

REGENERATING COLOMBIAN COFFEE ECOSYSTEMS PROJECT



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Summary:

“Regenerating Colombian Coffee Ecosystems” is a grouped reforestation project initiated in 2014 in the Colombian Northern Andean Montane Forests, where watersheds and coffee lands are severely eroded and biologically degraded.

The project aims to implement agroforestry system within coffee plantations and reforestation activities in degraded plots. The project is implemented with small-scale producers associated to the National Federation of Coffee Growers of Colombia, (FNC, for its acronym in Spanish) located in Colombian department of Cauca and Nariño.

The first instances of the grouped project intend to generate 284,262 t CO₂e over the 40 years crediting period.

The project employed approved CDM Afforestation and Reforestation methodology AR-AMS0007 version 03.1.

ECOCERT has conducted the validation audit following a request from PUR Projet, the project proponent (PP). The purpose of the audit was to document the assessment of the conformance of the Regenerating Colombian Coffee Ecosystems project with the rules, requirements and conditions of the Verified Carbon Standard VCS, the applied methodology, and to ensure that the documents, data and methods used are reliable and of sufficient quality to support the assertions in the project description document.

To conduct the validation audit ECOCERT realized a pre-validation assessment consistent in a remote desk audit of the Project Document (PD) and supporting information, a field visit and stakeholder interviews process and a documentary review. The Project Document was validated against following criteria: ISO 14064-2:2006; Verified Carbon Standard Version 3, v3.7; VCS Program Guide Version 3, v3.7; Agriculture, Forestry and Other Land Use (AFOLU) Requirements VCS Version 3, v3.6; VCS AFOLU Non-Permanence Risk Tool v3.3 Oct 2016; A/R CDM methodology AMS 0007 v 3.1.

Following the results of validation activities described above 12 CARs, 4 CLs and 2 FARs were identified.

The revised final documents submitted to ECOCERT auditors for review resulted in the closure of the initial 12 open CARs from the preliminary validation report. All CLs were satisfied. The validation team has no restrictions or uncertainties with respect to the compliance of the project with the VCS validation criteria.

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1 INTRODUCTION

1.1 Objective

The purpose of this report is to document the assessment of the conformance of the Project Regenerating Colombian Coffee Ecosystems with the rules, requirements and conditions of the Verified Carbon Standard VCS, the applied methodology, including the procedure for the demonstration of additionality specified in the validation standards and to ensure that the documents, data and methods used are reliable and of sufficient quality to support the assertions in the project description document

The project is developed by PUR Development Pte. Ltd, a French based company hereinafter referred to as PUR Projet or the Project Proponent, with the local guidance and support of the Federacion Nacional de Cafeteros (FNC). The report presents the findings of the audit process and the assessment of the Project document and project proponent system and performance against the applicable standard.

1.2 Scope and Criteria

The scope of this validation is:

- To document and assess the conformance of the project with:
 - the rules, requirements and conditions of the Verified Carbon Standard VCS;
 - the applied methodology, including the procedure for the demonstration of additionality specified in the validation standards.
- To assess the likelihood that implementation of the planned GHG project will result in the GHG emission reductions and/or removal enhancements as stated in the PD
- To ensure that the documents, data and methods used are reliable and of sufficient quality to support the assertions in the project description document.

The Project were verified against following criteria:

- ISO 14064-2:2006
- Verified Carbon Standard Version 3, v3.7 June 2017
- VCS Program Guide Version 3, v3.7 June 2017
- VCS Program Definitions v. 3.7 June 2017
- Agriculture, Forestry and Other Land Use (AFOLU) Requirements VCS Version 3, v3.6 June 2017
- VCS AFOLU Non-Permanence Risk Tool v3.3 Oct 2016
- Applicable VCS Program Updates
- Applicable VCS Association Policy Announcements
- CDM methodology used for project activities: AR-AMS0007: A/R Small-scale Methodology - Afforestation and reforestation project activities implemented on lands other than wetlands version 03.1.

1.3 Level of Assurance

The eligibility and likeliness of the GHG Project to result in the asserted GHG offsets will be validated to a reasonable level of assurance. A positive validation statement reasonably assures that the GHG project is eligible and likely to result in the asserted GHG assertion and that data and information supporting this assertion is materially correct and prepared in accordance with the VCS Standard Version 3.

1.4 Summary Description of the Project

The Regenerating Colombian Coffee Ecosystems project is a grouped afforestation and reforestation project initiated in 2014 in the Colombian Northern Andean Montane Forests, where watersheds and coffee lands are severely eroded and biologically degraded.

The project aims to implement an agroforestry system within coffee plantations and reforestation activities in degraded plots. The project is implemented under the global supervision of PUR Projet, the project proponent, with the local guidance of the National Federation of Coffee Growers of Colombia (FNC, for its acronym in Spanish). The project participants are small-scale producers associated to the FNC. The FNC provides technical assistance and support through its technical teams. Farmers receive plants and training on forestry and agroforestry techniques to ensure the sustainability of the project. The project is located in the Colombian departments of Cauca and Nariño.

The first instances of the grouped project intend to generate 284,262 t CO₂e over the 40 years crediting period.

The project employed approved CDM Afforestation and Reforestation methodology AR-AMS0007 version 03.1 (doc. Ref. 27).

2 VALIDATION PROCESS

2.1 Method and Criteria

As a first step of the validation assessment a desk review of the Project Description (Doc. Ref. 01), the Non-Permanence Risk Report (doc. ref. 04) and the Excel Workbook on GHG calculations (Doc. Ref 02, 03) was conducted from 23 to 26 May 2017. Then a field visit was conducted from 5 to 9 June 2017 to realize a document review of additional information, make interviews with stakeholders and visit the parcels from the first instances participating in the project. Finally, a telephonic interview with representatives from the Colombian Ministry of the Environment Climate Change Unit was conducted the 21 June 2017. The resolution of outstanding issues and the issuance of the validation report and validation representation closed this activity

The validation of the project and the GHG emissions and removals estimations included the following assessment activities:

- Review of the non-permanence risk assessment and other relevant documentation such as Standard Operating Procedures;
- Review of carbon calculation spreadsheet
- Assessment of Project boundaries and the stand information using a GPS with previously uploaded geographic information.

- An assessment of the implementation and operation of the proposed project activity through visual inspection and through interviews with the project proponent's staff;
- Confirmation of pre-project situation;
- Confirmation of the applicability of the methodology.
- Interviews with project participants (farmers) on stakeholder involvement, baseline and community benefits;
- Interviews with local and national authorities on regulatory requirements, land ownership, common practice and additionality;

2.2 Document Review

During the validation process, a desk review of the PD version 1.0 dated 28 April 2017 (doc.ref.01) and all additional documents, information and data to identify all issues relevant to the project related to implementation, GHG estimation, non-permanence risk analysis and project boundaries were conducted by ECOCERT auditors.

Three document reviews were conducted until the date of present report during the field visit, from 5 to 9 June 2017. The first document review took place at FNC main headquarters located in Bogota the 5 June. Subsequently, two document reviews were also conducted at the FNC's and the project's offices located in the municipios of La Sierra and El Tambo.

Some information, such as spread sheet data on CO2 calculations, was completely reviewed. When a large number of documents supporting one particular issue was available, as in the case of records of farmers involved in the project or geodetic polygons, a representative sampling was checked. Following table shows the list of all documents reviewed during the audit.

Following table shows the list of all documents reviewed during the audit

Ref.	Title, Author(s), Version, Date	Electronic Filename
01	<i>Pur Projet. Regenerating Colombian Coffee Ecosystems Project - Community Agroforestry Project In Colombia With Small-Scale Farmers. PD V1, Dated 28.04.17 and updated version 2.0 from 25.04.2018</i>	<i>PDD Cauca and Narino Agroforestry Project v1.0.pdf</i> <i>PDD Cauca and Narino Agroforestry Project v2.0.pdf</i>
02	<i>Pur Projet. GHG Project Calculations workbook version 1.0 and updated version 3.0 from 25.04.2018</i>	<i>VCS Colombia_GHG calculations</i> <i>VCS Colombia_GHG calculations v. 3.0</i>
03	<i>Pur Projet. Plantation registry.</i>	<i>Colombia_Consolidated registry Certification_v1.1.xlsx</i>
04	<i>Pur Projet. Non-Permanence Risk Report version 1.0 dated from 23.05.2017 and updated version 2.0 dated from 25.04.2018</i>	<i>Colombia Non-Permanence Risk Report - v1.0.pdf</i>
05	<i>VCS risk report calculation tool</i>	<i>Colombia Risk Report Calculation Tool - v1.0.xls</i>
06	<i>Pur Projet. COLOMBIA - Agroforestry Project - Project Business Plan dated from 24.03.2017</i>	<i>Business Plan Colombia PUR v1.0.xls</i>
07	<i>Pur Projet. Planificacion actividades FNC 2016. 26.12.2015</i>	<i>SAMPLE - Plan de actividades 2016 - COL .xlsx</i>
08	<i>Pur Projet. Planificacion actividades FNC 2016. 14.09.2016</i>	<i>Planeacion Actividades Proyecto Agroforesteria.xlsx</i>
09	<i>Pur Projet. KML files</i>	<i>Cauca W1.kmz; Cauca W2.kmz; Narino W1.kmz</i>
10	<i>Pur Projet. Agreements signed between Pur Projet and the nursery Corsavida.</i>	<i>Contrato Corsavida PP - 2014 - signed.pdf</i> <i>Contrato Corsavida PP - 2015 - signed.pdf</i> <i>Contrato Corsavida PP - 2016 - signed.pdf</i>
11	<i>Pur Projet. Agreements signed between Pur Projet and the nursery Asprogaleras.</i>	<i>Contrato 2015 - Vivero ASPROGALERAS v4.0 - signed.pdf</i> <i>Contrato 2016 - Vivero ASPROGALERAS v1.0 - signed.pdf</i>

