the PDD?	Yes									
Evidence provided?	Yes									

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

			<table><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Compliance verified?	Yes									
Compliance verified?	Yes													
C.3.3. Criterion 2: Site preparation does not cause significant longer term net decreases of soil carbon stocks or increases of non-CO2 emissions from soil;	DR		<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the PDD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	CL 6	OK	<p>To assess when CL6 is solved.</p> <p>CL 6 is closed as evidence has been provided and further explanations included in the PDD for each condition.</p>
			Applicability checklist	Yes/No										
			Criterion discussed in the PDD?	Yes										
			Evidence provided?	Yes										
			Compliance verified?	Yes										
C.3.4. Criterion 3: Carbon stocks in soil organic carbon, litter and dead wood can be expected to decrease more due to soil erosion and human intervention or increase less in the absence of the project activity, relative to the project scenario	DR		<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the PDD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	CL 6	OK	<p>To assess when CL6 is solved</p> <p>CL 6 is closed as evidence has been provided and further explanations included in the PDD for each condition.</p>
			Applicability checklist	Yes/No										
			Criterion discussed in the PDD?	Yes										
			Evidence provided?	Yes										
			Compliance verified?	Yes										

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

C.3.5. Criterion 4: Flooding irrigation is not permitted;	DR	<div>To assess when CL6 is solved. CL 6 is closed as evidence has been provided and further explanations included in the PDD for each condition.</div> <table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the PDD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	CL6	OK
Applicability checklist	Yes/No											
Criterion discussed in the PDD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											
C.3.6. Criterion 5: Soil drainage and disturbance are insignificant, so that non CO ₂ -greenhouse gas emissions from this type of activities can be neglected;	DR	<div>To assess when CL6 is solved CL 6 is closed as evidence has been provided and further explanations included in the PDD for each condition.</div> <table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the PDD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	CL 6	OK
Applicability checklist	Yes/No											
Criterion discussed in the PDD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

C.3.7. Criterion 7: The AR CDM project activity is implemented on land where there are no other on-going or planned AR activities.	DR	<div>To assess when CL6 is solved.. CL 6 is closed as evidence has been provided and further explanations included in the PDD for each condition.</div> <table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the PDD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	CL 6	OK
Applicability checklist	Yes/No											
Criterion discussed in the PDD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											
C.3.8. Are the carbon pools considered in the project activity in line with the requirements of the methodology? ("No" = conservative approach under the applicability conditions)	DR	Section C.3 of the PDD gathers in table 8 the carbon pools of the project to be in compliance with the applicable methodology.	OK	OK								
C.4 Description of ex ante stratification												
C.4.1 Has the ex-ante stratification been determined according to the applicable methodology?	DR	<div>The PDD states in section C.4 the steps used to define the ex-ante stratification. However, the followed steps are defined by the methodology AR-AM0004, version 3.</div> <div>CAR 6</div> <div>The PDD shall describe the ex-ante stratification according to version 4 of the applicable methodology. Section C.5.1 does not gather the</div>	CAR 6	OK								

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

		baseline land use/land cover for each identified stratum. CAR 6 is closed as version 4 has been correctly used in the final PDD and baseline land use has been defined for each stratum.		
C.5 Identification of baseline scenario				
<i>C.5.1. Step 1: Compliance with applicability criteria</i>				
Compliance with applicability criteria	DR	Covered in previous sections of the Validation protocol	OK	OK
<i>C.5.2 Step 2: Delineation of project boundary</i>				
Delineation of project boundary	DR	Covered in previous sections of the Validation protocol	OK	OK
<i>C.5.3. Step 3: Analysis of historical land use, local and sector land-use policies or regulations and land use alternatives</i>				
C.5.3.1 Analysis of historic and land use / cover change in the context of socioeconomic conditions and identification of key factors that influence land use change over the time (acc. AR definitions, using e.g. multitemporal images, field studies, interviews, other sources).	DR	The historical land use is described as continued deforestation and degradation due to grazing and agricultural activities.	OK	OK
C.5.3.2 Demonstration that land use / cover change has lead to a progressive degradation (e.g. vegetation or soil), including decrease or steady state of carbon stocks, using verifiable indicators that are sustained by further evidence.	DR	An assessment of land use change mainly based on aerial photos and maps was conducted in order to demonstrate the historic land use change. The assessment based on cartographic maps from 1960 to 1980 and aerial photos from 1992 to 2003 demonstrates the increase in not forest lands in 1992 and the permanence of the not forest lands till 2003 without reverse back use to forest.	CAR 7	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

		CAR 7 The PDD shall gather the step 3b of item “procedure for selection of most plausible baseline scenario” as the methodology describes in order to assess if historical and current land uses has led to progressive degradation of the land or steady state of the carbon stocks. CAR 7 is closed as PDD gathers the item requested.		
C.5.3.3 Brief description of national, sectoral, local land use policies or regulations adapted before 11 Nov. 2001, that may impact and land use / cover change and demonstrate that they do not impact the project area significantly. (if they do, baseline cannot be degraded land / extended applicability criteria)	DR	A Brief description of national, sectoral, local land use policies or regulations adapted before 11 Nov. 2001, that may impact and land use / cover change have been considered in the PDD. CL 7 However, PPs shall include further explanations regarding the impact of the different laws in the project. CL7 is closed as explanations have been provided in PDD.	CL7	OK
C.5.3.4 Identification of alternative land uses (including public or private activities) that are not in contradiction with regulations or policies, using appropriate sources. (if the land use is likely to change, then this methodology is not applicable / extended applicability criteria)	DR	Identification of alternative land uses that are not in contradiction with regulations or policies, are addressed in the PDD. These alternative land uses were confirmed during the site visit in interviews with farmers and people of COOPEAGRI.	OK	OK
C.5.3.5 Is it demonstrated that the land use / cover in the boundary would not change and /or is likely to lead to further degradation, e.g., by assessing attractiveness /	DR	CL 8 PPs shall provide in section C.5.1 step 3 further explanations related to whether the land use/cover in the boundary would not change	CL 8	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

benefits to locals, stakeholder consultations, and barriers for alternative land uses. (if the land use is likely to change, then this methodology is not applicable / extended applicability criteria)		and/or is likely to lead to further degradation. CL8 is closed as issues requested have been clarified		
<i>C.5.4. Step 4: Baseline stratification of the AR project area</i>				
C.5.4.1 Has the actual stratification of land areas within the project boundary occurred considering the indications of final ex-ante stratification (verifiable boundaries with GPS or remote sensing coordinates, managed in GIS; methodology Section II.3)?	DR	CL 9 The ex-ante stratification in section C.4 of the PDD shall be carried out according to the applicable version of the methodology. On the other hand, section C.5.2, step 4, of the PDD gathers different baseline strata compared with ones identified in section C.4 of the PDD. Thus, this issue has to be clarified. CL9 is closed as clarification has been clarified in the PDD.	CL 9	OK
<i>C.5.5. Step 5: Determination of the baseline land-use land-cover for each stratum</i>				
C.5.5.1. Has the baseline scenario for each stratum been determined? And has an analysis of the possibility of self encroachment of trees been carried out using appropriate (field) methods	DR	To assess when CAR 6 is closed. The baseline scenario for each stratum has been determined after CAR requested. Land use in the Northern Hillsides consists of pastures in steep terrain while land use in the Valley and South Hillsides consist of mixed agricultural lands and pasture lands in rolling hills. On the other hand, an analysis of the possibility of self encroachment of trees has been assessed in the PDD. No possibilities of self-encroachment of trees are determined.	CAR 6	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

C.5.5.2. Is the description of the baseline scenario applying to each stratum reasonable?	DR	To assess when CAR 6 is closed. The baseline scenario identified for each stratum is the current situation, i.e., the continuation of degradation through grazing and agriculture activities. The baseline scenario as described in the PDD is reasonable based on evidence provided and information got during the visit.	CAR 6	OK
C.6 Assessment and demonstration of additionality				
C.6.1. Is the project additionality assessed according to the applicable methodology? Detail the Tool used to demonstrate the Additionality of the project activity.	DR	Yes, the additionality of the project activity is assessed by applying the "Tool for the demonstration and assessment of additionality in A/R CDM project activities" version 02. CAR 8 However, the titles of the different steps shall be corrected, and all the steps stated in the tool shall be followed. Section C.6.1 has been rewritten in version 2 of the PDD and titles have been corrected. Additionality has been determined according to the "Guidance on application of the definition of the project boundary to A/R CDM project activities". CAR 8 is closed.	CAR 8	OK
<i>C.6.2 Step 0. Preliminary screening</i>				
C.6.2.1 Has evidence been provided that the starting date of the A/R CDM project activity was after 31 December 1999, and that the incentive from the planned sale of GHG	DR	To assess when CL 5 is closed. The certification letter by Engineer D. Luis Salazar confirms the first plantations of the project on 1 August 2006, i.e., after 31 December 1999. This certification letter has been provided. The first plantation	CL 5	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

emission allowances was seriously considered in the decision to proceed with the project activity (documentation that was available to third parties at, or prior to, the start of the project activity)?		represents the starting date of the project and it is after 31 December 1999. The Project Idea Note or the World Bank Finance Documents evidence that benefits of CDM was seriously considered in the decision to proceed with the project.		
C.6.2.2 Has evidence been provided that a) the land within the planned project boundary is eligible as the A/R CDM project activity and that b) the project activity is directly human-induced and not a mere continuation of the pre-project spontaneous processes.	DR	Planting and assisted natural regeneration on lands used for pasture and crops are considered human-induced. Regarding the eligibility of the discrete areas, see CAR 4. The eligibility of the lands has been clearly explained in the PDD.	CAR 4	OK
<i>C.6.3. Step 1. Alternatives to the A/R project activity consistent with the current laws and regulations</i>				
C.6.3.1 Have realistic and credible land-use alternative(s) been identified (sub-step 1a), including: 1. The proposed project activity not undertaken as a A/R CDM project activity; 2. Other plausible and credible land-use alternatives. 3. If applicable, continuation of the current situation	DR	Yes, three realistic and credible land-use alternatives have been identified. Identified alternatives are the following: 1. Land uses in the project sites may change from pastures to crops and vice versa, depending on the market price fluctuations of cattle and crops. Pasture lands are maintained and traditional grassland management (slash and burn) prevent the development of second growth forests 2. Farmers improve their agriculture production systems adopting improved technology for cash crop and meat production, therefore they require less land for these activities allowing	OK	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