Ref.	Title, Author(s), Version, Date	Electronic Filename
12	PUR Projet – Nespresso. 2006. Service Level Agreement for the implementation of the Carbon Insetting Program	SLA NN Pur Alliance 2016-2017_signed PP NN (1).pdf
13	Pur Projet – Nespresso – Rainforest Alliance; 2013. MoU for the Development of the Ecosystems Management Program	MoU Ecosystem Management Signed.pdf
14	Pur Projet – FNC. 2015. Convenio de Plantación de Arboles CN 2015-0109.	CONTRATO CN-2015-0109.pdf
15	Pur Projet – FNC. 2016. Convenio Marco de Plantación de Arboles CN 2016-0440.	CN 2016-0440 Acuerdo 2016 - 2018 Firmado.pdf
16	Nespresso. 2016. AAA Shared Commitment. Nespresso AAA Sustainable Quality™ Program. Version 2	AAA Shared Comirment 2016 Version 2 Sin firmas.pdf
17	Pur Projet – Nespresso – FNC. 2016. Proyecto Agroforestería Módulo I. Guía metodológica para socialización e inducción temática.	Módulo_I- ECAS - PUR.pdf
18	Pur Projet – Nespresso – FNC. 2016. Proyecto Agroforestería Módulo II. Guía metodológica para capacitación en siembra agroforestal	Módulo III- Pur Project.pdf
19	Pur Projet – Nespresso – FNC. 2016. Proyecto Agroforestería Módulo III. Guía metodológica para capacitación en poda y mantenimiento forestal	Módulo III- Pur Project.pdf
20	FNC. 2017. Cauca Action Plan Master File	Cauca Action Plan Master File 2017.xlsx
21	FNC. 2017. Nariño Action Plan Master File	Nariño Action Plan Master File 2017.xlsx
22	Rivas, Martha. 2016. RMC Consultoría independiente. Escuelas de Campo de Agricultores PLUS (ECAS+) Taller de Formación de Facilitadores (F de F) INFORME DEL EVENTO Cauca	ToT - Informe Cauca (07042016).pdf
23	Rivas, Martha. 2016. RMC Consultoría independiente. Escuelas de Campo de Agricultores PLUS (ECAS+) Taller de Formación de Facilitadores (F de F) INFORME DEL EVENTO Nariño	ToT - Informe Nariño (29032016).pdf
24	Federacion Nacional de Cafeteros - Pur Projet - Nespresso. 2017. Proyecto Agroforestería Nespresso Colombia. Procedimientos para el Registro de Información y Control de Calidad.	2017.02 Data Quality - Proyecto Agroforesteria NN Colombia v0.1.pdf
25	Delgado Daniel. 2017. Proyecto Agroforestería AAA Pur Projet FNC. Pwpt	PPT Daniel D Proyecto Agroforestería AAA Pur Projet FNC 2017-VCS .pdf
26	Villota Oscar. 2017. Presentación proyecto de agroforestería departamento de Nariño. Pwpt	Presentación proyecto de agroforestería departamento de nariño.pdf
27	A/R AMS0007 v. 3.1. Afforestation and reforestation project activities implemented on lands other than wetlands	https://cdm.unfccc.int/methodologies/DB/J6ZHLX1C3AE/MSZ52PWIII6D2AOJZUB
28	Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/RCDM project activities v4.2	https://cdm.unfccc.int/methodologies/ARmethodologies/tools/ar-am-tool-14-v4.2.pdf
29	Estimation of non-CO2 GHG emissions resulting from burning of biomass attributable to an A/R CDM project activity v.4.0	https://cdm.unfccc.int/methodologies/ARmethodologies/tools/ar-am-tool-08-v4.0.0.pdf
30	Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity v.2.0	https://cdm.unfccc.int/methodologies/ARmethodologies/tools/ar-am-tool-15-v2.0.pdf
31	Tool for estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities v.1.1	https://cdm.unfccc.int/methodologies/ARmethodologies/tools/ar-am-tool-16-v1.1.0.pdf
32	VCS Association. VCS Standard version 3 (v.3.7)	http://verra.org/wp-content/uploads/2018/03/VCS_Standard_v3.7.pdf
33	VCS Association. VCS AFOLU Requirements. (v3.6))	http://verra.org/wp-content/uploads/2018/03/AFOLU_Requirements_v3.6.pdf
34	VCS Association. VCS AFOLU Non Permanence Risk Tool v3.3	http://verra.org/wp-content/uploads/2018/03/AFOLU_Non-Permanence_Risk_Tool_v3.3.pdf
35	IPCC 2006. Guidelines for National Greenhouse Gas Inventories, Volume 4 AFOLU	https://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.html

Ref.	Title, Author(s), Version, Date	Electronic Filename
36	Pur Projet and FNC framework for the implementation of the project	1607 - Convenio Marco FNC PP - signed
37	FNC & PP. Contractual agreement for Project participants	Ficha 3 - Contrato de compromiso forestal Colombia FNC - PP - v2.0
38	Collaboration agreement between FNC and Pur Projet for wave 3 of Project plantations	PDL_FNC_Wave 3_PC_20160101_SIGNED
39	Pur Projet. Project area kml file	Grouped Project Area – Regenerating Colombian Coffee Ecosystems.kml
40	Adaptive Management Plan Documentation	1603_Reporte_FLPMeeting2015_ES.pdf 1609 - Convenio Marco de Cooperación UN PP - signed.pdf 2016.02.IWM Program_signed.pdf 160804 - Acta reunion V2020 - Colombia .pdf 170315 Informe Learning Meeting 2017 - Retroalimentación asistentes (1) (1).pdf RB_UNESCO_Agenda_Bogota_meeting_june2016.pdf Monthly Call Nespresso – PUR Projet_1704.11.pdf Nespresso Program Guidebook 2016.pdf SLA NN Pur Alliance 2016-2017_signed PP NN.pdf 1509 - Agenda visita Nariño - Solidaridad.pdf 140924 Presentación reunión Popayan.pdf 150310 Acta de reunión FLP-Pur Projet.pdf 150828 FLPs feedback FLP-PUR.pdf 150924 Informe visita de campo Nariño FLP Pur Projet.pdf 160513 National Coordinator Feedback 2015-Pur Projet (1).pdf 170316 Acta visita de campo y cierre La Sierra - Cauca. (2).pdf 1602 - FNC - Propuesta de desarrollo OLA 2 Nariño .pdf 1607 - Reporte Reunion Mitad de año FNC PROYECTO AGOFORESTERIA COLOMBIA (3).pdf 2017.01 Reunion planeacion - Proyecto Agroforesteria FNC.pdf 160120 - Acta reunion PP-FNC Plan 2016 - VF.pdf Plan de Recomendaciones Siembra - Oficio.pdf Plegable compriso Forestal (1).pdf Informe de causas de mortalidad de Ola 1 y Ola 2 en Cauca Proyecto de Agroforestería AAA.docx Informe de causas de mortalidad de Ola 2 en Nariño Proyecto de Agroforestería AAA.docx
41	Gobierno de Colombia, 1993. Ley 99, Ley General Ambiental de Colombia. Diario Oficial No. 41.146, de 22 de diciembre de 1993	http://www.oas.org/dsd/fida/laws/legislation/colombia/colombia_99-93.pdf
42	Decreto 2811 de 1974 "Por el cual se dicta el Código Nacional de Recursos Naturales Renovables y de Protección al Medio Ambiente"	https://rds.org.co/es/recursos/decreto-2811-de-1974-por-el-cual-se-dicta-el-codigo-nacional-de-recursos-naturales-renovables-y-de-proteccion-al-medio
43	Gobierno de Colombia, 2006. Ley 1021 – Ley General Forestal.	https://www.uis.edu.co/webUIS/es/investigacionExtensio/n/comiteEtica/normatividad/documentos/normatividadInvestigacionAmbiental/45_Ley1021de2006Regimenforestal.pdf
44	Gobierno de Colombia, 2017. Decreto 926 del 1 de junio de 2017. Reglamentación del impuesto nacional al carbono	http://es.presidencia.gov.co/normativa/normativa/DECR-ETO%20926%20DEL%2001%20DE%20JUNIO%20DE%202017.pdf
45	IPCC. 2003. Good Practice Guidance for LULUCF	https://www.ipcc-nggip.iges.or.jp/public/qpqlulucf/qpqlulucf_files/GPG_LU_LUCF_FULL.pdf
46	Pur Projet. Description of Project activities implementation and technical sheets	Etapas MF_ Colombia v1.0.xlsx 2. PFS. Technical Sheets_Colombia_v1.0.pdf
47	UNFCCC. A/R Methodological Tool Calculation of the number of sample plots for measurements within A/R CDM project activities	https://cdm.unfccc.int/methodologies/ARmethodologies/tools/ar-am-tool-03-v2.1.0.pdf

2.3 Interviews

During the period from 05 to 09 June 2017, project proponent representatives and local stakeholders working with the project proponent or affected by the project implementation were interviewed. These interviews were conducted during meetings organized at the corporate and regional FNC headquarters offices located in Cauca and Nariño. The audit team was able to interview directors and field technicians responsible for the activities proposed by the project proponent. Other interviews were carried out at field with parcels owners.

During the interviews ECOCERT verified the following:

- Stakeholder involvement, baseline, and communities benefits;
- Regulatory requirements, land ownership, common practice and additionality;
- Implementation and operation of the proposed project activity;
- Feasibility of the monitoring plan.

Following table is a list of people interviewed during the audit:

Date	Name	Role/Position
Throughout the audit	Pierric Jammes	Managing director Pur Projet
Throughout the audit	Maxime Couasse	Pur Projet
Throughout the audit	Barbara Bonet	Pur Projet
Throughout the audit	Daniel Delgado	National Coordinator FNC - Nespresso
5 June 2017	Mauricio Prada	Human resources management analyst at the FNC
5 June 2017	Marvin Rodríguez	Financial Analyst
5 June 2017	Maria Angélica Montes	Technical Specialist, GIA program
5 June 2017	Raul Jaime Hernandez	Forestry Eng. Responsible Environment FNC
5 June 2017	Carlos Rodriguez Solarte	Rural Promotor, Comité de Cafeteros FNC
5 June 2017	Carlos Alberto Prieto	Comité de Cafeteros FNC
5 June 2017	Juan Francisco Lehmann	Comité de Cafeteros FNC
5 June 2017	Mónica Parada	Coordinadora proyectos Fundación Proaves
5 June 2017	Javier Caropresse	Colombia Rural Asesor
Throughout the audit	John Edwin Rivera	Nespresso AAA
Throughout the audit	Julie Reneau	Nespresso
5 June 2017	Martha Rivas	Consultant
5 June 2017	Maria Amparo Camargo	Consultant
Throughout the audit	Grey Yohana Lozano	Pur Projet
Throughout the audit	Arthur Pivin	Pur Projet
6 June 2017	Jair Valverde	Coordinator of the Macizo Section, in Cauca five Municipalities (Rosas, La Sierra, Almagro, San Sebastian).FNC
6 June 2017	Irene Pistala	Nursery staff
6 June 2017	Luz Angelica Chapuer	Nursery staff
6 June 2017	Pablo Munoz Romero	Sector coordinator
6 June 2017	Carlos Rivera	Sector coordinator
6 June 2017	Milton Javier Vidal	FNC – special coffees
6 June 2017	Julian Tintinago	Corsavida (nursery)
6 June 2017	Oscar Alirio Castillo	Corsavida (nursery)
6 June 2017	John Arboleda	Rural development promoter - FNC

Date	Name	Role/Position
6 June 2017	Yeni Lorena Vidal Escobar	Rural development promoter - FNC
6 June 2017	Rodrigo Urbano	Rural development promoter - FNC
6 June 2017	Oscar Montenegro	Rural development promoter - FNC
6 June 2017	Alejandro Potosi	Rural development promoter - FNC
8 June 2017	Hernando Delgado Gomez.	Executive Director Coffee Producers Committee FNC
8 June 2017	Oscar Villota	Coordinador departamental Nariño
8 June 2017	Heidy Pupiales	Rural development promoter - FNC
8 June 2017	Blanca Burbano	Rural development promoter - FNC
8 June 2017	Dolly Garcia	Rural development promoter - FNC
8 June 2017	Katherine Moreno	Rural development promoter - FNC
8 June 2017	Andrés Ordonez	Rural development promoter - FNC
8 June 2017	Cristina Burbano	Profesional SFF Galeras Parques Nacionales
8 June 2017	Aida Navarro,	Grupo Galeras, Nursery
8 June 2017	Narcisa Miramá	Grupo Galeras, Nursery
8 June 2017	Rigoberto Diaz	Grupo Galeras, Nursery
8 June 2017	Heyvar Osvaldo Criollo	Corponarino
21 June 2017	Giovanni Pabón Restrepo	Climate Change Unit – Ministry of the Environment -
21-June-2017	Sebastian Carranza	Climate Change Unit – Ministry of the Environment
21-June-2017	Ximena Samaniego	Climate Change Unit – Ministry of the Environment -

2.4 Site Inspections

The onsite visit was conducted from 5 to 9 June 2017. The 5 June an opening meeting was conducted at the Headquarters of FNC in Bogota to meet the project proponent team and other participants. Afterwards, side visits were conducted at both regions involved, from 6 to 7 of June to Cauca and from 8 to 9 June to Nariño.

Visits on the parcels in both regions were made on the basis of a random sampling over the list of parcels identified as the first group of participants provided by project proponent. The closing meeting was held the 9 of June at Nariño with representatives of the three main institutions involved, FNC, PUR Projeet and the company Nespresso, financial partner of the project. During the visit ECOCERT carried out an assessment of the implementation and operation of the project through visual inspection and through interviews with the project participants. The following activities were led:

- Project boundaries and the stand information were assessed using geographic information previously uploaded into a smartphone.
- Assessment of the feasibility of the monitoring plan proposed by the project proponent.
- Assessment of the technical skills of the team that will conduct the monitoring activities.
- An assessment of the implementation and operation of the proposed project activity through visual inspection and through interviews with the project proponent's staff;
- Confirmation of pre-project situation
- Assessment of leakage potential and non-permanence threats;
- Confirmation of the applicability of the methodology.