		natural regeneration to develop in the remain lands. 3. Implementation of the project without being registered as the A/R CDM project		
C.6.3.2 Are the alternative(s) in compliance with all applicable legal and regulatory requirements (sub-step 1b)? If that is not the case, an alternative can only be considered if applicable legal or regulatory requirements are systematically not enforced	DR	CAR 9 Applicable laws and regulations stated in the PDD have to be provided to the validation team. Furthermore, according to the “Tool for the demonstration and assessment of additionality in A/R CDM project activities” version 02, local policies that have been implemented since the adoption of the COP of the CDM M&P shall not be considered in the analysis. Section has been updated and short description of relevant laws has been added in the PDD. Copies of the laws have been provided to DOE. CAR 9 is closed. Alternatives are in compliance with applicable legal and regulatory requirements.	CAR 9	OK
C.6.3.3 Is the project scenario not the only remaining alternative?	DR	The project scenario is not the only remaining alternative.	OK	OK
<i>C.6.4. Step 2: Investment analysis</i>				
C.6.4.1. In case of applying step 2 / investment analysis of the additionality tool: Is the analysis method identified appropriately?	DR	N/A	OK	OK
C.6.4.2. In case of Option I (simple cost analysis): Is it demonstrated that the activity produces no economic	DR	N/A	OK	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

benefits other than CDM income?				
C.6.4.3. In case of Option II (investment comparison analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelised) unit cost)?	DR	N/A	OK	OK
C.6.4.4. In case of Option III (benchmark analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelised) unit cost)?	DR	N/A	OK	OK
C.6.4.5. In case of Option II or Option III: Is the calculation of financial figures for this indicator correctly done for all alternatives and the project activity?	DR	N/A	OK	OK
C.6.4.6. In case of Option II or Option III: Is the analysis presented in a transparent manner including publicly available proofs for the utilized data?	DR	N/A	OK	OK
C.6.4.7. In case of Option II or Option III: Is the sensitive analysis made taken into account the relevant parameters in accordance with EB guidance?	DR	N/A	OK	OK
<i>C.6.5. Step 3: Barrier analysis</i>				

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

C.6.5.1. In case of applying step 3 (barrier analysis) of the additionality tool: Is a complete list of barriers developed that prevent the different alternatives to occur?	DR	<p>Barriers listed in initial PDD:</p> <ul style="list-style-type: none">• Financial barriers• Technological barriers• Market barriers• Policy barriers• Legal barriers• Cultural barriers• Infrastructure barriers• Social barriers <p>The existence of barriers was determined by means of surveys among experts and farmers.</p> <p>CL 10</p> <p>List of surveyed experts and institutions as well as the surveys have to be provided to the validation team.</p> <p>Survey approach for demonstrating barriers has been discarded in the final PDD.</p> <p>CL 10 is closed</p> <p>Barriers listed in the final PDD are the following:</p> <ul style="list-style-type: none">• Barriers related to local tradition• Barriers related to land• Technological barriers	CL 10	OK
--	----	---	-------	----

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

		<ul style="list-style-type: none"> Investment barriers <p>Therefore a complete list of barriers has been developed that prevent the proposed CDM project activity to occur.</p>		
C.6.5.2. In case of applying step 3 (barrier analysis): Is transparent and documented evidence provided on the existence and significance of these barriers?	DR	<p>CAR 10</p> <p>The additionality assessment is not robust and clear to demonstrate the additionality of the project, since there are issues indicated in the PDD version 01 which have to be clarified and or corrected according to the "Guidelines for objective demonstration and assessment of barriers (version 01)", (EB50, annex13) and the Tool for the demonstration and assessment of additionality in A/R CDM project activities" version 02. More specifically:</p> <p>The identified barriers are only sufficient grounds for demonstration of additionality if they would prevent the implementation of proposed project activity. Some of the barriers listed fail to fulfil with this requirement.</p> <p>According to the description provided in the PDD is not possible to categorize the barriers listed into the 3 levels stated in the PDD. i.e., if the identified barriers prevent the implementation of any of the scenarios.</p> <p>Scenarios analysed don't match with alternatives identified in Sub-step 1a of the PDD.</p> <p>The market barrier analysis for the proposed project activity is based on anecdotal evidence. Transparent and documented evidence has to be provided.</p> <p>According to the above tools and guidelines, the financial barriers described in the PDD should be considered in the framework of the investment analysis.</p>	CAR 10	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

		<p>Evidence about the appropriateness of the input values used (techno-economic parameters and assumptions) in the investment analysis shall be provided as well as the spreadsheets used for the calculations shall be submitted to the validation team</p> <p>Technological barriers: PDD description states that they do not prevent the implementation of the proposed project activity.</p> <p>This section has been rewritten in final version of the PDD to clarify that the identified barriers prevent the implementation of the proposed project activity.</p> <p>Barriers listed in the final PDD are the following:</p> <ul style="list-style-type: none"> • Barriers related to local tradition • Barriers related to land • Technological barriers <p>CAR 10 is closed</p> <p>Yes, transparent and documented evidence on the existence and significance of the barriers has been provided.</p>		
C.6.5.3 .In case of applying step 3 (barrier analysis): Is it transparently shown that the execution of at least one of the alternatives is not prevented by the identified barriers?	DR	<p>To assess when CAR 10 is closed.</p> <p>CAR 10 is closed. It is transparently shown that the execution of at least one of the alternatives is not prevented by the identified barriers.</p>	CAR 10	
C.6.6. Step 4: Common practise				

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

<p>C.6.6.1 Is the project activity common practise in the region? Has a common practise analysis been carried out in line with the requirement of the CDM and are there essential distinctions between them. Are there fundamental and verifiable changes in circumstances when compared to other projects (e.g. explain why the proposed CDM AR project cannot use e.g. political benefits granted in other projects)</p>	DR	<p>Costa Rica started a national reforestation program in 1997 (PSA program). Since 2003, FONAFIFO took the responsibility of the implementation of the program.</p> <p>CL 11</p> <p>In accordance with the Tool for the demonstration and assessment of additionality in A/R CDM project activities" version 02, the PP shall provide an analysis to which extent similar forestation activities have implemented previously or are currently underway in the geographical area of the proposed project activity and documented evidence and ,where relevant, quantitative information have to be provided.</p> <p>Evidence about the essential distinctions between the proposed project activity and the other forestation activities has to be provided.</p> <p>Clarification and evidence about the reasons why the proposed project activity cannot use benefits from the PSA program.</p> <p>Data on the implementation of forest activities prior to the project has now been provided in table 13 of the PDD.</p> <p>Under the ESP program, a small farm is defined as <20 ha while a medium farm is defined as 20-100 ha and the general analysis of the PSA program conclude that large farmers and forest owners are disproportionately represented among program participants which made PSA program penetration in the region to be residual (0.1%).</p> <p>CL 11 is closed.</p> <p>The project activity cannot be considered as common practise. The common practise analysis has been carried out in line with CDM requirements.</p>	CL 11	OK
--	----	---	-------	----

C.7 Estimation of the ex ante baseline net GHG removals by sinks				
C.7.1. Have the ex ante baseline removal calculations been provided in the table, do they correspond to the chosen crediting period and use the approach provided in the selected approved methodology?	DR	<p>The ex ante baseline removal calculations have been provided in the table in section C.7 of the PDD, they correspond to the chosen crediting period and use the approach provided in the selected approved methodology.</p> <p>CL 12</p> <p>Spreadsheet for determining the baseline net GHG removal by sinks shall be provided. Moreover, the used nomenclature for Aikt and Iv,ijt parameters in baseline calculation in section C.7 of the PDD do not match with the strata and species defined in the PDD. Thus, this issue shall be clarified.</p> <p>CL12 is closed.</p>	CL 12	OK
C.7.2. Is the baseline net GHG removal set zero where <ol style="list-style-type: none"> no growing trees or woody perennials exist and where no trees / perennials are expected to grow, or where no trees / perennials will reach the forest threshold due to ongoing slash and burn 	DR	<p>To assess when CL 12 is closed.</p> <p>Final PDD considers the baseline net greenhouse gas removals by sinks are expected to be negative due to ongoing degradation. Under these circumstances, the methodology conservatively assumes that baseline net greenhouse gas removals by sinks are zero: CBSL = 0.</p>	CL 12	OK
C.7.3. Where these conditions are not applicable, is the baseline net GHG removal considered for above and below ground biomass? (formula 2)	DR	<p>To assess when CL 12 is closed.</p> <p>As per PDD submitted to GSC the formula 2 of the applicable methodology was applied. However, the PDD was updated to consider the baseline net greenhouse gas removal by sinks to be zero. Hence, formula 2 of the methodology is not applied.</p>	CL 12	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

C.7.4. For estimation of GHG removals due to growth in baseline strata, is the formula included to the PDD and correctly applied? (formula 3)	DR	To assess when CL 12 is closed. Formula 3 of the methodology was applied in the PDD to GSC. However, the PDD was updated to consider the baseline net greenhouse gas removal by sinks to be zero. Hence, formula 2 of the methodology is not applied.	CL 12	OK
C.7.5. For those strata with few growing trees, is ΔCB_{ikt} (sum of the changes in living biomass carbon stocks in the baseline, above- and below-ground; tonnes CO ₂ -e,) estimated using one of following two methods (increment data vs. stock data): 1. Method 1: Carbon gain-loss method 2. Method 2: stock change method	DR	To assess when CL 12 is closed. Method 1 is used in calculation as PDD for GSC. However, the PDD was updated to consider the baseline net greenhouse gas removal by sinks to be zero.	CL 12	OK
C.7.6. Has the corresponding formula been applied correctly, are used values in line with onsite conditions and are they clearly sustained / referenced? (formulae 4)	DR	To assess when CL 12 is closed. A formula 4 of applicable methodology is correctly applied in the PDD to GSC. However, the PDD was updated to consider the baseline net greenhouse gas removal by sinks to be zero.	CL 12	OK
C.7.7. In regard to D_j (wood density), $BEF_{1,j}$ (biomass expansion factor for conversion of increment), $BEF_{2,j}$	DR	CL 13 Regarding information in table 19 of the PDD for GSC related to the	CL 13	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