- Interviews with project participants (farmers, field technicians and local authorities) on stakeholder involvement, baseline, and community benefits;

Following table shows the sites visited during the field audit.

Plot ID	Model	Farmer/Site	Department	Sector	Vereda
SISALEMUMAO2M1	Linear	Leonardo Munoz	Cauca	La Sierra	San Pedro Bajo
ROALMAERGUO2M1	Linear	Maria Erazo	Cauca	Rosas	Alttillo
ROLARUBRO2M1 /ROLARUMUO2M2	Linear / intercropping	Rubi Ordenez	Cauca	Rosas	La Laja
TACILAPAM1O2	Linear	Laureano Legarda	Nariño	El Tambo	Placer
TACILAPAM1O2	Coffee Intercropping	Laureano Legarda	Nariño	El Tambo	Placer
TATAPLJATOM4O2	Mixed stand	JAC Plan Verde	Nariño	El Tambo	Plan Verde
TATAARSAM1O2	Linear	Arturo Bejarano Andrade	Nariño	El Tambo	Plan Verde
TATAARSAM1O2	Coffee Intercropping	Arturo Bejarano Andrade	Nariño	El Tambo	Plan Verde

2.5 Resolution of Findings

Material discrepancies shall be resolved through the issuance of appropriate Corrective Action Requests.

A Corrective Action Request is issued when a discrepancy with respect to a specific requirement is identified. This type of finding could only be closed upon receipt by ECOCERT of evidence of corrective actions taken in response to the issuance indicating that the identified discrepancy had been corrected. Resolution of all open CARs was a prerequisite for issuance of a validation statement.

Other types of findings issues are characterized as follows:

Clarification Request (CL): A CL signified a need for supplementary information in order to determine whether a material discrepancy existed with respect to a specific requirement. Receipt of a CL did not necessarily indicate that the project was not in compliance with a specific requirement. However, resolution of all open CLs was a prerequisite for issuance of a validation statement.

Forward Action Request (FAR): A FAR is issued to highlight issues related to the project's implementation that require review during the next verification audit of the project. A FAR may lead to direct non-conformances if not addressed. Unlike CARs, FARs are not formally closed.

Following the conducted validation activities 12 CARs, 4 CL and 2 FARs were identified. Following responses provided by project proponent, all findings issued by the audit team during the validation process have been closed.

In accordance with Section 5.3.7 of the VCS Standard version 3, all findings issued during the validation process, and the impetus for their closure, are described in Section 3 and Appendix 1 of this report.

2.5.1 Forward Action Requests

During the validation activities ECOCERT raised 2 forward actions request. These FARs are described in Appendix 1.

3 VALIDATION FINDINGS

3.1 Project Details

3.1.1 Project type, technologies and measures implemented, and eligibility of the project

Section 1.2 of the PD (doc. Ref. 01) identifies the sectoral scope and category of the project. The applicable sectoral scope is Agriculture, Forestry and Other Land Use (AFOLU), and the category is Afforestation, Reforestation and Revegetation (ARR). Moreover, the PD clearly indicates that the project is a grouped project. ECOCERT auditors confirm that the sectoral scope and category of the project have been correctly identified.

3.1.2 Project proponent and other entities involved in the project

According to section 1.3 of the PD (doc. Ref. 01) the Project proponent is PUR Projet. PUR Projet is also the project developer and manager of the grouped project and is responsible for the overall activity, the monitoring of the processes and for built-up the local management team.

The Federación Nacional de Cafeteros FNC has also a major role in the implementation of the project. The FNC is the Federation formed in 1927 by Colombian Coffee farmers to create an institution that would represent them both nationally and internationally, defend their rights and seek ways to improve their quality of life. It is organized in regional committees. The FNC has 2,655 employees; including 1,500 field technicians whose main role is to bring knowhow and innovations to Colombian coffee growers and to support the implementation of quality practices. While the project proponent PUR Projet supervises project coordination, monitoring, definition of processes, development of training modules, consolidation of project data and quality control activities, the FNC is responsible for local project implementation through his regional committees. The FNC has hired dedicated technicians to operate the project and implement monitoring activities

ECOCERT confirms that the contact information is provided for all the project participants.

3.1.3 Project start date

Section 1.5 of PD (doc. Ref. 01) indicates that the project start date is 20 April 2014, date on which the activities for the first plantation wave started, as evidenced by the first contract signed between PUR Projet and the nursery CORSAVIDA (doc ref 10). ECOCERT auditors confirm that the project start date complies with section 3.2.1 of VCS Standard AFOLU requirements (doc. Ref. 33).

3.1.4 Project crediting period

The crediting period indicated in section 1.6 of PD (doc. Ref. 01) is 40 years and complies with section 3.8.1 of the VCS Standard: VCS Version 3.7 (doc. Ref. 32). The project crediting period start date is fixed at 20 April 2014, which is consistent with the project start date. The length of this

crediting period is enough in order to include at least one complete harvest/cutting cycle of all species.

Main operating activities to be conducted on field are described in the PD (doc. Ref. 01). Additionally, the PP prepared a comprehensive documentation on implementation, operating and management of the project including and adaptive management plan (doc. Ref. 40). PP has made financial arrangements in order to support main activities to be conducted on field as described in the PD (doc. Ref. 01). The project's business plan and other legal documents provided also reflect these arrangements and include the main activities identified over the entire crediting period of the project (doc. Ref. 06).

3.1.5 Project scale and estimated GHG emission reductions or removals

The estimated GHG ER indicated in the PD (doc. Ref. 01) for the first group of instances is 7,107 tCO₂ average per year during the crediting period defined for the project. The scale of the proposed project activity is indicated in section 1.7 of PD (doc. Ref. 01) as that of "project", since the project is expecting average annual removals below the threshold of 300,000 tCO₂ per year defining large projects. Then, the scale of the project has been correctly identified.

PD indicates a Long-Term Average (LTA) benefit of 247,988 tCO₂e estimated with a period of 80 years corresponding to the longevity of the project.

3.1.6 Project location

As mentioned in section 1.9.1 of the PD, all project instances will be located in the Republic of Colombia, in a Global ecoregion defined as "Northern Andean Montane Forests" by The World Wild Fund for Nature. Section 1.9.1 from the PD (doc. Ref. 01) includes a map of the project area. The project proponent has provided the boundaries of the project's geographic area using geodetic coordinates in the format required (doc ref. 39).

According to section 1.9.2 of the PD (doc. Ref. 01), the initial instances from the grouped project are being implemented in Cauca and Nariño regions.

Instances	Farmers organizations	Region	Province
1. Reunion of all planted parcels in Cauca region from 2014 to 2016	FNC	Cauca	La Sierra; Rosas; La Vega
2. Reunion of all planted parcels in Nariño in 2015 and 2016	FNC	Nariño	El Peñol; El Tambo; La Florida; Sandona

PP has provided KML files containing parcels delimitation using geodetics polygons as required by the VCS Standard V3.6 (doc ref 09). A sample of plots were visited by the team to verify the consistency between the KML and the field data. Furthermore, during the field visit, the audit team reviewed the ownership of the land through sample of the land tenure documents of the land owners within the project.

3.1.7 Conditions prior to project initiation

The main land uses identified in the area are described in section 1.10 of PD (doc. Ref. 01). Four pre-project land-use types are identified which are: “rastroy” (degraded areas or severely degraded lands by heavy use of chemicals or previous coca plantations), coffee and sisal plantations, pasture and annual crops. According to the project document the parcels to be reforested are either degraded areas or productive coffee fields that have been deforested and used for agriculture for 15 to 40 years. A pre-assessment is conducted by the technicians from the project on the historical land-use of the parcel to ensure that the parcel was not deforested for the purpose of replanting trees.

The farmers involved in the project are all small-scale farmers (owning less than 20 ha), with low level of income and high dependence to coffee production levels and market prices.

Communities living in the project area are mainly relying on coffee production. The two regions where the project is being developed are among the most impacted by the Colombian conflict involving the guerrilla since years 1960s. Both regions have been also deeply affected by the traffic of drugs.

A comprehensive description of environmental conditions in the area is also provided in this section. The project is located an area defined as a tropical and subtropical moist broadleaf ecoregion, with two well defined seasons, a dry season from June to September, and a rainy season from October to May.

Both initial instances present average month temperature between 18 and 20°C with minimum temperature of 14-15°C, and maximum temperature of 25-26°C. The Cauca region is characterised by annual rainfall superior to 1500 mm while the Nariño region presents precipitation above the 2200 mm/year.

Soils present in the area are characterized by a high concentration of organic matter and recognized as very fertile though this fertility has been lost due to intense farming and coca leaf production. Section 1.10 of the PD (doc. Ref. 01) also reports the characteristics of the forest present in the area, which is defined as a tropical and subtropical moist broadleaf ecoregion.

3.1.8 Project compliance with applicable laws, statutes and other regulatory frameworks

Section 1.11 of the PD (doc. Ref. 01) states that the proposed project activities are in compliance with the exiting national and regional legal framework defined in Colombia. According to the information provided in the PD, the Law 99 from 1993 (doc. Ref. 41), the National Renewable Natural Resources and the Environmental Protection Code (decree 2811 from 1974) (doc. Ref. 42) and the General Forest Act (Law 1021 of 2006) (doc. Ref. 43) constitute the legal framework relevant for the project. Further, the PD indicates that the project also is in line with the Coffee NAMA strategies defined by the Colombian government.

Additional information provided in the PD indicates that plantations from the project will not be established on private, community or any other government property without the appropriate consent.

Finally, it is stated that the project will comply with all labour regulatory framework and explains the organisation applied with the other project participants in order to empower the communities in the implementation of the project.

The information provided by the project proponent has been confirmed by the team through interviews with representatives from the Ministry of the Environment and from Corponariño.

3.1.9 Project Ownership

3.1.9.1 Right of use

Section 1.12.1 of the PD (doc. Ref. 01) provides an explanation of the situation of coffee growers and the land tenure. All farmers included in the project are affiliated to the FNC, which ask them for their cédula cafetera which is the relevant document to confirm their membership. The coffee producers are considered affiliated once the “cedula cafetera” is issued by the respective Departmental Committee of Coffee Growers. To obtain this “cedula cafetera”, the coffee producers have to present to the FNC a formal document recognizing their rights on the land: a legal land title (or “constancia de posesion”), a notarial land purchase contract, or a community certificate. Relevant section provides additional information on the relevant institutions responsible for the land rights regulation. This information was confirmed by the team through interviews with the FNC technical teams participating in the project and during the onsite visit, by asking the farmers to show the relevant documents. Further, a copy of the cedula is kept in the record of each participant. The team also verified the existence of the relevant document for each participant by conducting a desk review of a sample of records at Nariño and Cauca FNC regional offices.

The project ownership is guaranteed by different agreements signed between the projects actors: the project holders have signed a contract with the FNC, granting the FNC the right to enter the farmer’s property to operate the project, and the property on all environmental products generated by the project, including GHG credits (doc. Ref. 37). A second agreement has been signed between the FNC and PUR Projet granting the latest the right to manage and operate the project, and the property on all environmental products generated by the project, including GHG credits (doc. Ref. 36).

3.1.9.2 Emissions trading programs and other binding limits

Section 1.12.2 from the PD (doc. Ref. 01) provides the required information on whether the project reduces GHG emissions from activities that are included in an emissions trading program or any other mechanism that includes GHG allowance trading. According the relevant section, to date there is no emissions trading program in Colombia and a draft decree to create a national registry of projects of GHG emissions reductions is under discussion. Section states that by now the project is not considered as part of the NDCs.

Following information obtained from an interview with representatives from the Ministry of the Environment in Colombia, ECOCERT confirms that the new Decree 926 from 1 June 2017 concerning the carbon tax in Colombia (doc. Ref. 44) includes some regulations concerning the carbon projects implemented in the country and a potential national market. According to people interviewed, until now there is no a binding limit established in the country and to date the projects that are being developed under voluntary international standards are not considered for INDC

objectives. Further, the national registry will serve to identify the different project initiatives that are being implemented in Colombia in order to deal with potential double counting issues. The team has checked the INDC of Colombia and confirmed that no binding limit is defined, however, the INDC clearly indicates that *to estimate the BAU and emissions reductions scenarios* (in the AFOLU sector), *the carbon emission and removals from forest plantations and permanent crops are included*. The project proponent shall monitor the implementation of the Colombian INDC and the development of the GHG national registry, in order to ensure that the project is not taking into account for the INDC objectives. (FAR 2).

Finally, ECOCERT checked among the main GHG programs registries and no evidence was found that the activity to be implemented by the project has been registered or included in other emissions trading program.

3.1.9.3 Other forms of environmental credit sought or received and eligible to be sought or received

Section 1.12.3 of PD (doc. Ref. 01) indicates that the project neither has nor intends to generate any other form of GHG related environmental credit. ECOCERT auditors realized a crosscheck in the Markit Registry to verify this information. Furthermore, the information from the project cash flow estimation (doc. Ref. 06) and contracts between the project owner and its clients confirm that the sole sources of revenues expected is the sale of carbon credits. ECOCERT auditors confirmed through Interviews with different stakeholder that the project intends to generate only carbon credits.

3.1.9.4 Participation under other GHG programs

According to section 1.12.4 of the PD (doc. Ref. 01) the project is a new A/R project and is not registered nor is seeking registration under any other GHG program. ECOCERT auditors realized a crosscheck in the main GHG project registries (UNFCCC CDM, CDM pipeline, VCS pipeline, Markit Environment) to verify this information.

3.1.9.5 Rejection by other GHG programs and other programs

The Project Proponent states in section 1.12.5 of the PD (doc. Ref. 01) that the project has not been rejected by any other GHG programs as it has not been presented to other GHG program. This is consistent with the information obtained during the verification conducted by ECOCERT on the websites of the main GHG program registries.

3.1.10 Additional information relevant to the project

In section 1.13 of the PD (doc. Ref. 01), project proponent provides a single list of the eligibility criteria that project instances need to meet in order to be included in the grouped project. All the parcels must comply with the following criteria to be included in the project instances:

- located in the ecoregion Northern Andean Montane Forest area
- owned by small holders (less than 20 hectares)
- not deforested in the last 10 years
- not be cleared of native ecosystems within the 10-year period prior to the project start date, as set out in section 3.1.6. of the VCS AFOLU requirements
- not falling under “forest” category as defined by Colombian DNA
- owner has clear land-use rights with no land tenure conflicts

- outside of any conservation area (National Parks, concessions for conservation, etc.) and any large economic concessions (forestry, oil, mining, etc.)
- where the reforestation will take place under one of the 5 models of the project and according to the project's proceedings described in the PDD

The set of eligibility criteria defined by the project proponent complies with section 3.4.9 of the VCS Standard (doc. Ref. 32). ECOCERT has confirmed through inspections on the field and interviews with FNC technical teams and farmers involved in the project that criteria defined is respected and implemented.

The potential for leakage is identified by PP as the leakage due to the displacement of existing agricultural activities as indicated by selected methodology AR-AMS0007 v3.1 (doc. Ref. 27). Based on the analysis conducted by PP on the project area, leakage emissions for the project are considered nil, so no additional measures of leakage management are proposed by PP. ECOCERT auditors confirm the information provided by PP on leakage and consider that the conclusions of the PP are accurate (see section 3.2.6.3 below).

Project proponent indicates that no commercially sensitive information has been excluded from the public version of the project description.

Further information is provided under section 1.13 of the PD (doc. Ref. 01) concerning the contribution of the project to the sustainable development. According to the information provided, the project is aligned with the three objectives of the Colombia's plan for development 2014 - 2018 ("Plan Nacional de Desarrollo") which are:

1. Achieve a sustainable and low carbon growth
2. Protect and ensure the sustainable use of the natural capital, and improve the quality of environmental governance
3. Achieve a resilient growth and reduce the vulnerability towards natural disasters and climate change

Additionally, the project contributes to the following sustainable development goals defined by the United Nations Development Program (UNDP):

- End of poverty by securing and increasing the revenues within vulnerable communities through income diversification.
- Responsible production and consumption through the promotion of sustainable production practices
- Action for the climate by contributing to climate change mitigation through carbon storage in the trees.
- Life of terrestrial ecosystems: the project aims at protecting the ecosystem and the biodiversity at landscape level.

Finally, information related to water, biodiversity, soils and climate aspects confronted by the project is included in section 1.13. Parameter influencing climate conditions presented in the area of the project, (temperature and mean annual precipitation) are provided.

ECOCERT auditors confirm that the information and description provided by the PP in the project description (doc. Ref. 01) are accurate, complete and provide an understanding of the nature of the project.

3.2 Application of Methodology

3.2.1 Title and Reference

According to section 2.1 of the PD (doc. Ref. 01) the baseline and monitoring methodology applied is the approved CDM methodology AR-AMS 0007 v. 3.1 “Afforestation and reforestation project activities implemented on lands other than wetlands” (doc. Ref. 27).

ECOCERT conducted a verification on the UNFCCC CDM website and confirms that the version of the methodology proposed for the project is currently valid

(<https://cdm.unfccc.int/methodologies/DB/J6ZHLX1C3AEMSZ52PWIII6D2AOJZUB>)

Further, the project proponent indicates that the tools applied are:

CDM – AR TOOL 14 – Version 04.2: Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities (doc. Ref. 28)

Estimation of non-CO2 GHG emissions resulting from burning of biomass attributable to an A/R CDM project activity (doc. Ref. 29).

3.2.2 Applicability

The applicability criteria of the methodology have been assessed as follows:

Applicability criteria AR – AMS0007 v03.1	Project compliance
The land subject to the project activity does not fall into wetland category	PP states in section 2.2 of PD that all areas selected to be part of the project fall in the category of degraded grassland and agriculture land and thus they don't fall into wetland category. According to IPCC Guidance for National GHG Inventories (2006), wetlands are defined as any land that is covered or saturated by water for all or part of the year, and that does not fall into the Forest Land, Cropland, or Grassland categories. Site inspection permitted to confirm the information provided by the PP concerning the areas intended for the project. Auditors confirm that lands intended for the project fall under the category of degraded grassland and agriculture land. Information provided in section 1.10 of PD on conditions prior to project initiation confirms this information. There are 4 types of pre-project land uses in the parcels intended for the project: “rastrojo” (moderately degraded areas to severely degraded areas); Coffee and Sisal plantations (perennial crops), annual crops and pasture. Project proponent provided a complete list of plots where the information on land use for each plot was recorded. Site inspection permitted to confirm the information provided by the PP concerning the areas intended for the project. Auditors confirm that lands intended for the project

	fall under the category of degraded grassland and agriculture land.
Soil disturbance attributable to the afforestation and reforestation (A/R) project activity does not cover more than 10 per cent of area in each of the following types of land, when these lands are included within the project boundary (i) Land containing organic soils; (ii) Land which, in the baseline, is subjected to land-use and management practices and receives inputs listed in appendices 1 and 2 to this methodology.	According to information provided in PD section 2.2 the soil disturbance attributable to the afforestation and reforestation project activity will be around 1% of the surface under the highest planting density model of plantation proposed. No machinery will be used for the implementation of the plantations. As the plantations are being established under agroforestry models, the practice for land preparation is limited to digging 30 cm x 30 cm x 30 cm holes. Farmers interviewed confirmed to ECOCERT auditors that they themselves provided hand labour to prepare the terrain for planting. They receive also training from the FNC to ensure good practices. Furthermore, section 2.2 states also that the existing trees will not be removed for soil preparation before planting, practice that was confirmed by the auditors during the visit to the planted parcels.

Applicability of relevant tools	Project compliance
CDM – AR TOOL 14 – Version 04.2: Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities	
Not relevant. The tool has no internal eligibility conditions.	
Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities.	
Not relevant as the tool has not internal eligibility conditions. The dead wood and litter carbon pools were not included in the project boundaries for accounting of carbon stock changes as permitted by the methodology applied	
Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity	
This tool is not applicable if the displacement of agricultural activities is expected to cause, directly or indirectly, any drainage of wetlands or peat lands.	According to information provided in section 1.13 and 3.3 no displacement of pre-project activities is expected due to the implementation of the project. Site inspection permitted to confirm that the project is being implemented under agroforestry systems combined with the pre-project activities. The farmers participating in the project are small farmers and the coffee production is the main source of revenues. The models proposed by the PP and the FNC ensure the continuation of the main activity and avoid the displacement of activities. Auditors confirm that no preproject agricultural activities are being displaced

	by the project.
Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities	
Not relevant as the tool has not internal eligibility conditions. The dead wood and litter carbon pools were not included in the project boundaries for accounting of carbon stock changes as permitted by the methodology applied	
Estimation of non-CO2 GHG emissions resulting from burning of biomass attributable to an A/R CDM project activity.	
The tool is applicable to all occurrence of fire within the project boundary. - Non-CO2 GHG emissions resulting from any occurrence of fire within the project boundary shall be accounted for each incidence of fire which affects an area greater than the minimum threshold area reported by the host Party for the purpose of defining forest, provided that the accumulated area affected by such fires in a given year is $\geq 5\%$ of the project area.	According to section 2.2 the tool will be applied to estimate the non-CO2 GHG emissions resulting from any accidental fire. Project proponent declares in section 2.3 of the PD that the project does not allow the use of fire in site preparation, clearing of harvest residues prior to replanting or any kind of project related activity during the whole project lifetime. Practices to be applied for site preparation or replanting were confirmed during the site inspection through interviews with farmers. Section 4.2 and 4.3 of PD indicate that the occurrence of forest fires will be monitored during the project crediting period. Following interviews with members of the FNC technical teams, the use of fire for land preparation purposes is monitored during the initial evaluation, conducted by the team on each parcel, to include a new parcel in the project. The team has confirmed during the audit that the evaluation form used by FNC clearly asks for the soil preparation activities conducted for initial plantation and plantation renew (see CAR6 for additional information).

3.2.3 Project Boundary

The geographical project boundary adopted is the geographic area for the project group defined by PP as the Northern Andean Montane Forests. Polygons of all parcels of the first group of instances were available at the moment of the visit.

The project boundaries were verified by ECOCERT auditors on site through inspection of a sample of plots, and against maps and information provided in KML files (doc. Ref. 09) on areas intended for plantation identified as the first group of instances. The sample visited by ECOCERT consisted in 3 plots located in the province of Cauca and 5 other plots located in the province of Nariño chosen over the group of parcels included in the first group of instances of the grouped project at the time of the visit.

Two carbon pools have been identified for accounting carbon stock changes, i.e. above-ground biomass and below-ground biomass. Soil organic carbon (SOC), Dead wood and Litter have been excluded from the baseline scenario, which is an option allowed by the applied methodology.

Methodology applied identifies CH₄ and N₂O emissions resulting from the burning of woody

biomass for site preparation purposes as the GHG emissions to be selected for accounting. The PD (doc. Ref. 01) indicates that no woody biomass is present on the planting areas covered by the following land uses: grassland and rastrojo, annual crops and pastures. In the case of parcels with perennial cultures (coffee and sisal), the trees are planted in intercropped models and the model does not require trees removal. Furthermore, the project does not allow for burning to clear the land. ECOCERT auditors confirmed this statement during the visit to the project area. The FNC teams monitor the use of fires for soil preparation through an evaluation form that is filled for each new parcel looking to be included in the project. Further, each parcel is subject to yearly monitoring during the initial three years of plantation. The use of fires as agricultural practice as well as accidental fires occurred in the fields around the relevant parcel are included in the information collected during these monitoring activities (see CAR6 for additional information). Therefore, for the purpose of ex-ante estimations CH₄ and N₂O emissions resulting from the burning of biomass are considered as zero by the project proponent.