<p>(biomass expansion factor for conversion of volume), CF_j (carbon fraction for species) and R_j (root to shoot ratio):</p> <p>Have values been chosen with priority from higher to lower order as follows:</p> <p>a) Existing local and species specific.</p> <p>b) National and species specific (e.g., from national GHG inventory).</p> <p>c) Species specific from neighbouring countries with similar conditions. Sometimes c) might be preferable to b); this case shall be substantiated in the PDD.</p> <p>d) Globally species specific (e.g., GPG-LULUCF).</p> <p>If none of the above is applicable data of "similar species" values can be used following this order.</p>		<p>ex-ante baseline net GHG removals by sinks the following issues shall be clarified:</p> <ul style="list-style-type: none"> • The data sources used for the different parameters shall be provided (D_j, A_{ikt},....). • It shall be detailed in table 19 of the PDD for GSC, all values of parameter l_{v,ijt}, for all species j and all strata i. As well as providing to the validation team the used values and data sources. • It shall be stated in table 19 in column "comment" if values applied are measured, estimated or default. • The values of current annual increment given in table 3.1 of annex 3 do not match with values provided in section C.7 of the PDD. Thus, this issue shall be clarified. <p>CL13 is closed as issues requested have been properly closed and clarified.</p>		
<p>C.7.8. If data from global or national databases has been used, have values been confirmed through local data from literature or inventory?</p>	DR	<p>To assess when CL 13 is closed.</p> <p>The PDD was updated to consider the baseline net greenhouse gas removal by sinks to be zero. However, calculations of the net anthropogenic removals by sink used local data when available and IPCC default values as conservative estimate when there were no local data.</p>	CL 13	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

C.8 Completion of the baseline study				
C.8.1. Is there any indication of a date when the baseline and monitoring were determined?	DR	CAR 11 The date of completion of baseline study and monitoring shall be provided in section C.8 of the PDD. CAR 11 is closed.	CAR 11	OK
C.8.3. Is the information on the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation?	DR	Yes, the information is consistent with the actual situation.	OK	OK
D. CALCULATION OF NET GHG EMISSION REMOVALS				
D.1. Estimation of ex ante actual net removals				
D.1.1. Are the calculations of ex ante actual net removals for the crediting period consistent with the approach in the selected methodology and adequately defined?	DR	CAR 12 <ul style="list-style-type: none"> • The PDD shall follow all steps of the applicable methodology. With regard to this, in section D.1 shall be included the "Treatment of pre-existing vegetation". • In section D.1, step A.1 of the PDD the Ebiomassloss is considered as "significant". Correct it. • Equations in section D.1 shall be revised to be in compliance with the methodology at summation and variables H_{ijt} and B_{Hijt} (equation 12 and 13 of the first PDD) do not include 	CAR 12	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

		<p>"year⁻¹".</p> <ul style="list-style-type: none"> Spreadsheet calculation shall be provided to the validation team. Data sources in table 22 of the PDD shall be described in English. In addition, this evidence shall be provided to the validation team in order to verify whether the used values are correctly. <p>CAR 12 is closed as issues requested have been corrected and correctly addressed in the PDD.</p>		
D.1.2. Are all gases / emissions of other sources considered that are included to the boundary definition?	DR	Yes, all gases/emissions of other sources are considered.	OK	OK
D.1.3. Has the formula for the calculation of actual changes in living biomass stocks been applied correctly?	DR	<p>To assess when CAR 12 is closed.</p> <p>The formula for the calculation of actual changes in living biomass stocks have been applied correctly</p>	CAR 12	OK
<p>D.1.4.</p> <p>a) Treatment of pre-existing trees and tree vegetation:</p> <p>Is it estimated pre-existing carbon stock in living biomass significant (>2% of actual net removals)?</p> <p>If yes, are follow up calculations carried out accordingly?</p>	DR	<p>To assess when CAR 12 is closed.</p> <p>According to the annex 21 of EB 50 the GHG emissions from felling, clearance, decay or burning of existing woody biomass during site preparation are insignificant if at least one of the conditions are met. In case of the proposed project, as the baseline scenario is degrading land involving decline in woody vegetation cover for this Project, hence $E_{biomasslos} = 0$</p>	CAR 12	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

<p>D.1.5.</p> <p>b) Treatment of trees</p> <p>D.1.6. Is the formula provided by the methodology (for baseline estimates) applied correctly, while taking into account the following differences:</p> <ul style="list-style-type: none"> •Harvesting and mortality are taken into account •Baseline strata differ • Stand models differ <p>Is the calculation carried out according to A) the carbon gain-loss or B) the stock change method, and is all input data clearly sustained and referenced?</p>	DR	<p>The used method is carbon gain-loss.</p> <p>The formula provided by the methodology are correct and they consider the following differences:</p> <ul style="list-style-type: none"> •Harvesting and mortality are taken into account •Baseline strata differ and Stand models differ 	OK	OK
<p>D.1.7. Is the increase of GHG emissions (GHGE) estimated according to methodology implications and is sustained and references input data used?</p>	DR	<p>As no burn activities will be carried out on site preparation, GHG emissions is equal to zero.</p> <p>CL 14</p> <p>However it shall be clarified why GHG_E is stated in section D.1 to only account the non-CO2 GHG emissions, when applicable methodology refers to non-CO2 and CO2.</p> <p>CL 14 is closed. The issue requested has been clarified.</p>	CL 14	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

D.1.8. Estimation of EFuelBurn (GHG emissions from burning of fossil fuels): Have the emissions from fuel burn been estimated adequately and in line with the methodology requirements? Is sufficient evidence provided on input values?	DR	n/a	OK	OK
D.1.9. Estimation of EBiomassBurn (GHG emissions from biomass burning): Is slash and burn as part of site preparation applied and if yes, have emissions been estimated adequately and in line with the methodology requirements? Is sufficient evidence provided on input values?	DR	As no burn activities will be carried out on site preparation, GHG emissions is equal to zero.	OK	OK
D.1.10. Estimation of (nitrous oxide emissions from nitrogen fertilisation): Have the emissions from nitrogen fertilisation been estimated adequately and in line with the methodology requirements? Is sufficient evidence provided on input	DR	n/a	OK	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

values?				
D.1.11. Has all data been provided relevant for ex-ante estimation? Has data provision been cross-checked with section II.11 of AR-AM0004.	DR	To assess when CAR 12 and CL 12 are closed. All relevant data have been provided for ex-ante estimation and they have been cross-checked with data source to be consistent with section II.11 of AR-AM0004	CAR 12 CL 12	OK
D.2 Estimation of ex ante leakage				
D.2.1. Are the calculations of ex ante leakage for the crediting period consistent with the approach in the selected methodology and adequately defined?	DR	CAR 13 Section D.2 of the PDD related to the Leakage attributable from sources to the AR/CDM project activities is incorrectly addressed in the PDD. CAR 13 is closed as issue requested has been corrected.	CAR 13	OK
D.2.2. Have the emissions from LK Activity Displacement been estimated adequately and in line with the methodology requirements and has sufficient evidence provided on input values for the following calculations? 1. Leakage due to conversion of lands with a) conversion of grazing and b) conversion of cropland. 2. Leakage due to displacement of fuelwood collection	DR	CL 15 <ul style="list-style-type: none">To assess LK conv-crop and LK conv-graz, the guidelines and tool on this matter shall be applied.Applicability conditions for assessing LK fuelwood shall be applied in the PDD to be in compliance with the applicable methodology.Leakage caused by the increased use of wood posts for fencing shall be considered in the PDD.Section D.2 of the PDD refers to table 2 of the PDD regarding the average cattle heads per ha= 0.6 animals. However, that table	CL 15	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

3. Leakage due to increased used of wood posts for fencing.		shows a mean of 0.7 animals/ha. CL 15 is closed, as issues requested have been clarified.		
D.2.3. Has all relevant data for leakage estimation been collected and archived? (section III.8, p.94)	DR	To assess when CL 15 is solved. All relevant data for leakage estimation have been collected and archived	CL 15	OK
E. MONITORING PLAN				
E.1 Monitoring of the project implementation				
E.1.1. Has the data to be collected for monitoring of the project boundary been listed adequately?	DR	CL 16 The Quality assurance and quality control shall be included in the introduction of section E "Monitoring Plan" of the PDD. CL 16 is closed.	CL 16	OK
E.1.2. Has data to be collected for monitoring of forest establishment been listed adequately?	DR	CL 17 It shall be specified in section E.1.1 of the PDD that monitoring activities shall be conducted in the first three years after planting as the applicable methodology gathers. CL 17 is closed.	CL 17	OK
E.1.3. Has data to be collected for monitoring of forest management been listed adequately?	DR	CL 18 Section E.1.1 of the PDD "forest management activities" to be monitored shall contain the described and applicable practises in the methodology to the project activity such as: thinning, planting, cleaning and site preparation.....and their corresponding data: date,	CL 18	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

		location, area, tree species, volumes or biomass removed, etc. Thus, table 24 shall be updated. CL 18 is closed.		
E.1.4. In the collection of data for the monitoring of the project boundary, forest establishment or of forest management, do any measurements not follow typical forest mensuration practises and if so have they been adequately described?	DR	To be closed when CL 17 and 18 are solved. The collection of data for the monitoring of the project boundary, forest establishment or of forest management has been adequately described.	CL 17 CL 18	OK
E.2 Sampling design and stratification				
E.2.1. Have the conditions for ex-post strata update (within in GIS data base) been included to the PDD / Monitoring Plan?	DR	Conditions for ex-post strata update have been included in the PDD.	OK	OK
E.2.2. Is the sampling framework, including sample size, plot size, plot shape, and plot location specified in the PDD?	DR	CL 19 Data used in table 26 and 27 of the first PDD to calculate total sample size shall be provided to the validation team. To clarify the value of 7% as allowable sample error. CL 19 is closed.	CL 19	OK
E.2.3. Is the sample size / no. of permanent plots and their allocation among strata calculated according to	DR	The sample size / no. of permanent plots and their allocation among strata are calculated according to methodology requirements.	OK	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