GHG sources/sinks	GHGs involved	Description
Baseline	CO ₂	Removals in above- and below-ground biomass,
Project	CO ₂	Removals in above- and below-ground biomass,
	CH ₄ , N ₂ O	Non-CO ₂ emissions due to burning of biomass for the purpose of site preparation are accounted as project emissions. According to PD burning of biomass is not included in the activities intended for the implementation of the project so are considered as zero for ex-ante estimations.
Leakage	CO ₂	No GHG sources due to leakage have been identified. This is consistent with the information presented in the PD (doc. Ref. 01) in the section dealing with leakage emissions (section 3.3), and in the ER calculation spreadsheet.

The project boundary indicated in section 2.3 of the PD (doc. Ref. 01) complies with the VCS requirements related to project boundaries in that it encompasses above-ground tree biomass and below-ground biomass. ECOCERT auditors considers that the identification of pools, sources and GHG for the purpose of GHG calculations is complete and in accordance with the applied methodology.

3.2.4 Baseline Scenario

A description of the baseline scenario in the project area is presented in section 2.4.2 of the PD (doc. Ref. 01), and consists in the continuation of the pre-project land use which is consistent with the applied methodology AR-AMS0007 v.3.1 (doc. Ref. 27) and information on conditions prior to the project on section 1.10 of the PD (i.e. moderately degraded land to severely degraded land (rastrojo), pastures, annual crops and permanent crops – coffee and sisal). Auditors could confirm that this description is accurate, in that the same conditions could be observed during the site visit on June 2017 all around the project plots, and were confirmed by the famers interviewed while

visiting the project plots.

Since the project proponent limits the geographic area of the project to the Northern Andean Montane Forests, and following information provided on climate, land use, soil characteristics and socioeconomic context, as well as the defined eligibility criteria (i.e. all project instances registered as part of the project shall be located in the area defined as Northern Andean Montane Forests) ECOCERT auditors consider that the baseline scenario identified is applicable to the entire geographical area of the grouped project and that the analysis conducted by the project proponent is accurate.

3.2.5 Additionality

According to point 3.14.1 of the VCS standard version 3.7 (doc. Ref. 32), additionality shall be demonstrated and assessed in accordance with the requirements set out in the methodology applied to the project. For the demonstration of additionality, the PP has used the barrier analysis for the assessment of additionality contained in Appendix 1 of the applied CDM methodology AR-AMS0007 v.3.1 (doc. Ref. 27).

Section 2.5 of the PD (doc. Ref. 01) identifies the barriers confronted by the project. The main barriers identified are:

Investment barriers

Related to investment barriers, there is a lack of local or regional investments for the installation and maintenance of forest plantations (commercial and protective) and especially due to the absence of adequate roads for access and to transport planting or harvested material. There is no tradition within companies for long term investments, especially when repayment periods are long. In 2014, the forest plantations in Colombia occupied 477,575 hectares, equivalent to about only 6% of the country's total potential area for forestry plantation.

Governmental initiatives like the Forestry Incentive Certificate – (Certificado de Incentivo Forestal – CIF) have had a limited impact because of the difficulty in its implementation and the uncertainty in the delivery of the funds, mainly among small scale farmers, which don't have the necessary resources to invest beforehand while expecting for the payment.

The information provided by the project proponent was discussed and confirmed by the team during an interview with representatives of the Ministry of the Environment.

Financial barriers and local tradition

Additional two issues are identified by the project proponent as barriers for the implementation of coffee agroforestry projects: financial barriers for the installation of new coffee plantations and local tradition.

The existence of barriers for new coffee plantations are well supported in the PD that explains the low revenue to the farmer and the low investment by the FNC in the coffee land expansion. This information was confirmed during the visit to the project area through interviews with FNC representatives and farmers involved in the project. The price to the farmer is limited and is far to be an incentive to the extension of coffee plantations.

In regard with the barriers for reforestation (agroforestry), even if several reforestation experiences in the country have been successfully carried out, some of them by the FNC who has carried out reliable research in the field, the local tradition to cultivate sun grown coffee in Colombia remains by far the main model of production. Shade grown coffee is limited to areas different from the “zona cafetera”. The project is perceived by the participants as an opportunity to introduce this new model of production through technical assistance and training to farmers.

ECOCERT auditors consider that the barriers have been demonstrated with appropriate documentation. The demonstration provided is considered acceptable.

3.2.6 Quantification of GHG Emission Reductions and Removals

3.2.6.1 Quantification of baseline emissions

The relevant equations to calculate the baseline carbon stock are described in section 3 of the PD (doc. Ref. 01). These are in line with the equations indicated in the applicable methodology A/R AMS0007 v 3.1 (doc. Ref. 27) and excel spreadsheets (doc. Ref. 02). As indicated in section 2.3 of PD (doc. Ref. 01), only changes in carbon stocks in above ground biomass and below ground biomass are considered for quantification of GHG emissions and removals as permitted by applied methodology. Therefore, the pools corresponding to SOC, litter and dead wood are assumed to be zero in the baseline. Project proponent defined a first level of stratification following the land use type presented in the areas intended for the project. A second level of stratification was defined according to the model of plantation. In total, 8 strata were defined.

For the estimation of the total net baseline emissions and removals the project proponent assumes that baseline carbon stocks will be removed in the parcels where a full installation of a new coffee plantation will be conducted (model of Agroforestry coffee installation) or in the case of a mixed stand plantation of trees. For fallows and grasslands covered with new coffee plantations combined with threes the removal with take place over 4 years as the trees planted grow on the parcel. In parcels covered with annual crops the removal will take place over 1 year. Finally, parcels covered with perennial crops in the baseline and where the mixed stand is introduced will lose the baseline carbon stocks over 8 years following the introduction of trees plantation.

For the estimation of baseline net GHG removals for trees and shrubs project proponent used the following factors:

Initial Land-use	AGB	Root-to-shoot	BGB	Total Biomass	Total Carbon	Source
	t d.m. ha ⁻¹		t d.m. ha ⁻¹	t d.m. ha ⁻¹	tC/ha	
Degraded fallow (Rastrojo)	19.2	-	-	19.2	9.0	IPCC 2006 Chapter 6 Grassland; IPCC 2003 GPG LULUCF Table 3A.1.5, Table 3A.1.8
Pastures / Grassland	6.2	1.58	9.8	16	7.5	IPCC 2006 Chapter 6 Grassland; IPCC 2003; M(ss) above: Table 6.1 R: Table 6.4
Annual crops	-	-	-	10	4.7	IPCC 2006 Chapter 6 Grassland; IPCC 2003; B(ss): Chapter 6.3.1.2
Perennial crops (coffee)	-	-	-	22	10.3	Henk Rikxoort, Götz Schroth, Peter Läderach, Beatriz Rodríguez Sánchez. Carbon footprints and carbon stocks reveal climate-friendly coffee production. Agronomy for Sustainable Development, Springer Verlag/EDP

						Sciences/INRA, 2014, 34 (4), pp.887-897
Carbon fraction for tree biomass (tC/tdm):					0.47	2006 IPCC Guidelines for National Greenhouse Gas Inventories. Volume 4. Agriculture, Forestry and Other Land Use. Chapter 4: Forest Land Table 4.3 Carbon fraction of aboveground forest biomass
C to CO2 Conversion Factor (44/12)					3.67	

Values on factors and parameters utilized by PP for the estimation of baseline net GHG removals are considered conservative and adequate in the context of the project activity.

3.2.6.2 Quantification of Project Emissions and Removals

For the ex-ante estimation of GHG removals from the project the PP has selected the “Estimation by modelling of tree growth and stand development” approach described in the relevant tool *Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities* (doc. Ref. 28). A stratification of the lands based on the planting model and year of plantation was conducted and 15 strata were defined. Further, the project proponent made the following assumptions:

- The reference densities of plantations or distance of plantation according to each model are:
 - Model 1 (linear): trees planted every 3 meters along the parcels' borders
 - Model 2A (intercropping coffee): 70 trees/ha
 - Model 2B (Agroforestry coffee installation): 70 trees/ha timbers species with under cropping of coffee trees at density of: 5000 to 10000 trees/ha
 - Model 3 (silvopasture): 300 trees/ha
 - Model 4 (mixed stand): 1111 trees/ha
- The mean annual increment value (MAI) is reached for a planted density above 700 trees/ha
- In the year of plantation and the year following the plantation the carbon stock in the standing trees is considered as nil.
- Harvesting rate: 3% according to a timber management plan

Factors utilised by project proponent for the estimation are described in the following table:

Parameter		Value	Source
Mean Annual increment (MAI)	t d.m. ha ⁻¹ y ⁻¹	10	2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4 AFOLU (doc. Ref. 35), Chapter 4 Forest Land, Table 4.10, Aboveground Net Biomass Growth in Tropical and Subtropical Forest Plantations, Tropical rainforest, Americas other broadleaf. Initial value: 20 t d.m. ha ⁻¹ y ⁻¹ . The project proponent degraded to 10 t d.m. ha ⁻¹ y ⁻¹ based on previous experiences.
Maximum AGB	t d.m. ha ⁻¹	150	2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4 AFOLU (doc. Ref. 35), Chapter 4 Forest Land, Table 4.8, Aboveground Biomass in Forest Plantations, Tropical rainforests, Americas other broadleaf
Root-to-shoot ratio		0,37	2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4 AFOLU (doc. Ref. 35), Chapter 4 Forest Land, Table 4.4. Ratio of below-ground to above-ground biomass, Tropical rainforest

CF	tC / t d.m	0,47	CDM A/R TOOL 14 (doc. Ref. 28)
Age of the first commercial cut	years	10	

Non CO₂ GHG emissions resulting from burning of biomass has been accounted as zero for ex-ante estimations since the use of fire for site preparation and/or to clear the land of harvest residue prior to replanting is not allowed as part of the site preparation activities. ECOCERT confirmed this information through interviews with farmers.

No uncertainty control was conducted by PP as, according to relevant tool Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities v4.2 (doc. Ref. 28), ex-ante estimation (projection) of carbon stock in tree biomass is not subjected to uncertainty control.

Values on factors and parameters utilized by PP for the ex-ante estimation of project net GHG removals are considered conservative and adequate in the context of the project activity.

3.2.6.3 Quantification of leakage

Section 3.3 of PD (doc. Ref. 01) describes the assessment conducted by PP on leakage. Section states that no displacement of agriculture activities is expected in the parcels where linear planting model is applied. No displacement of agriculture activities is expected in degraded land (rastrojos) planted with dense planting model as these are abandoned lands and no agriculture activities are present at the moment of the plantation.

In the case of trees and/or coffee trees planted to replace pastures, the project document indicates that the risk of displacement is low as this generally occurs when a farmer disposes of more grasslands that such required for the cattle owned. When mixed stand model is applied in established coffee plantations, this is because producers do not want to continue with the activity or because they decided to reduce the area under production, mainly because of the quality of the plantation.

ECOCERT auditors confirm that no important grazing activities were observed in the area surrounding the project parcels. No displacement of any previous production was confirmed during the interviews with the farmers participating in the project. The coffee culture constitutes a major economic activity in the region and the producers interviewed seemed attached to their parcels and their activity. Besides, land tenure among the project participants is characterized by the predominance of small parcels, which limits the displacement of agricultural activities. For this reason, the agroforestry models proposed by the project seem to be well received by the farmers. In addition, FNC staff interviewed indicated that one of the indications given in the initial stages of information of the project to potential participants was the importance of not displacing existing activities to establish new plantations.

Based on this analysis, leakage emissions from the project are considered negligible, and have been accounted as 0. Monitoring of leakage will be conducted through information collected by technical team once after project activity is established and before first verification.

3.2.6.4 Summary of net GHG emission reductions or removals

Table below taken from section 3.4 from PD (doc. Ref. 01) summarize the net GHG emissions and removals estimations for the first instances of the project. Total estimated net emission removals

are 284,262 tCO₂e over the 40 years crediting period with average emission removals estimated at 7,107 tCO₂e per year. LTA for the first two instances is 247,988 tCO₂e and was estimated over a period of 80 years corresponding to the longevity of the project.