methodology requirements?				
E.2.4. Is the sample plot size calculated according to methodology requirements?	DR	The sample plot size is calculated according to methodology requirements.	OK	OK
E.2.5. Does the PDD/Monitoring Plan include in line with the methodology indications on -plot localising, -monitoring frequency -indications on measurements and estimation of carbon stock changes over time in plots? (omission of baseline trees and non tree biomass) -monitoring of GHGe by sources increased as a result of the project activity?	DR	<p>CL 20</p> <p>It shall be included in the monitoring frequency that first verification will take place close to the end of the first commitment period as the methodology requires.</p> <p>On the other hand, it shall be clarified if to carry out the monitoring and verification prior to any thinning or harvesting activities is to avoid the peaks in carbon stocks, if not, it shall be detailed in the PDD how it will fulfil with this requirement.</p> <p>CL 20 is closed.</p>	CL 20	OK
E.3 Monitoring of the baseline net removals				
E.3.1. Is monitoring of the baseline net removals required by the selected methodology? If yes, Has the application of the procedure for selection of sample plots been adequately defined and has all data to be	DR	<p>To assess when CAR 5 and CL 12 are closed.</p> <p>Monitoring of baseline removals is not required as it is calculated ex-ante and will remain fixed for the first crediting period.</p> <p>Finally, due to the CAR 5 the PPs have corrected the chosen crediting period to be 20 years renewable twice. Then, section E.3 of the PDD</p>	CAR 5 CL 12	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

collected or used been listed?		was completed to state a list of parameter to be collected at the renewal of the crediting period in compliance with the methodology. Section E. 2 of the PDD shows the sampling procedure. It is suitable defined		
E.3.2. As the monitoring of baseline carbon stock changes is not required under AR-AM0004. However, if a renewable crediting period is foreseen, is relevant data collected as indicated in the methodology and are control plots outside the project boundary installed? (compare also table in section III.4)	DR	To assess when CAR 5 and CL 12 is closed. Monitoring of baseline removals is not required as it is calculated ex-ante and will remains fixed for the first crediting period. Finally, due to the CAR 5 the PPs have corrected the chosen crediting period to be 20 years renewable twice. Then, section E.3 of the PDD was completed to state a list of parameter to be collected at the renewal of the crediting period in compliance with the methodology. Section E. 2 of the PDD shows the sampling procedure. It is suitable defined. To avoid subjective choice of plot locations the permanent sample plots shall be located systematically with a random start in each stratum, which is considered good practise in IPCC GPG-LULUCF	CAR 5 CL 12	OK
E.4 Monitoring of the actual net removals				
E.4.1. Has the data to be collected in order to monitor the changes in carbon stock resulting from the project been adequately defined?	DR	CAR 14 Regarding the monitoring and calculation ex post of actual net GHG removal by sinks, the section E.4 of the PDD shall contain all steps and formulae of the applicable methodology. On the other hand, it shall be included in section E.4 of the PDD the fulfilment of the project activity regarding the item 5.2 "Estimation of the increase in emissions" of the methodology. Table 31 of section E.4.1 of the PDD shall contain all applicable data	CAR 14	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

		variable to the project activity in compliance with table E of the methodology. CAR 14 is closed.		
E.4.2. Has the data to be collected in order to monitor the GHG emissions that are increased as a result of the project activity within the project boundary been adequately defined?	DR	To assess when CAR 14 is solved. The data to be collected in order to monitor the GHG emissions that are increased as a result of the project activity within the project boundary have been adequately defined	CAR 14	OK
E.4.3. Are the procedures for measurements in the monitoring of the changes in carbon stocks or the monitoring of GHG emissions increased in the project clearly defined and do they follow typical forest mensuration practises?	DR	To assess when CAR 14 is solved. The procedures for measurements in the monitoring of the changes in carbon stocks or the monitoring of GHG emissions increased in the project clearly have defined and they follow typical forest measurements practises.	CAR 14	OK
E.5 Leakage				
E.5.1. If monitoring of leakage is required by the selected methodology has this been stated and has the data and information that will be collected to monitor leakage been adequately defined?	DR	To assess when CL 15 is closed. Not applicable as leakage in the project is considered insignificant	CL 15	OK
E.5.2. Are the procedures for measurements for the monitoring of leakage clearly defined and do they follow	DR	To assess when CL 15 is closed. Not applicable as leakage in the project is considered insignificant.	CL 15	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

typical forest mensuration practises?				
E.5.3. Have procedures for the periodic review of the implementation of activities and measures to minimize leakage been adequately defined?	DR	To assess when CL 15 is closed. Not applicable as leakage in the project is considered insignificant.	CL 15	OK
E.6 QA/QC procedures undertaken for data monitored				
E.6.1. Have QA/QC procedures been defined appropriately and are explanations of procedures (including their absence) reasonable?	DR	The PDD has QA/QC procedures appropriately defined.	OK	OK
E.6.2. Have Standard Operating Procedures been defined for each step of the field measurements (e.g., according to BEF or allometric equations method)? Do they include field team training, test plots, re-check of plots, documentations of steps through time, training of new personnel?	DR	A standard operating procedure has been defined in the PDD for implementation of the project and monitoring activities. The project also considers training actions; re-checking of calculations, plots...	OK	OK
E.6.3. Have procedures for field data verification been defined and do they comply with methodology requirements (10-20% of randomly selected plots, error <5 %	DR	Procedures for field data verification have been defined in the PDD and they comply with methodology requirements (10-20% of randomly selected plots, error <5 % accepted)	OK	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

accepted, overall measurement error shall be defined)				
E.6.4. Are procedures defined for Verification of data entry and analysis in line with methodology requirements?	DR	Procedures for Verification of data entry and analysis in line with methodology requirements have defined in the PDD.	OK	OK
E.6.5. Are procedures defined for data maintenance and archiving in line with monitoring requirements?	DR	Procedures for data maintenance and archiving have defined in the PDD in compliance with methodology.	OK	OK
E.7 Operational and management structure of project operator				
E.7.1. Has the operational and management structure that the project operator will implement in order to monitor actual removals and leakage by the project been adequately defined?	DR	The operational and management structure that the project operator will implement in order to monitor actual removals and leakage by the project been have adequately defined.	OK	OK
E.8 Person applying Monitoring Plan				
E.8.1. Has the person or entity applying the Monitoring Plan been named, are they listed as a project participant and has contact information been provided?	DR	CAR 15 Section E.8 of the PDD shall contain information regarding whether the entity or person applying the Monitoring Plan is a project participant listed in annex 1 of the PDD. CAR 15 is closed.	CAR 15	OK
F. ENVIRONMENTAL IMPACTS				

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

F.1. Documentation on the analysis of the environmental impacts, including transboundary impacts				
F.1.1. Has the analysis of the environmental impacts of the project activity been sufficiently described in the PDD?	DR	Section F.1 of the PDD sufficiently details the environmental analysis of the impacts due to the project activity.	OK	OK
F.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	DR	CL 21 Information about the necessity of E.I.A shall be provided in the PDD. CL 21 is closed.	CL 21	OK
F.1.3. Will the project create any adverse environmental effects? Has any environmental impact identified as significant?	DR	CL 22 Impacts on Water and Fauna have been scored as negative due to the project activity. For these cases, it shall be clarified whether these negative impacts are significant. CL 22 is closed.	CL 22	OK
F.1.4. Are transboundary environmental impacts identified in the analysis?	DR	No transboundary environmental impacts have been identified in the analysis.	OK	OK
F.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party.				
F.2.1. Have the identified environmental impacts been addressed in the PDD sufficiently?	DR	To assess when CL 22 is closed. The environmental impacts have been sufficiently addressed in the final PDD	CL 22	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

F.2.2. Does the project comply with any other environmental legislation in the host country?	DR	To assess when CL 21 is closed. The project fulfils with the host country regulations.	CL 21	OK
G. SOCIO-ECONOMIC IMPACTS				
G.1. Documentation on the analysis of the environmental impacts, including transboundary impacts				
G.1.1 Has an analysis of the socio-economic impacts including impacts outside the project boundary been adequately documented?	DR	An analysis of the socio-economic impacts including impacts outside the project boundary has been adequately documented in the PDD. This matter was treated during the site visit with COOPEAGRI people and farmers. They confirmed the information in the PDD regarding the benefits of the CDM project among others in management's lands and the promotion of sustainable rural live hoods in areas of the project activity.	OK	OK
G.1.2 Does the analysis adequately include (where applicable) information on local communities, indigenous people, land tenure, local employment, food production, cultural and religious sites and access to fuelwood and other forest products?	DR	Section G of the PDD analysis adequately the information on local communities, local employment, etc and how COOPEAGRI, the cooperative of farmers in the area works in the land with the owners of lands.	OK	OK
G.2. If socio-economic impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party.				
G.2.1. If any negative impact is considered significant by the project participants or the host Party, has a statement that	DR	No negative significant socio-economic impacts have been identified.	OK	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

the project participants have undertaken a socio-economic impact assessment in accordance with the procedures required by the host Party (including conclusions and references to supporting information) been provided?				
G.2.2. Has an adequate description of the planned monitoring and remedial measures to address significant socio-economic impacts been provided?	DR	<p>Section G.3 of the PDD gathers information on this matter.</p> <p>The impacts of the project are measured by FONAFIFO, which contracts periodical technical and social evaluations. It is expected that these studies would continue, and that the socio-economic impacts of the proposed CDM project will be evaluated as part of these studies. The results of the evaluation will be public, and if there were any communities negatively affected they will be able to provide inputs for the design of alternative measures to correct the implementation of the project. These studies will be complemented by an annual survey applied by COOPEAGRI staff to property owners.</p>	OK	OK
H. STAKEHOLDERS' COMMENTS				
H.1. Brief description how comments by local stakeholders have been invited and compiled				
H.1.1. Have relevant stakeholders been consulted? Is the exact date of the consultation process included in the PDD	DR	<p>Sections H.1 and H.2 of the PDD state information regarding relevant stakeholder consultation.</p> <p>CL 23</p> <p>Evidence about the stakeholder consultation process shall be provided to the validation team.</p> <p>CL 23 is closed.</p>	CL 23	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

H.1.2. Have appropriate media been used to invite comments by local stakeholders?	DR	CL 24 Further information shall be provided in the PDD related to the media used for the stakeholder process. CL 24 is closed.	CL 24	OK
H.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	DR	No special requirement in the host country is required related to the stakeholder consultation process as checked during the on site visit.	OK	OK
H.1.4. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	DR	To assess when CL 23 and 24 are closed. The stakeholder process has been carried out in a transparent and complete manner.	CL 23, CL 24	OK
H.2. Summary of the comments received				
H.2.1. Is a summary of the stakeholder comments received provided?	DR	Main information received from stakeholders is described in the PDD.	OK	OK
H3. Report on how due account was taken of any comments received				
H.3.1. Has due account been taken of any stakeholder comments received?	DR	Section H.3 of the PDD describes suitability this issue.	OK	OK

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,
Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

*MoV/Ref: Means of Validation and references of background documents. DR: Desk review/ I: Interview.

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

Table 2 Resolution of Corrective Action and Clarification Requests

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
CAR 1 Letters of approval by the DNAs of Costa Rica and Canada have to be provided.	A.1.1	The PPs have provided the LoA from Canada, and Costa Rica.	CAR 1 has been closed as LoAs have been provided and they fulfil with CDM requirements.
CAR 2 Information regarding Canadian DNA in annex 1 is wrong.	A.2.3	Information has been corrected in annex 1 of the PDD	PDD has been reviewed and it is correct in final PDD. Then CAR 2 is closed.
CAR 3 Hydrology conditions shall be included in the PDD.	A.5.1.6.	Information has been added in final version of the PDD.	Relevant hydrology conditions of the project boundary have been added in section A.5.1 of the PDD. Then, CAR 3 is closed.
CAR 4 Annex 18 of EB 26 is referenced in section A.7 of the PDD, however, the latest tool of eligibility of the land (EB 35 – Annex 18) has to be applied in	A.5.1.9	The latest version of the tool to eligibility has been applied. Evidence has been provided to AENOR.	The PDD has been updated to consider the final version of the tool of eligibility of the land. GIS files have been provided to AENOR. The assessment of the eligibility of the land has been mainly assessed by satellite images, maps

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

conformance with the applicable methodology. Furthermore, evidence mentioned in the PDD to demonstrate the eligibility of the land shall be provided to the validation team.			and site visit. The eligibility of lands was discussed with people from FONAFIFO and World Bank. AENOR checked the GIS information provided by the PPs and cross-check with Google Earth and also with field information got on site visits. Thus, CAR 4 is closed.
CAR 5 Yes. A renewable crediting period is defined in section B.3.1 of the PDD. However, section E.3 mentions a fixed crediting period of 30 years. Then, the project is inconsistent in this matter.	B.3.1	Reference in section E.3 was incorrect and has been removed in the final PDD.	CAR 5 is closed as The PPs have updated the PDD to gather a renewable crediting period of 20 years each one.
CAR 6 The PDD states in section C.4 the steps used to define the ex-ante stratification. However, the followed steps are defined by the methodology AR-AM0004, version 3. Thus, the PDD shall describe the ex-ante stratification according to version 4 of the applicable methodology. Section C.5.1 does not gather the baseline land use/land cover for each identified stratum.	C.4.1	Section C.4 has been rewritten in the PDD to follow the steps of version 4 of the methodology. The stratification itself has also been modified. Section C.5.1 has been re-written to clearly describe the land-use land cover change for the strata. FONAFIFO has determined the baseline use per strata based on field observations and surveying and cross-checked by forest cover maps and aerial photographs.	CAR 6 is closed. Two baseline strata have been defined based on climatic and topographic conditions: 1. North Hillsides; 2. Valley and South Hillsides As described in section A.5.4, the project will implement Assisted Natural Regeneration (ANR); Forest Plantations (FP) and Agroforestry Systems (AFS). As a result the stand models defined are: 6. Stand model 1: Gmelina arborea (SM1) 7. Stand model 2: Tectona grandis and/or

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

			<p>Eucalyptus (SM2)</p> <p>8. Stand model 3: Assisted Natural Regeneration (SM3)</p> <p>9. Stand model 4: Agroforestry- Trees mixed with crops (SM4)</p> <p>10. Stand Model 5: Silvopastoral -. Trees in Pastures (SM5)</p> <p>Resulting in the following ex-strata for the actual net GHG removals by sinks:</p> <ol style="list-style-type: none"> 1. North Hillsides/ANR 2. North Hillsides/Melina 3. Valley Lands and South Hillsides/Melina plantations 4. Valley Lands and South Hillsides /Teak and/or Eucalyptus plantations 5. Valley lands and South Hillsides /Agroforestry Trees+Crops 6. Valley Lands and South Hillsides /Silvopastoral Trees+Pastures. 7. Valley lands South Hillsides/ANR <p>On the other hand, the land uses in the baseline scenario have been addressed in the PDD per stratum.</p>
<p>CAR 7</p> <p>The PDD shall gather the step 3b of item "procedure for selection of most plausible baseline scenario" as the methodology describes in order to assess if historical and current land uses has led</p>	C.5.3	<p>Section C.5.1 has been rewritten to include this step with the following explanations:</p> <p>As per the requirements of the methodology, historical degradation can be indicated by vegetation degradation and/or soil degradation. Vegetation degradation is occurring because land was forest at times in the past and non-forest in more recent times. Because of the land</p>	<p>CAR 7 is closed. The step 3b of the methodology has been included.</p> <p>The studies of Leiva (2003); Baltissen (1988); Von Platen (1985) , and, specifically for the project region, Sifuentes (2009) confirm the trend to progressive degradation or steady state</p>

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

to progressive degradation of the land or steady state of the carbon stocks.		<p>use pattern and the pressure on the land, self-encroachment of trees will not occur. This is also confirmed by table 12 which shows that land that has been converted to pastures or agricultural lands remains as such and does not revert back to forest. This trend is confirmed by studies such as Leiva (2003); Baltissen (1988); Von Platen (1985) , and, specifically for the project region, Sifuentes (2009).</p> <p>Hence, once lands are used as agricultural land or pastures, lands are likely to remain in a low carbon state or are subject to further degradation. Indicators of further degradation in the project area are related to soil degradation and soil erosion which can be witnessed in the field through a visual assessment (pictures of the situation in the field are attached to the PDD). The visual assessment shows occurrence of exposed sub-soils and existence of gullies.</p> <p>Moreover, evidence is referenced in the PDD and provided to AENOR.</p>	of the carbon stocks in carbon pools of lands that were deforested in the past and converted to pastures and agricultural lands like lands where the project will be implemented.
CAR 8 However, the titles of the different steps shall be corrected, and all the steps stated in the tool shall be followed.	C.6.1.	<p>Section C.6.1 has been rewritten in version 2 of the PDD and titles have been corrected</p> <p>The PDD identified 892.42 ha as the project area. For all the 892.42 ha, contracts have either been signed with the farmers or contracts are in the final stage of processing.</p>	CAR 8 has been resolved since the final version of the PDD has been corrected as required. All steps have been followed.
CAR 9 Applicable laws and regulations stated in the PDD have to be provided to the validation team. Furthermore, according to the "Tool for the demonstration and assessment of additionality in A/R CDM	C.6.3.2	<p>Section has been updated and short description of relevant laws has been added in the PDD. Copies of the laws have been provided to DOE.</p>	CAR 9 has been resolved since the final version of the PDD has been corrected and appropriate evidence has been provided.

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

project activities" version 02, local policies that have been implemented since the adoption of the COP of the CDM M&P shall not be considered in the analysis			
<p>CAR 10</p> <p>The additionality assessment is not robust and clear to demonstrate the additionality of the project, since there are issues indicated in the PDD version 01 which have to be clarified and or corrected according to the "Guidelines for objective demonstration and assessment of barriers (version 01)", (EB50, annex13) and the Tool for the demonstration and assessment of additionality in A/R CDM project activities" version 02. More specifically:</p> <p>The identified barriers are only sufficient grounds for demonstration of additionality if they would prevent the implementation of proposed project activity. Some of the barriers listed fail to fulfil with this requirement.</p> <p>According to the description provided in the PDD is not possible to categorize the barriers listed into the 3 levels stated in the PDD, i.e. if the identified barriers prevent the implementation of any of the scenarios.</p>	<p>C.6.5.2</p> <p>C.6.5.3</p>	<p>This section has been rewritten in final version of the PDD to clarify that the identified barriers prevent the implementation of the proposed project activity.</p> <p>Barriers listed in the final PDD are the following:</p> <p>Barriers related to local tradition</p> <p>Barriers related to land</p> <p>Technological barriers</p> <p>Investment barriers</p>	<p>CAR 10 has been resolved as credible evidence has been provided. The PDD is updated with references. Barriers and their prohibitive character have been sustained. Beyond this, reforestation rates in the area are very small for small and medium farms as witnessed during the onsite visit.</p>

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

<p>Scenarios analysed don't match with alternatives identified in Sub-step 1a of the PDD.</p> <p>The market barrier analysis for the proposed project activity is based on anecdotal evidence. Transparent and documented evidence has to be provided.</p> <p>According to the above tools and guidelines, the financial barriers described in the PDD should be considered in the framework of the investment analysis.</p> <p>Evidence about the appropriateness of the input values used (techno-economic parameters and assumptions) in the investment analysis shall be provided as well as the spreadsheets used for the calculations shall be submitted to the validation team</p> <p>Technological barriers: PDD description states that they do not prevent the implementation of the proposed project activity.</p>			
<p>CAR 11</p> <p>The date of completion of baseline study and monitoring shall be provided in section C.8 of the PDD.</p>	<p>C.8.1</p>	<p>As per final PDD, the baseline study was completed on 15 July 2011 as quoted in the PDD and it was started in 2005 with the study cost-benefit analysis for the project.</p>	<p>This has been included in section C.8 of PDD. Then, CAR 11 is closed.</p>