Year	Estimated baseline emissions or removals (tCO ₂ e)	Estimated project emissions or removals (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated net GHG emission reductions or removals (tCO ₂ e)
2014	0	0	0	0
2015	2 822	(2 304)	0	518
2016	27 352	(23 320)	0	4 031
2017	112 881	(96 258)	0	16 623
2018	125 496	(96 258)	0	29 238
2019	138 196	(96 258)	0	41 938
2020	151 558	(96 258)	0	55 300
2021	165 211	(96 258)	0	68 953
2022	178 864	(96 258)	0	82 606
2023	192 592	(96 258)	0	96 334
2024	206 342	(96 258)	0	110 084
2025	220 078	(96 258)	0	123 820
2026	232 956	(96 258)	0	136 698
2027	243 580	(96 258)	0	147 322
2028	253 967	(96 258)	0	157 709
2029	264 124	(96 258)	0	167 866
2030	274 045	(96 258)	0	177 787
2031	283 649	(96 258)	0	187 391
2032	292 535	(96 258)	0	196 277
2033	300 496	(96 258)	0	204 238
2034	307 752	(96 258)	0	211 493
2035	314 662	(96 258)	0	218 404
2036	321 280	(96 258)	0	225 022
2037	327 574	(96 258)	0	231 316
2038	333 364	(96 258)	0	237 106
2039	338 665	(96 258)	0	242 407
2040	343 391	(96 258)	0	247 132
2041	347 553	(96 258)	0	251 294
2042	351 302	(96 258)	0	255 044
2043	354 701	(96 258)	0	258 443
2044	357 607	(96 258)	0	261 348
2045	360 303	(96 258)	0	264 045
2046	362 895	(96 258)	0	266 637
2047	365 387	(96 258)	0	269 129
2048	367 786	(96 258)	0	271 528
2049	370 097	(96 258)	0	273 839
2050	372 333	(96 258)	0	276 074
2051	374 485	(96 258)	0	278 227
2052	376 563	(96 258)	0	280 305
2053	378 573	(96 258)	0	282 315
2054	380 520	(96 258)	0	284 262
Total	380 520	(96 258)	0	284 262

Procedure undertaken to estimate the net GHG removals displayed in the GHG calculation workbook (doc. Ref. 02) is clear and the explanation of the procedure undertaken for estimation has been provided in the PD (doc. Ref. 01).

ECOCERT auditors consider that PP has correctly identified and applied the methodology and relevant tools to calculate the net GHG emission removals from the project.

3.2.7 Methodology Deviations

No Methodology Deviation has been applied

3.2.8 Monitoring Plan

The parameters to be monitored identified in section 4.2 of the PD (doc. Ref. 01) are:

- Total area planted under each model, in each plantation wave. Area planted is measured by technicians' team at first parcel monitoring, conducted three months after plantation. For model 1 (linear) the distance planted is measured, and the area is recalculated using a given width. The equipment indicated to define this parameter is a GPS.
- Density of plantation per strata. Defined as the number of trees planted per hectare. This parameter is monitored on the field by technical team at first parcel monitoring, three months after plantation.
- Area of inventory plots. Area is measured by technicians at each inventory event. Data is cross checked in the field by the project proponent at each visit. The monitoring equipment indicated for this parameter is the GPS, the field form used by the technical team and the registry of inventory.
- DBH – diameter at breast height. This will be monitored at each inventory (less than 5 years) through physical measurements taken on the field in sample plots. Diameter is measured at 1.30 m height, which is consistent with IPCC GPG for LULUCF (doc. Ref. 45). A caliper or diameter tape will be used to take measurements. As part of QC/QA procedures cross-check of part of the measurements will be conducted by other project teams on a sample basis.
- H – Height of trees. Monitored yearly through measurements on the field in sample. The monitoring equipment indicated is the clinometer.
- Carbon stock - Define as the Stock of carbon in the biomass of the planted trees, it will be monitored after each biomass inventory as a calculation based on diameter and height measurement in the sampling plots.
- Project Area affected by fires. This parameter will be monitored at each parcel monitoring. If fires have occurred, the percentage of area affected is estimated with the farmer and then this percentage is deducted from the total area of the parcel in the registry of plantations (see CAR 6 for additional information).

The list of monitored parameters has been verified against the methodology and applicable tools and is considered complete.

PD (doc. Ref. 01) describes the procedure implemented for the monitoring of actual net greenhouse gas removals which is by measuring and monitoring the project area and the planted trees and conducting carbon sampling within stratified sample plots. This monitoring consists of five steps: monitoring of planting progress and tree survival, stratification based on actual plantation model and year of plantation, the establishment of permanent sampling plots; field data measurement and carbon stock calculations.

Section 3.2.1 of the PD (doc. Ref. 01) on ex-post estimation of GHG removals describes the protocol that will be followed for the establishment of permanent sampling plots and field data

measurement. According to this information, permanent plots of 500 m² will be defined to conduct measurements and the number of sampling plots will be determined in accordance with the methodological tool Calculation of the number of sample plots for measurements within A/R CDM project activities (doc. Ref. 47).

Section 4.3.2 of the PD (doc. Ref. 01) also describes the organizational structure implemented for monitoring. The FNC have technical teams dedicated to operate the project and implement the monitoring activities and Pur Projet conducts every year an internal audit covering documents; plantations; technical skills, benefits; etc. A local project coordinator defined in each region is in charge of the planning; coordination of plantation and monitoring activities. Field technicians trained by the project coordinator and/or external forestry experts, are in charge of registration and monitoring activities on the field.

Finally, section 4.3.3 of the PD (doc. Ref. 01) indicates the quality control and quality assurance procedures that the project proponent will implement as part of the monitoring plan, including collection, verification, analyses and storage of data collected. The document *Procedimientos para el Registro de Información y Control de Calidad* (doc ref.24) was also provided as evidence of QA/QC procedures implemented by the project.

ECOCERT auditors consider that monitoring plan proposed by PP is complete and in accordance with requirements of the applied CDM methodology AR-AMS 0007 v. 3.1 “*Afforestation and reforestation project activities implemented on lands other than wetlands*” and relevant tools (doc. Ref. 27).

3.3 Non-Permanence Risk Analysis

After review of contracts, agreements and other supporting documentation, the audit team is able to confirm that the project does not confront important internal risks. During the onsite visit, the auditors could have discussed with a representative from Nespresso, a major financial partner of the FNC, which has concluded an agreement with the project proponent to buy the future carbon credits. Nespresso confirmed the interest to continue its partnership with the FNC in order to ensure the long-term viability of coffee plantations through the introduction of agroforestry models. Further, the FNC is a much-respected institution in Colombia and having this institution providing the technical support to the project constitutes a major guarantee to the permanence of the project.

Regarding external risks, the support from the FNC is also a kind of guarantee to the project and the participant farmers against the potential problems linked to the guerrilla and to the coca plantations, as the institution has managed along the years of conflict, to keep independence from any kind of armed group. Interviews with the FNC teams from the Cauca and Nariño department permitted to confirm that the problem of guerrilla, if not completely resolved today, has been much mitigated in the region thanks to the peace negotiations initiated by the Colombian government. The free circulation has been restituted in the zones occupied by the guerrilla some years ago and the government, through its Unidad de Restitucion de Tierras, is restituting the lands to the previously displaced communities and promoting agricultural activities such as the coffee production.

The risk assessment (doc. Ref. 04) was assessed according to the VCS Version 3 Procedural Document “AFOLU Non-Permanence Risk Tool v3.3” (doc. Ref. 34). Each risk category was calculated based on the VCS guidance and the input provided by the Project Proponent. The information was validated and cross-checked through document and literature review, onsite visits of the project area and interviews conducted. Relevant findings on Non-Permanence Risk Analysis

are listed in Appendix 1. The overall risk rating according to applied tool is 3 %, with an internal risk of 0 %, an external risk of 0% and a natural risk of 3 %.

The risk rating should not be used for any other purpose than retiring VCUs according to the VCS permanence rules. The risk will be reassessed at time of the next verification and with that prior to any issuance of VCUs.

3.4 No Net Harm

Contracting for validation was prior to 19 April 2017 so the No Net harm was not conducted by the project proponent according to the VCS standard requirements.

3.5 Environmental Impact

According to PD the project implementation will not have negative environmental impacts. Otherwise, the PD presents a list of environmental benefits generated by the project. No negative aspects have been identified during the on field visit. This was also confirmed through interviews conducted during site inspections, and no negative environmental impacts were reported.

3.6 Local Stakeholder Consultation

No Local stakeholder consultation was conducted by the project proponent as the contract for validation with ECOCERT was prior to 19 April 2017.

3.7 Public Comments

The project was submitted to the VCS pipeline for public comments. The project was open for public comments from 03 May to 02 June 2017. No comments were received.

4 VALIDATION CONCLUSION

ECOCERT has performed the validation of the Regenerating Colombian Coffee Ecosystems grouped project in Colombia. This validation was conducted on the basis of VCS Standard requirements (doc. Ref. 32); the Project Document dated 28 April 2017 and updated version from 25 April 2018 (doc. Ref. 01), all supporting information provided by project proponent; the baseline and monitoring methodology CDM AR-AMS0007 Version 3.1 (doc. Ref. 27); and the updated non-permanence risk report dated 25 April 2018.

The validation activities conducted by ECOCERT included: collection of information, documents and data supporting the project document; assessment GHG calculation spreadsheets; assessment of information management system; assessment of the provisions made to implement the project in accordance with the information provided in the PD; assessment of whether the provisions made in the monitoring plan were consistent and could be appropriately applied; on site visit to the parcels and assessment of the non-permanence risk report.

The revised documents and information submitted to ECOCERT for review have resulted in 12 open CARs and 4 CL. The project is in conformance with the validation criteria for projects, the VCS

requirements as set out in the VCS program documents and the applied methodology, all documents indicated in section 1.2 of this report. No qualifications or limitations exist with respect to the validation opinion reached by the audit team. The project is likely to achieve the estimated GHG emission reductions and removals that are described in the PD. The total emission reductions from the project are estimated to be on average 7,107 tCO₂ per year for the first project instances for a total of 284,262 tCO₂ over the 40 years crediting period.

In summary, it is ECOCERT opinion that the project “Regenerating Colombian Coffee Ecosystems”, as described in the VCS PD, version 2.0 dated 25 April 2018 (doc. Ref. 01), meets all relevant VCS requirements for VCS projects and correctly applies the selected methodology CDM AR-AMS0007 Version 3.1 (doc. Ref. 27)

APPENDIX 1: CORRECTIVE ACTION REQUESTS, CLARIFICATION REQUESTS AND FORWARD ACTION REQUESTS

CORRECTIVE ACTION REQUESTS

CAR1 dated 06/17: Project Description Template				
The project description provided to the audit team does not follow the indications from the project description template defined by the VCS program. The project proponent is asked to implement the corrective action necessary to resolve this finding. In general the project proponent is asked to provide the information required following the guidance provided in each section.				
Timeline for Conformance: Prior to validation				
Client Response: The project description has been corrected following the indication from the project description template defined by the VCS Program. Supporting document: VCS_Regenerating Colombian Coffee Ecosystems_PDD_v2.0.docx				
ECOCERT Assessment of PP responses: A new version of the PD presented by the PP follows the requirements and indications provided in the last version of the VCS project description template.				
Status: Closed				
CAR2 dated 06/17: Project location				
According to VCS standard section 3.10.2 for grouped AFOLU projects the project proponent shall specify the geographic area where the new instances could be implemented using a geodetic polygon. Further, the information provided in section 1.9.1 is considered insufficient to understand the location and boundaries of the project. The project proponent is asked to implement the corrective action necessary to resolve this finding.				
Timeline for Conformance: Prior to validation				
Client Response: To precise the geographic area where the new instances will be implemented, the project proponent provided the KML file of a geodetic polygon with the following coordinates:				
	Decimal Degree		Degree Minute Seconds GCS_WGS_1984	
	Longitude	Latitude	Longitude	Latitude
A	-77,555	7,677	77°33'17,8"W	7°40'36,087"N
B	-79,22	1,486	79°13'11,117"W	1°29'10,016"N
C	-76,107	-0,577	76°6'23,761"W	0°34'36,67"S
D	-70,644	5,362	70°38'38,677"W	5°21'42,713"N
E	-73,237	12,492	73°14'12,261"W	12°29'33,827"N
Supporting document: Grouped Project Area – Regenerating Colombian Coffee Ecosystems.kml				
ECOCERT Assessment of PP responses: The geographic area where the grouped project is being implemented is defined by a polygon provided. Relevant coordinates are provided by the project proponent.				
Status: Closed				
CAR3 dated 06/17: Project ownership				

Section 1.12 of the project document provides a discussion on the situation of the land ownership. The project is developed with multiple coffee producers from the departments of Narino and Cauca. However, the section does not provide information to justify the **project** ownership.