<p>CAR 12</p> <ul style="list-style-type: none"> The PDD shall follow all steps of the applicable methodology. With regard to this, in section D.1 shall be included the "Treatment of pre-existing vegetation". In section D.1, step A.1 of the PDD the Ebiomassloss is considered as "significant". Correct it. Equations in section D.1 shall be revised to be in compliance with the methodology at summation and variables Hijt and BHijt (equation 12 and 13 of the first PDD) do not include "year-1". Spreadsheet calculation shall be provided to the validation team. Data sources in 22 of the PDD shall be described in English. In addition, this evidence shall be provided to the validation team in order to verify whether the used values are correctly. 	<p>D.1.1</p>	<ul style="list-style-type: none"> Section D.1 of the PDD has been revised to refer to the guidelines provided by the CDM EB in EB 50, Annex 21. Under these guidelines, GHG emissions from removal of existing vegetation due to site preparation can be considered insignificant for this project. Ebiomassloss has been reviewed. Equations and formulae have been reviewing in compliance with the methodology. TARAM calculation has been provided, and data sources translated to English and provided to AENOR. Table with variables and values applied in the ex-ante estimation of actual net GHG removals by sinks have been corrected to include the correct values for parameters per each stratum. 	<ul style="list-style-type: none"> The treatment of pre-existing vegetation has been addressed in section D.1 f the PDD. Under guidelines of EB50 annex 21, GHG emissions from removal of existing vegetation due to site preparation can be considered insignificant for this project. The typo error detected in step A.1 of section D.1 of the PDD to GSC regarding the significant of Ebiomassloss has been corrected. Moreover, as per methodology since the baseline scenario is degrading land with declining woody vegetation cover Ebiomassloss=0. Different equations and description of parameters have been revised to be in compliance with the methodology. TARAM spreadsheet and data sources used for the calculation have been provided. The table 19 containing the variables and values applied for the ex-ante estimation of actual net GHG removals by sinks has been corrected. Data sources were provided to AENOR. Values have been indicated to be default or estimated or measured. <p>The values of parameters Aikt, Iv,ijt, Dj, BEF1j, and Hijt in table 19 were corrected to be consistent with the corrected area of the each ex-ante strata and also to be consistent with data sources. Thus, CAR 12 is closed.</p>
---	--------------	--	--

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

CAR 13 Section D.2 of the PDD related to the Leakage attributable from sources to the AR/CDM project activities is incorrectly addressed in the PDD.	D.2.1	The following leakage has been addressed in the PDD from the AR/CDM project: Carbon stock decreases due to deforestation caused by displacement of pre-project agricultural crops, grazing and fuel-wood collection activities	The final PDD considers in its section D.2 all leakage attributable from sources to the AR/CDM project activities. They have been quoted in the PDD and analysis in compliance with the methodology and guidance. Then, CAR 13 is closed.
CAR 14 Regarding the monitoring and calculation ex post of actual net GHG removal by sinks, the section E.4 of the PDD shall contain all steps and formulae of the applicable methodology. On the other hand, it shall be included in section E.4 of the PDD the fulfilment of the project activity regarding the item 5.2 "Estimation of the increase in emissions" of the methodology. Table 31 of section E.4.1 of the PDD shall contain all applicable data variable to the project activity in compliance with table E of the methodology.	E.4.1	Section E.4 of the PDD has been updated in compliance with the methodology. Estimation of the increase in emissions has been addressed in the PDD and table in section E.4.1 has been completed in compliance with the methodology.	CAR 14 is closed as all issues requested have been correctly resolved. Section E.4 of the PDD has been updated. Formula and steps of the methodology have been considered in the PDD. The estimation of the increase in emissions has also been considered. According to the technology of the project, biomass burning will not be allowed during site preparation, then, there is not increase in GHG emissions as a result of biomass burning. Finally, table included in section E.4.1 of the PDD has been updated to consider all parameters requested by the methodology for the proposed project activity. Data and variables for monitoring the changes in carbon stock resulting from the project are included to the PDD.
CAR 15 Section E.8 of the PDD shall contain information regarding whether the entity	E.8.1	Section E.8 of the PDD has been updated to include this information.	FONAFIFO has been included as PP in section E.8 of the PDD. CAR 15 is closed.

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

or person applying the Monitoring Plan is a project participant listed in annex 1 of the PDD.			
CL1 Decimal coordinates shall state in the PDD	A.5.1.1	Section A.4.2 of the PDD states the decimals coordinates of project activity and annex 5 also included coordinates of all discrete areas.	The geographic location of the project is 9.37 to 9.67 North Latitude and -83.47 to -83.97 West Longitude (Datum WGS84). It covers 892.42 ha. Annex 5 also details the coordinates of 204 discrete areas. Then, CL1 is closed.
CL 2 The PPs shall demonstrate that for all areas of land planned for the A/R CDM project activity, the control over afforestation or reforestation as required by modalities and procedures for the A/R CDM activity is already established or is expected to be established and, that all areas of land planned for A/R CDM project activity comply with all A/R CDM requirements for validation and registration, except for the control. (Guidance on application of the project boundary, EB44, annex 16). The PPs shall clarify the area under the project boundary as different data are stated throughout the PDD.	A.5.1.2	Guidance of EB44 has been taking into account to define the project boundary. The final area in the PDD is 892.42 Ha which corresponds to the total area already controlled by FONAFIFO at validation. The information of all 204 discrete areas has been included in annex 5 of the PDD.	PPs have corrected the information in the PDD to only include the discrete areas already controlled by FONAFIFO at validation. This way, the area under the Project boundary represents 892.42 Ha which is consistent with the rest of documents provided during the validation process. Thus , CL 2 is closed.

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

CL 3 The corners of polygons will be provided to ANEOR in order to verify whether information included in the PDD is correct.	A.5.1.4	Shapes files have been submitted to AENOR.	CL 3 is closed as the polygons of each discrete area under the Project boundary have been provided. After its cross-check, the information in the PDD is consistent.														
CL 4 In section A.5.3 of the PDD is mentioned that four native species and two non native species will be used in the project activity, however, table 5 in that section is not in parallel with previous information.	A.5.1.8	Section A.5.3 of the PDD and table has been corrected to state the same information.	CL 4 is closed as finally, the Project will use three native species and three non native species. The information is consistent in section A.5.3 and table in this section. <table><tr><th>Tree Species</th><th>TYPE</th></tr><tr><td>Amarillon (<i>Terminalia amazonica</i>)</td><td>native</td></tr><tr><td>Cedro amargo (<i>Cedrela odorata</i>)</td><td>native</td></tr><tr><td>Pilon (<i>Hieronyma alchorneoides</i>)</td><td>native</td></tr><tr><td>Eucalipto (<i>Eucalypus degluta</i>)</td><td>non-native</td></tr><tr><td>Melina (<i>Gmelina arborea</i>)</td><td>non-native</td></tr><tr><td>Teak (<i>Tectona grandis</i>).</td><td>non-native</td></tr></table>	Tree Species	TYPE	Amarillon (<i>Terminalia amazonica</i>)	native	Cedro amargo (<i>Cedrela odorata</i>)	native	Pilon (<i>Hieronyma alchorneoides</i>)	native	Eucalipto (<i>Eucalypus degluta</i>)	non-native	Melina (<i>Gmelina arborea</i>)	non-native	Teak (<i>Tectona grandis</i>).	non-native
Tree Species	TYPE																
Amarillon (<i>Terminalia amazonica</i>)	native																
Cedro amargo (<i>Cedrela odorata</i>)	native																
Pilon (<i>Hieronyma alchorneoides</i>)	native																
Eucalipto (<i>Eucalypus degluta</i>)	non-native																
Melina (<i>Gmelina arborea</i>)	non-native																
Teak (<i>Tectona grandis</i>).	non-native																

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

<p>CL 5</p> <p>The starting date was defined on 01/01/2006 in the PDD submitted to GSC. With regard to this date evidence shall provide to the validation team in order to assess whether the starting date has been defined in compliance with the AR/CDM requirements, as well as the evidence of the main milestones of the project to assess whether CDM was seriously considered in the decision to proceed with the project activity.</p>	B.1.1	<p>The start date has been revised to 1 August 2006 when the first planting occurred. A certification letter by Luis Salazar is provided to the DOE.</p> <p>Other relevant milestones to demonstrate the prior consideration of the CDM is provided in the PDD.</p>	<p>CL 5 is closed. AENOR considers this date (01 August 2006) as valid for establishing the starting date of the project as this hint represents the first plantation in the project. This is the earliest date at which either the implementation of the project or real action begins. This date is before to the contract signature between the farmer and FONAFIFO, n° SJ-02-20-0050-2006.</p> <p>On the other hand, the evidence provided and detailed in the PDD to demonstrate that the CDM was seriously considered in the decision to proceed with the project. Among others, the following documents include the consideration of the carbon financing:</p> <ul style="list-style-type: none"> • Project Idea Note to The World Bank in 2004 is elaborated as a CDM project. • World Bank Finance Document dated in October 2004 mentions that the benefits of CDM are a decisive factor to proceed with the project. • World Bank reports AB1913 and 36084-CR.
<p>CL 6</p> <p>All the applicability conditions are mentioned in the PDD, however further explanations shall be provided and evidence to assess their applicability shall be provided.</p>	C.3.2	<p>Evidence that the project meets the condition of lands to be reforested are severely degraded or remain in a low carbon steady state is provided in section C.5.1 step 3 b. As shown in section C.5.1 step 3 b, the project is implemented on degraded lands which continue to degrade including occurrence of soil erosion and degradation. Hence carbon stocks in soil organic carbon, litter and dead wood can be expected to further decrease in the absence of</p>	<p>Section C.2 of the PDD has been detailed with more information regarding the fulfilment of all conditions by the project. Moreover, the evidence to support the explanations have been provided and quoted in the PDD. Thus, CL 6 is closed.</p>

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

		<p>the project activity.</p> <p>The manuals and guides for reforestation activities which do not contain a reference to the use of flooding irrigation are provided.</p> <p>As per Section A.5.4, site preparation will be limited to making a hole with a tree planting shovel and keeping a circle of 35 cm radius free of weeds around the seedlings. Hence site preparation does not cause significant longer-term net decreases of soil carbon stocks or increases of non-CO2 emissions from soil.</p> <p>Land that will be reforested is owned by small farmers who were not implementing A/R activities on their lands by themselves. Section C.5.1, step 3 (e) and section C.6 show that without the CDM project activity, it is very unlikely that these farmers would have implemented A/R activities.</p>	
<p>CL 7</p> <p>PPs shall include further explanations regarding the impact of the different laws in the project.</p>	C.5.3	<p>Costa Rica has several policies that influence land use. These include:</p> <ul style="list-style-type: none"> a. The Political Constitution (1949), b. The Soil Use, Management and Conservation Law (No. 7779, 1998), c. The Forestry Law (No. 7575, 1996), d. The Biodiversity Law (No 7788, 1997), e. The National Plan of Forestry Development (2001-2010), <p>Further explanations have included in the PDD for the impact of all laws in the project, especially for the Forestry Law No. 7575 which provides the legal and regulatory basis to contract landowners for the environmental services provided by their lands, and establishes a financing mechanism for this purpose. This law empowers to National Forestry Financing Fund (FONAFIFO) to issue contracts for the environmental services provided by privately owned forest ecosystems (known as the PSA program)</p>	<p>The impact of laws in the project has been discussed in the PDD.</p> <p>Most of these laws only provide incentives that promote good practises. None of these policies forces land owners to change their current land use that leads to degradation. Forestry Law No. 7575 can potentially have an effect on land use; however, the incentives provided by the forestry law No. 7575 are not sufficient to result in land use changes in area of the proposed A/R CDM project activity.</p> <p>On this matter, the PP has included in the PDD data which evidence the lack of impact that the PSA program has had on the project area prior to the project start. PSA forest plantations were implemented in only 136.9 hectares out of</p>

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

			<p>117,321 hectares in the project region of Perez Zeledon County, totalling 0.1% of the project region from 1997 to 2005. Also a map in the PDD shows that the policies have had a negligible effect on the project area.</p> <p>Thus, the policies and laws have not significantly impacted the land use in the boundary of the proposed A/R CDM project activity as the PDD states. Hence CL 7 is closed.</p>									
<p>CL 8</p> <p>PPs shall provide in section C.5.1 step 3 further explanations related to whether the land use/cover in the boundary would not change and/or is likely to lead to further degradation.</p>	<p>C.5.3</p>	<p>Section C.5.1 steps 3 e) and 3 d) have been revised to correctly addressed the issues requested in compliance with the applicable methodology.</p> <p>The scenarios identified are:</p> <table><tr><td></td><td>North Sub-region</td><td>Valley and South Hillside Sub-regions</td></tr><tr><td>Scenario 1</td><td>coffee, cattle farming (meat), cattle farming (dairy), limited agricultural crops (fruits and vegetables)</td><td>coffee, cattle farming (meat), agriculture of subsistence (grains), cattle farming (dairy), agriculture of subsistence (fruits and vegetables), ,</td></tr><tr><td>Scenario 2</td><td>Limited cash crop agriculture (grains),</td><td>cash crop agriculture (grains), commercial horticulture,</td></tr></table>		North Sub-region	Valley and South Hillside Sub-regions	Scenario 1	coffee, cattle farming (meat), cattle farming (dairy), limited agricultural crops (fruits and vegetables)	coffee, cattle farming (meat), agriculture of subsistence (grains), cattle farming (dairy), agriculture of subsistence (fruits and vegetables), ,	Scenario 2	Limited cash crop agriculture (grains),	cash crop agriculture (grains), commercial horticulture,	<p>PPs have updated the section C.5.1 step 3 of the PDD to provide further explanation and more evidence to support the comments in this regard.</p> <p>As confirmed during the site visit with the relevant stakeholders of the project, the alternatives scenarios identified are credible. The attractiveness of these scenarios for the farmers is explained in the PDD. The evidence provided and comments gathered during the site visit indicate the preference and constraints to the land use change other than the continuation of the current practise due to barriers to implement reforestation or other agriculture practises such as grains. As a result, the current situation would lead to further degradation and carbon stock decrease in absence of the project activity. Hence, CL 8 is closed.</p>
	North Sub-region	Valley and South Hillside Sub-regions										
Scenario 1	coffee, cattle farming (meat), cattle farming (dairy), limited agricultural crops (fruits and vegetables)	coffee, cattle farming (meat), agriculture of subsistence (grains), cattle farming (dairy), agriculture of subsistence (fruits and vegetables), ,										
Scenario 2	Limited cash crop agriculture (grains),	cash crop agriculture (grains), commercial horticulture,										

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

		<table><tr><td>Scenario 3</td><td>agroforestry systems, forest plantations</td><td>Agroforestry systems, forest plantations</td></tr></table> <p>Scenario 1 is the current situation and it is not prevented by current laws. Scenario 2 is low attractive because of the high investment costs, then it is not a feasible option for farmers. Current land use policies do not actively promote or prevent this scenario and Scenario 3 is the proposed project activity without the CDM. As discussed in section C.6 of the PDD, the small and medium farmers in the project area face significant barriers for the implementation of reforestation activities.</p> <p>Based on the analysis provided in the PDD, scenario 1 is therefore considered as the most likely baseline scenario for each stratum and therefore the current land use would not change. As shown in step 3 (b) in the PDD, this scenario would lead to further degradation and carbon stock decrease and a change can only occur as a result of the implementation of the proposed A/R CDM activity.</p>	Scenario 3	agroforestry systems, forest plantations	Agroforestry systems, forest plantations	
Scenario 3	agroforestry systems, forest plantations	Agroforestry systems, forest plantations				
CL 9 The ex-ante stratification in section C.4 of the PDD shall be carried out according to the applicable version of the methodology. On the other hand, section C.5.2, step 4, of the PDD gathers different baseline strata compared with ones identified in section C.4 of the PDD. Thus, this issue has to be clarified.	C.5.4	Sections 4 and 5 of the PDD have been corrected to be consistent. Ex-ante stratification has been carried out according to the applicable methodology.	The final ex-ante stratification has been performed according to climatic differences and the landscape topography. Thus, CL9 is closed.			
CL 10 In C.6.5 the existence of barriers was determined by means of surveys among	C.6.5.1	This approach has been discarded in the final PDD	CL 10 has been resolved since the final version of the PDD discarded the use of surveys as means of demonstration and assessment of			

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

experts and farmers. List of surveyed experts and institutions as well as the surveys have to be provided to the validation team			barriers. Thus, CL 10 is closed.
<p>CL 11</p> <p>In accordance with the Tool for the demonstration and assessment of additionality in A/R CDM project activities" version 02, the PP shall provide an analysis to which extent similar forestation activities have implemented previously or are currently underway in the geographical area of the proposed project activity and documented evidence and ,where relevant, quantitative information have to be provided.</p> <p>Evidence about the essential distinctions between the proposed project activity and the other forestation activities has to be provided.</p> <p>Clarification and evidence about the reasons why the proposed project activity cannot use benefits from the PSA program.</p>	C.6.6.1	<p>Data on the implementation of forest activities prior to the project has now been provided in table 13 of the PDD.</p> <p>Under the ESP program, a small farm is defined as <20 ha while a medium farm is defined as 20-100 ha and the general analysis of the PSA program conclude that large farmers and forest owners are disproportionately represented among program participants which made PSA program penetration in the region to be residual (0.1%).</p>	<p>CL 11 has been resolved as credible evidence has been provided. The PDD is updated with references and analysis of forestation activities in the geographical area of the proposed project activity demonstrating that the project cannot be considered as common practise.</p>

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

<p>CL 12</p> <p>Spreadsheet for determining the baseline net GHG removal by sinks shall be provided. Moreover, the used nomenclature for Aikt and Iv,ijt parameters in baseline calculation in section C.7 of the PDD do not match with the strata and species defined in the PDD. The same one shall be clarified for parameters in the actual net removals by sinks. Thus, this issue shall be clarified.</p>	<p>C.7.1</p>	<p>TARAM calculations have been provided to AENOR.</p> <p>Using the approach provided in the selected approved methodology, and the guidelines from EB 46 Annex 16 (Guidance on conditions under which the change in carbon stocks in existing live woody vegetation are insignificant) the PDD has been reviewed.</p> <p>It was determined that the change in carbon stocks in the woody vegetation that might occur in the baseline scenario are insignificant and therefore can be accounted for as zero as per condition (iii) in the guidance which states that the change in the carbon stocks might be considered zero if: "Growth conditions are already, or are expected to become within 10 years (e.g., due to on-going land degradation), such that biomass in existing woody vegetation is expected to become static or to decline".</p> <p>The following studies clearly specified in the PDD: Leiva (2003); Baltissen (1988); Von Platen (1985), and, specifically for the project region, Sifuentes (2009) show that the baseline land use system in the region ensures that lands will keep degrading or remain in a low carbon steady state and that the overall vegetation will not increase.</p> <p>The baseline net greenhouse gas removals by sinks are expected to be negative due to ongoing degradation. Under these circumstances, and considering the Guidance from EB 46 Annex 16, it is conservatively assumed that baseline net greenhouse gas removals by sinks is zero:</p> <p>$CBSL = 0$ for all $t^* \leq tcp$</p> <p>Moreover, nomenclature used for different parameters in the ex-ante actual net anthropogenic removals by sink in table 19 of the PDD has been reviewed to correctly trace it.</p>	<p>Sections C.2 and C.5 of the PDD show that lands to be reforested are degraded lands, subjected to pre-project grazing activity or agricultural crop activity. This continued land use ensures that lands are still degrading or remaining in a low carbon steady state and that the vegetation will not reach the threshold for the national definition of forest due to ongoing cycles that are part of the land use system in the region. Under these conditions the baseline net greenhouse gas removals by sinks are expected to be negative due to ongoing degradation. Then, as per the approach of the guidance from EB46 Annex 16 as studies provided demonstrated the fulfilment of condition (iii), it is assumed that baseline net greenhouse gas removals by sinks are zero. Thus, CL2 is closed.</p>
---	--------------	---	--