Timeline for Conformance: Prior to validation

Client Response: PUR Projet initiated an afforestation and reforestation project in Colombia in 2014, in collaboration with small-scale coffee farmers. The project is based on the relationship between PUR Projet, the French coordinator, fundraiser and carbon offset trader of the project, and FNC, in charge of project implementation. FNC has developed internal dedicated teams to operate the project and implement monitoring activities. Nespresso SA has supported the launch and development of the agroforestry project. On 1/14 January 2014, the project owner PUR Projet and Nespresso signed a contract for the generation and commercialization of emission credits out of the projects, which proves the title of primary ownership to the project owner.

Supporting document: Nespresso_Service Level Agreement_201501_Signed.pdf

30.04.2018. The project ownership is guaranteed by a chain of agreement contracts between the projects actors:

- The farmers of the project are the owner of their farms. Any farmer willing to join the project signs a contract with the FNC; the “Compromiso Forestal”; granting the FNC the right to enter the farmer’s property to operate the project, and the property on all environmental products generated by the project, including GHG credits.
- The FNC signs a contract with PUR Projet that grants PUR Projet the right to manage and operate the project, and the property on all environmental products generated by the project, including GHG credits.

Supporting document:

Ficha 3 - Contrato de compromiso forestal Colombia FNC - PP - v2.0.docx

1607 - Convenio Marco FNC PP – signed.pdf

PDL_FNC_Wave 3_PC_20160101_SIGNED.pdf

ECOCERT Assessment of PP responses: 30.03.2018. The project proponent has provided an agreement with Nespresso SA, the organization supporting the launch and development of the agroforestry project. This agreement however is not an evidence of the project ownership provided to the project proponent. According to the VCS program definitions, the project ownership is the legal right to control and operate the project activities and according to VCS standard the project description shall be accompanied by one or more of the following types of evidence establishing project ownership accorded to the project proponent:

- 1) Project ownership arising or granted under statute, regulation or decree by a competent authority.
- 2) Project ownership arising under law.
- 3) Project ownership arising by virtue of a statutory, property or contractual right in the plant, equipment or process that generates GHG emission reductions and/or removals (where the project proponent has not been divested of such project ownership).
- 4) Project ownership arising by virtue of a statutory, property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions and/or removals (where the project proponent has not been divested of such project ownership).
- 5) An enforceable and irrevocable agreement with the holder of the statutory, property or contractual right in the plant, equipment or process that generates GHG emission reductions and/or removals which vests project ownership in the project proponent.

6) An enforceable and irrevocable agreement with the holder of the statutory, property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions or removals which vests project ownership in the project proponent.

7) Project ownership arising from the implementation or enforcement of laws, statutes or regulatory frameworks that require activities be undertaken or incentivize activities that generate GHG emission reductions or removals.

The CAR remains open

28.05.2018: The project proponent has provided the relevant information on the agreements established with the holders of the right in the land where the project is implemented.

Status: Closed

CAR4 dated 06/17: Section 1.12.2 from the PD. Emissions Trading programs and other binding limits

Section 1.12.2 from the PD does not provide the required information on whether the project reduces GHG emissions from activities that are included in an emissions trading program or any other mechanism that includes GHG allowance trading, and include details about any such programs or mechanisms. The project proponent is asked to implement the corrective action necessary to resolve this finding;

Timeline for Conformance: Prior to validation

Client Response: To date there is no emissions trading program in Colombia. The creation of the national registry of projects of GHG emissions reductions still at the stage of a draft decree. PUR Project consulted the Colombian authorities and the representative in the "Ministerio de Medio Ambiente" (Sebastian Carranza; scarranza@minambiente.gov.co) confirmed that the project is not registered under a national registry. The project is not considered as part of the NDCs.

Supporting documents:

2017.06 Consulta MADS Proyecto VCS - Doble contabilidad.pdf

Official answer MADS emissions trading program.pdf

Proyecto de Decreto del Registro Nal de Reducción de Emisiones GEI.docx

ECOCERT Assessment of PP responses: The project proponent has provided the relevant information concerning the participation of the project in other emissions trading programs and other binding limits

Status: Closed

CAR5 dated 07/17: Eligibility criteria for grouped projects

The project proponent is asked to provide an explanation on how the eligibility criteria defined for the inclusion of new instances in the grouped project comply with the eligibility criteria requirements indicated in section 3.4.9 of VCS standard requirements.

Timeline for Conformance: Prior to validation

Client Response:

How the project guarantees the new instances meet the applicability conditions of the methodology: this methodology is applicable under the following conditions:

- The land subject to the project activity does not fall in wetland category

The first eligibility condition defined by the project proponent is that the project should be

located in the ecoregion Northern Andean Montane Forest. As indicated in section 1.9 of the PD this ecoregion is characterized by the presence of forest land or productive land (cropland and grasslands). According to guidance provided by 2006 IPCC Guidelines for National Greenhouse Gas Inventories, and Good Practice Guidance for Land Use, Land-Use Change and Forestry (IPCC 2003), wetlands are defined by land that is covered or saturated by water for all or part of the year and that does not fall into the forest land, cropland, grassland or settlements categories, which is the case of the lands in the project area.

- Soil disturbance attributable to the project activity does not cover more than 10 per cent of area in each of the following types of land, when these lands are included within the project boundary:
 - Land containing organic soils;
 - Land which, in the baseline, is subjected to land-use and management practices and receives inputs listed in appendices 2 and 3 of the methodology

To guarantee the compliance with the **applicability conditions** of the methodology and to ensure that the soil disturbance attributable to the project will not be in any case more than 10 per cent of area, PUR Project defined internal rules and project processes, described below:

All the parcels are only eligible if the area must **comply with the following** requirements to be included in the project instances:

- owned by small holders (less than 20 hectares)
- not deforested in the last 10 years
- not be cleared of native ecosystems within the 10-year period prior to the project start date, as set out in section 3.1.6. of the VCS AFOLU requirements
- not falling under “forest” category as defined by Colombian DNA
- owner has clear land-use rights with no land tenure conflicts
- outside of any conservation area (National Parks, concessions for conservation, etc.) and any large economic concessions (forestry, oil, mining, etc.)
- where the reforestation will take place under one of the 5 models of the project and according to the project’s proceedings described in the PDD

The eligibility criteria are explained to any farmer willing to join the project during the initial socialization training. Then, for all new parcels to be included in the project, the project’s technicians verify that the eligibility criteria are met during an onsite individual visit, the “Pre-Registry”. This ensures that the new instances will all meet the applicability conditions.

How the project guarantees **the technologies or measures** specified in the project description are used:

- The plantation contracts signed or that will be signed with the project entities describes these proceedings, technology and measures to be followed to implement the project and ensure that all new instances will use the same tools specified in the project description to implement the project.

How the project guarantees **the technologies or measures are applied** in the same manner as specified in the project description:

- The project process includes a training of all technicians, of the new project entities, on those technologies and measures specified in the project description to ensure that they will be applied in the same manner.
- Initial FNC technician training, continuous follow up and training with the FNC, and regular field visit enable to make sure the technologies and measures are applied as per the project process.

How the project guarantees new instances are subject to the **baseline scenario** determined in the project description for the specified project activity (reforestation) and geographic area (Northern Andean Montane Forest):

- According to the AR-AMS-0007 Methodology Section 5.2, the baseline scenario is considered to be the continuation of the pre-project land-use. To guarantee that new instances are subject to the baseline scenario determined in the project description, PUR Project defined as one eligibility criteria the necessity to be a small-scale farmer, owner of a multipurpose farmland located in the Northern Andean Montane Forest area and affiliated to one of the entities accepted to be part of the project. As the entities participating in the project are mainly coffee cooperatives, the main land use identified is croplands, predominantly coffee plantations and degraded land. The technical team at each relevant cooperative collects the information on the land type and land uses necessary to assess if they can integrate the project through an initial questionnaire. Therefore, the future plots (instances) will be necessary lands from members of the same organizations, located in the same area of influence and having the same profile as the initial instances.

How the project guarantees the **new instances have characteristics with respect to additionality** that are consistent with the initial instances for the specified project activity and geographic area. For example, the new project activity instances have financial, technical and/or other parameters (such as the size/scale of the instances) consistent with the initial instances, or face the same investment, technological and/or other barriers as the initial instances:

- Project internal rules frames the socio-economic background of the project participants (owned by small holders - less than 20 hectares) and the requirements on the parcel characteristics (not deforested in the last 10 years; not be cleared of native ecosystems within the 10-year period prior to the project start date, as set out in section 3.1.6. of the VCS AFOLU requirements; not falling under "forest" category as defined by Colombian DNA) thus guaranty additionality.

Supporting document:

VCS_Regenerating Colombian Coffee Ecosystems_PDD_v2.0.docx

ECOCERT Assessment of PP responses: The project proponent has provided detailed explanation in the PD on how the set of eligibility criteria defined for inclusion of new instances in the grouped project complies with VCS standard requirement 3.4.9.

Status: Closed

CAR6 dated 06/17: Methodology AMS 0007 and section 2.2 of the PD

The list of relevant tools applicable for the project does not mention some relevant tools such as the tool for the estimation of the non-CO2 emissions which is relevant for the project. The project proponent declares that no burning of biomass is attributable to the implementation of the project activity. However, according to the tool, non-CO2 GHG emissions resulting from any occurrence of fire within the project boundary shall be accounted for each incidence of fire which affects an area greater than the minimum threshold area reported by the host Party for the purpose of defining forest, provided that the accumulated area affected by such fires in a given year is $\geq 5\%$ of the project area. The project proponent is asked to complete the list of relevant tools according to the methodology applied and to justify the applicability conditions if any.

Timeline for Conformance: Prior to validation

Client Response: FNC producers are very aware of the risk of slash and burn practices and do not use such agricultural practices. For the few times it's happen, those slash and burn practices are performed by nonmembers of the project. The emission source account in this methodology is burning

of wood biomass and this source is not expected to happen. However, if forest fires happen in the project area, it will be monitored and determined by the methodology.

Since 2014, fires and drought episodes occurring on the parcels of the project have been monitored and registered in the planting database. In the reforestation project, records show that 3 parcels out of 5091 were affected by fires between 2014 and 2017, and a total of 990 trees died because of fires and drought episodes, out of 729 063 planted, i.e. 0,2% of the total number of trees, which can be considered as 0,2% of carbon stocks (even distribution of fires on all species), all of them in the summer of 2015 that have been exceptionally dry. Moreover, thanks to the dispersion of the reforested parcels the spread of fires from parcels to another is very unlikely. Considering the analysis, the significance of fire risk is estimated to be less than 1%.

The list has been updated.

A/R Methodological tool 08 "Estimation of non-CO2 GHG emissions resulting from burning of biomass attributable to an A/R CDM project activity (Version 04.0.0): This tool is used for burning of biomass and forest fires and will be used in case of occurrence of fire within the project boundary.

Supporting document:

VCS_Regenerating Colombian Coffee Ecosystems_PDD_v2.0.docx

ECOCERT Assessment of PP responses: The project proponent has updated the PD in order to include the relevant tool "Estimation of non-CO2 GHG emissions resulting from burning of biomass attributable to an A/R CDM project activity (Version 04.0.0)". The updated PD indicates that the tool will be used to estimate non-CO2 GHG emissions if fires occurred

Status: Closed

CAR7 dated 06/17: Additionality

The project proponent has not provided enough information permitting to confirm the existence of barriers identified. The evidence provided in order to justify the existence of a barrier shall also demonstrate that the conditions at the origin of the barriers are present in the region and have a relation with the local context of the project and/or the project participants. The project proponent is asked to implement the corrective action necessary to resolve this finding and to provide the necessary references to justify the barriers identified for the additionality assessment. Furthermore, the project proponent shall explain how the project activity proposed contributes to overcome these barriers.