<p>CL 13</p> <p>Regarding information in table 19 of the PDD for GSC related to the ex-ante baseline net GHG removals by sinks the following issues shall be clarified:</p> <ul style="list-style-type: none"> The data sources used for the different parameters shall be provided (Dj, Aikt,...). It shall be detailed in table 19 of the PDD for GSC, all values of parameter $I_{v,ijt}$, for all species j and all strata i. As well as providing to the validation team the used values and data sources. It shall be stated in table 19 in column "comment" if values applied are measured, estimated or default. <p>The values of current annual increment given in table 3.1 of annex 3 do not match with values provided in section C.7 of the PDD. Thus, this issue shall be clarified</p>	<p>C.7.7</p>	<p>Section C.7 has been reviewed to include the following:</p> <p>As per AR-AM-004 Version 04, the changes in stocks of the living vegetation (above-ground and below-ground biomass) do not include the biomass of herbaceous vegetation. Therefore:</p> $C_{BSL} = \Delta C_{B,LB}$ <p>Where:</p> <p>C_{BSL} =baseline net greenhouse gas removals by sinks; tonnes CO2-e</p> <p>$\Delta C_{B,LB}$ =baseline sum of the changes in living biomass carbon stocks (above- and below-ground); tonnes CO2-e.</p> <p>As shown in section C.2 and C.5 of the PDD, lands to be afforested or reforested are degraded lands, subjected to pre-project grazing activity or agricultural crop activity. This continued land use ensures that lands are still degrading or remaining in a low carbon steady state and that the vegetation will not reach the threshold for the national definition of forest due to ongoing cycles that are part of the land use system in the region.</p> <p>The baseline net greenhouse gas removals by sinks are therefore expected to be negative due to ongoing degradation. Under these circumstances, and considering the guidance from EB46 Annex 16 is conservatively assumed that baseline net greenhouse gas removals by sinks is zero:</p> $CBSL = 0 \text{ for all } t^* \leq tcp.$ <p>Therefore, table 19 of the PDD for GSC with variables and data for ex-ante baseline net GHG removals by sinks has been removed.</p> <p>Since Annex 3 did not provide new information compared to what was already discussed in the PDD, information in this annex has</p>	<p>As per evidence provided by PPs and explanations included in the PDD and using the conservative approach of the guidance it is assumed that CBSL = 0.</p> <p>Thus, CL 13 is closed.</p>
--	--------------	--	--

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

		been removed.	
CL 14 However it shall be clarified why GHGE is stated in section D.1 to only account the non-CO2 GHG emissions, when applicable methodology refers to non-CO2 and CO2.	D.1.7	This issue has been corrected in Section D.1 of the PDD.	The PPs have corrected the PDD to consider the $GHGE = \text{Sum of the increases in GHG emissions by sources within the project boundary as a result of the implementation of an A/R CDM project activity; t CO}_2\text{-e.}$ Thus, CL 14 is closed.
CL 15 <ul style="list-style-type: none"> The guidelines and tool shall be applied to assess LK conv-crop and LK conv-graz, Applicability conditions for assessing LKfuelwood shall be applied in the PDD to be in compliance with the applicable methodology. Leakage caused by the increased use of wood posts for fencing shall be considered in the PDD. Section D.2 of the PDD refers to table 2 of the PDD regarding the average cattle heads per ha= 0.6 animals. However, that table shows a mean of 0.7 animals/ha. 	D.2.2	References to guidance have included in the PDD. The applicability of leakage has been assessed in compliance with the guidance. Leakage due to fuel wood has been carried out in compliance with the methodology and leakage due to use of wood for fencing also considered in the PDD. The inconsistency has been corrected to be 0.64 animals	The PDD has been corrected to include the treatment of leakage in section D.2 as per methodology and guidance of EB51 annexes 13 and 14. Formulae have been included and assumptions justified. Regarding leakage due to the use of non-renewable wood for fencing is considered negligible as per EB 44, paragraph 37. This information has been included in the PDD. Regarding leakage for fuel wood, the formula of methodology has been included in the PDD and its applicability also assessed and justified. Finally, according to CORFOGA 200 cattle census provided the average cattle heads per Ha is 0.64 animals which has been considered throughout the PDD. Thus, CL 15 is closed as all issues requested have been clarified.

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

CL 16 The Quality assurance and quality control shall be included in the introduction of section E "Monitoring Plan" of the PDD.	E.1.1	Sections E.1.2, E.7 and annex 4 of the PDD have been modified to include further information on QA/QC.	The PPs have included further detailed information in these sections of the PDD regarding the QA/QC of the project, hence CL16 is closed. FONAFIFO will be responsible for all activities of the project.
CL 17 It shall be specified in section E.1.1 of the PDD that monitoring activities shall be conducted in the first three years after planting as the applicable methodology gathers.	E.1.2	Section E.1.1 of the first PDD states this issue.	CL 17 is closed as first paragraph of the section E.1.1 clearly states that monitoring activities will be carried out in the first three years after planting.
CL 18 Section E.1.1 of the PDD "forest management activities" to be monitored shall contain the described and applicable practises in the methodology to the project activity such as: thinning, planting, cleaning and site preparation.....and their corresponding data: date, location, area, tree species, volumes or biomass removed, etc. Thus, table 24 shall be updated.	E.1.3	Section E.1.1 has been update to include the requested information by AENOR.	Section E.1.1 has been corrected to include further information regarding the parameters to be collected for monitoring of forest establishment and management. Then CL 18 is closed.
CL 19 Data used in tables 26 and 27 of the first	E.2.2	Winrock spreadsheet calculation has been provided to the AENOR team.	The spreadsheet calculation for a targeted precision level of $\pm 10\%$ of the mean at 90%

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENORAsociación Española de
Normalización y Certificación

PDD to calculate total sample size shall be provided to the validation team. To clarify the value of 7% as allowable sample error.		PDD has been updated as per methodology to consider a 10%. Also, Calculation was updated due to changes in total area under the project and the new stratification.	confidence level has been provided. Tables in section E.2 of the PDD have been corrected as a result of the final area under the project boundary and the ex-ante stratification of the project. The total sample size will be 77. Thus, CL 19 is closed.
CL 20 It shall be included in the monitoring frequency that first verification will take place close to the end of the first commitment period as the methodology requires. On the other hand, it shall be clarified if to carry out the monitoring and verification prior to any thinning or harvesting activities is to avoid the peaks in carbon stocks, if not, it shall be detailed in the PDD how it will fulfil with this requirement.	E.2.5	Section A.9 of the PDD has been updated to include a first expected verification in 2012. Technology description of the project scheduled the harvesting and thinning activities to avoid the 5 year verification cycle.	Finally, the PDD consider a first verification in 2012 and subsequently verification activities every 5 years after the first verification. On the other hand, in section A.5.4 of the PDD are detailed the harvesting and thinning activities. Based on frequency of rotation and thinning, the time of monitoring and verification shall not coincide with the peaks in carbon stocks. Then CL 20 is closed.
CL 21 Information about the necessity of E.I.A shall be provided in the PDD	F.1.2	Section F.2 has been updated including the national regulation related to needs for E.I.A	The PDD has been updated. According to the Decree 31849 detailed in the PDD an E.I.A is not required for the proposed project activity. Hence, CL 21 is closed.
CL 22 Impacts on Water and Fauna have been scored as negative due to the project activity. For these cases, it shall be clarified whether these negative impacts	F.1.3	Section F of the PDD has been updated to clarify this issue. No significant negative (evaluated in the matrix with score -3) impacts have been identified, however an environmental Monitoring Plan is planned and remedial measures for risks will be implemented as described in section F3 of the PDD.	Further explanations have been included in Section F of the PDD. Impacts in water and fauna are negative in short term and not significant due to friendly forestry techniques such as site preparation manually and based on

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

are significant.			tree hole, proper choice of forestry species, seedling quality due to COOPEAGRI nursery, appropriate species spacing,.....This environmental friendly techniques will lead to a positive impact in water and fauna in the long term as a result of the project activity. Hence, CL 22 is closed.
CL 23 Evidence about the stakeholder consultation process shall be provided to the validation team.	H.1.1	The appropriate evidence have been provided to the AENOR team	Evidence provided confirms the information included in the PDD. During the site visit, farmers and people of COOPEAGRI confirmed that there was a socialisation of the project before the signature of the first contracts with farmers. Thus, CL 23 is closed.
CL 24 Further information shall be provided in the PDD related to the media used for the stakeholder process.	H.1.2	Section H of the PDD has been updated to include further information	Appropriate media used in the stakeholder process was included in the PDD as requested. Meetings and a survey were used. Thus, CL 24.

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENOR

Asociación Española de
Normalización y Certificación

Table 3 Unresolved Corrective Action and Clarification Requests (in case of denials)

Clarifications and / or corrective action requests by validation team	Id. of CAR/CL	Explanation of Conclusion for Denial
n/a	n/a	n/a

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

Annex II: CERTIFICATE OF QUALIFICATION REPORT

Subject: Validation and Technical Review Team for "Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)"

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039.07, and in relation with the validation process of the above mentioned project activity:

Name: **José Luis Fuentes Pérez**

CDM Chief Validator: Yes

CDM Validator: Yes

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: Yes

Technical areas related with the project activity: TA14.1: Forestry



José Luis Tejera Oliver
CDM Operational Director

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

AENOR

Asociación Española de
Normalización y Certificación

Subject: Validation and Technical Review Team for "Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)"

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039.07, and in relation with the validation process of the above mentioned project activity:

Name: **Marcelino Pellitero Martínez**

CDM Chief Validator: Yes

CDM Validator: Yes

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: Financial Expert

Technical areas related with the project activity: --



José Luis Tejera Oliver
CDM Operational Director

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

Subject: Validation and Technical Review Team for "Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)"

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039.07, and in relation with the validation process of the above mentioned project activity:

Name: **Manuel García Rosell**

CDM Chief Validator: No

CDM Validator:

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: Yes

Technical areas related with the project activity: TA14.1: Forestry



José Luis Tejera Oliver
CDM Operational Director

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

Subject: Validation and Technical Review Team for "Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)"

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039.07, and in relation with the validation process of the above mentioned project activity:

Name: **Mercedes García Madero**

CDM Chief Validator: Yes

CDM Validator: Yes

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: No

Technical areas related with the project activity: --



José Luis Tejera Oliver

CDM Operational Director

Subject: Validation and Technical Review Team for "Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI Project)"

Validation Protocol AR-AM0004

Project Title: Carbon Sequestration in Small and Medium Farms in the Brunca Region,

Costa Rica (COOPEAGRI Project)

Date of Completion: 24/09/2012

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039.07, and in relation with the validation process of the above mentioned project activity:

Name: **Jose Antonio Gesto Vilacoba**

CDM Chief Validator: Yes

CDM Validator: Yes

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: Financial Expert

Technical areas related with the project activity:--



José Luis Tejera Oliver

CDM Operational Director