Timeline for Conformance: Prior to validation

Client Response: The additionality section of the project design document has been updated.

Supporting documents:

Investigacion en Semillas Forestales.pdf

2005.salazar.cadenamadera.colombia.centrodoc_1140.pdf

Agroforesteria y sistemas agroforestales - CENICAFE.pdf

VCS_Regenerating Colombian Coffee Ecosystems_PDD_v2.0.docx

ECOCERT Assessment of PP responses: Section 3.2.5 of the PD (doc. Ref. 01) has been updated to include additional references and explanation on how the proposed project activity contributes to overcome identified barriers.

Status: Closed

CAR8 dated 06/17: Section 1.11 from PD
According to section 1.11 from PD the project is framed with national laws and regulations. However, the project proponent does not indicate how the project is in compliance with this legal framework
Timeline for Conformance: Prior to validation
Client Response: The proposed project activities are all within the existing national and regional legal framework of the Government of Colombia. Project activities are implemented in the framework constituted by the domestic legal regulations related to the forest sector, set out in Law 99 of 1993, the National Renewable Natural Resources and Environmental Protection Code (Decree 2811 of 1974)¹, and the General Forest Act (Law 1021 of 2006)². These laws govern the development of timber yielding and non-timber yielding forest resources, under the principle of sustainability, giving priority to the protection of the biodiversity, the preservation of the associated environmental services, and the benefits to the community in the concerned areas. Additionally, the Corporaciones Autonomas Regionales and National Parks of Colombia also endorsed the project, through an evaluation survey, specifying that the project: - is operated in accordance with Colombian national and regional legal framework - does not threaten the existence of high value species - has a positive impact on the environment and ensures its sustainability Supporting documents: 2017.04 Opinion Proyecto Agroforesteria Colombia - CRC Cauca.pdf 2017.04 Opinion Proyecto Agroforesteria Colombia – CORPONARINO.pdf 2017.04 Opinion Proyecto Agroforesteria Colombia - Parques Nacionales Naturales Cauca.pdf Cert_Pur_LaSierra_2016 Cert_Pur_Rosas_2016 Certificados Municipalidades Narino 21092016 Carta ICA - certificacion CORSAVIDA.pdf
ECOCERT Assessment of PP responses: The project has provided additional explanation and documents supporting the statement that the project is framed with national and regional legislation. The information permits to conclude that the project is in compliance with national and local laws and regulations.
Status: Closed

CAR9 dated 06/17: GHG baseline & project estimations
The project proponent is asked to justify the choice of parameter used for the estimation of baseline and project GHG emissions and removals. If local or national data available, the project proponent is asked to justify why these data were not used instead of international data (IPCC data). The project proponent is also asked to clarify some of the sources provided in table 5 of the PD. For some parameter the information provided is confusing (i.e. Degraded fallows; annual crops) as two different sources are provided (IPCC 2006 and IPCC 2003). In the case of the land use Degraded fallows, the project proponent is asked to clarify why the value provided (12.1 t d.m. ha⁻¹) does not correspond to the value used in the Excel workbook for GHG estimations. Further, in the estimation of the <i>baseline removals</i> and the <i>GHG removals in baseline</i>

¹ <http://redjusticiaambientalcolombia.files.wordpress.com/2014/04/decreto-ley-2811-de-1974.pdf>

² The complete texts of these laws are available at: <http://www.minambiente.gov.co>

sinks the information provided in tCO₂e does not correspond to actual tCO₂e as the appropriate factor conversions have not been applied.

Timeline for Conformance: Prior to validation

Client Response: Local and national data was available for carbon stocks in secondary forest. As presented in the “Annex_Growth model” sheet, the local references mentioned values of 200 to 239 tdm/ha. The 2006 IPCC data of 150 tdm/ha have been preferred to remain conservative and based on our experience on previous projects.

A model including natural regeneration and annual crops cultivation has been used to estimate the average carbon stocks in degraded fallows, as detailed in the sheet “Annex_degraded fallows”. It uses reference values of MAI for natural regeneration, Root to shoot ratio in natural regeneration, and carbon stocks in annual crops. It has been considered that the most relevant value for MAI and Root to Shoot ratio in natural regeneration was the IPCC, GHG for LULUCF 2003, while the most relevant value for carbon stocks in annual crops was IPCC guidelines 2006. Natural regeneration was more thoroughly addressed in the document from 2003 than in the document for 2006.

The value use for carbon calculations was of 19.2 tdm/ha, as calculated in the “Annex_degraded fallows” sheet of the carbon calculations.

The appropriated conversion factors have been applied and the baseline removals and the GHG removals in baseline sinks have been recalculated. The values have been corrected in the PDD.

Supporting document: VCS_Regenerating Colombian Coffee Ecosystems_PDD_v2.0.docx VCS Colombia_GHG calculations_v3.0.xlsx

ECOCERT Assessment of PP responses: The project proponent has provided the justification to the choice of parameters and has conducted the required corrections in the Excel workbook on GHG calculations (doc. Ref. 02).

Status: Closed

CAR10 dated 06/17: Project management

During the inspection conducted to the project area it was found that some producers have not follow the model of plantation recommended by the project proponent, resulting in very important densities of plantation that could affect the coffee productivity and result in a potential loss of biomass in the future. Additionally, it was found that some producers gave some trees to other producers that were not in the project. These new areas were integrated into the project after assessment from the field technicians on eligibility criteria, however the procedure to identify and include new parcels in the project defined by the project proponent was not respected.

Timeline for Conformance: Prior to validation

Client Response: The main focus of the project technical team during the first phases was the establishment of the plantations, the registry of planted areas in a database, and the implementation of technical assistance and trainings focused on planting, weeding, and pruning techniques.

PUR Projet strengthened the technical assistance strategy with a focus on training the technical teams on the management requirements in agroforestry systems to avoid potential loss of coffee and biomass productivity in the future. - Training of the technical teams on the interspecific interactions in tropical agroforestry systems (coffee – trees) have been done by PUR Projet’s staff at headquarters of each instance - The technical teams attended joint workshops for the harmonization of knowledge and practices on an annual basis - Internal rules of the project and the procedures to include new parcels also have been clarified, completed and socialized with the technical team and the farmers - From now on, the technical assistance and trainings to farmers will have a stronger emphasis on the management (planting model, pruning, etc.) of the agroforestry systems. - At the cooperatives and farmers organization level, more emphasis will be made on the specific internal rules of the projects.

PUR Projet will also develop, jointly with the FNC, a complete and detailed training plan on the forestry management. The technical team and the farmers will be trained on the common principles for forestry management (structure and organization of the supply chain, FSC certification) and further detailed elements (minimum DBH and Age for cut per specie, chain of custody at field level).

Supporting documents:

Agroforesteria - Guia de procedimientos - COLOMBIA version 2017.pdf

Reglas Internas - Colombia 2017.pdf

ECOCERT Assessment of PP responses: The project proponent has provided the adapted procedures and rules developed for the project and used by the technical teams. New rules precise the fact that the planting area and the number the trees to be planted will be decided with the technician and that once the tree distributed they cannot be given to other producer or planted in an area different from the area previously identified. Records of meetings for the review with technical teams of these procedures and rules were provided to ECOCERT.

Status: Closed

CAR11 dated 06/17: Risk assessment

The project proponent is asked to justify the mitigation measure proposed on section 2.1.g). No evidence of such action could be presented by the project proponent at the time the validation audit was conducted. Furthermore, the project proponent is asked to clarify why in section on project longevity, it is indicated that the project will have a timber exploitation component including an FSC certification. However, during the visit and interviews with the FNC it was indicated that the project has a conservation objective. In general, the project proponent is asked to provide references to information provided in the risk assessment report.

Timeline for Conformance: Prior to validation

Client Response: PUR Projet will work with a Colombian company specialized to land titling process to help the producers to get land title. To be conservative the risk rating has been changed from -2 to 0.

Supporting document: Colombia Non-Permanence Risk Report – v2.0.docx Colombia Risk Report Calculation Tool – v2.0.xlsx

ECOCERT Assessment of PP responses: The relevant indicator has been set up to 0 in the new version of the Non-permanence risk report (doc. Ref. 04).

Status: Closed

CAR12 dated 08/17: GHG baseline & project estimations

The project proponent is asked to justify the choice of parameter used for the estimation of project GHG emissions and removals. If local or national data available, the project proponent is asked to justify why these data were not used instead of international data (IPCC data).

Further, the root-to shoot ratio indicated in table 7 of the PD (0.34) does not correspond to the value found in the indicated source of information. This value also does not correspond to the value used in the Excel workbook on GHG estimations (doc. Ref. 02). In the same way, the age of first commercial cut indicated in the PD as being 20 years does not correspond to the value of 10 years used for the estimations.

Additionally, the project proponent is asked to provide justification for the use of the parameter aboveground biomass in forest plantations =150 for the estimation of GHG project removals based on a density of 700 trees/ha. Furthermore, the project proponent shall provide reference to justify the

assumption that the same parameter total biomass / ha could be applied to different densities of plantation.

Finally, the total GHG removals indicated in sections 1.7 and 3.4 of the PD do not correspond to the results provided in the Excel workbook on GHG estimations. The LTA calculation is not provided in the relevant document.

Timeline for Conformance: Prior to validation

Client Response:

Local and national data was available for carbon stocks in secondary forest. As presented in the “Annex_Growth model” sheet, the local references mentioned values of 200 to 239 tdm/ha. The 2006 IPCC data of 150 tdm/ha have been preferred to remain conservative and based on our experience on previous projects.

TABLE 4.4 RATIO OF BELOW-GROUND BIOMASS TO ABOVE-GROUND BIOMASS (R)				
Domain	Ecological zone	Above-ground biomass	R [tonne root d.m. (tonne shoot d.m.) ⁻¹]	References
	Tropical rainforest		0.37	Fittkau and Klinge, 1973

Root-shoot ratio	0.37	2006 IPCC Gu ratio of below-g
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The value in the indicated source of information (IPCC 2006) corresponds the one used to calculate the GHG removals (0.37). Table 7 has been corrected in the PDD.

The value used for GHG calculations is of 10 years. Value has been corrected in the PDD.

As presented in the “Annex_growth model” of the GHG calculation file, the value of 150 tdm/ha was used after consulting 9 scientific references for the project's area (Please see below for the full references for articles mentioned as “Biodiversity 1 / 2 / 3). As explained below, the 2006 IPCC value for Andean forests came out to be the most adapted to our project's context.

Forest type	Localisation	LT AGB tdm/ha	R tdm/tdm	Total tdm/ha	MAI tdm/ha/year	Range MAI tdm/ha/yr	Credits TCO2eq	Source
Forest plantations	Americas	100	0,2	120	10	8-40		IPCC_Subtropical humid
Forest plantations	Americas	100	0,42	142	18			GPG LULUCF_Tropical moist deciduous / Subtropical moist deciduous
Forest plantations	Americas	100	0,2	120	13			IPCC 2006_Forest land_Tropical moist deciduous
Forest plantations	Americas	150	0,42	213	17			GPG LULUCF Tropical wet (>2000 mm)
Forest plantations	Americas	150	0,37	206	20			IPCC 2006_Tropical rainforest
Andean natural forests	Project Area	211						Biodiversity_1
Secondary forest_projection 40 years	Rio Porce	200	0,34	268				Biodiversity_2
Primary Forest	Rio Porce	229	0,34	307				Biodiversity_2
Natural forests		239						Biodiversity_3: Bosque humedo premontano

The long term biomass stock, or maximum possible biomass per hectare, is determined by the available resources in the environment, and thus by pedoclimatic conditions (soil, precipitation, temperature, sunshine). After a bibliography review, the value of 150tons of dry matter per hectare for above ground biomass (2006 IPCC value for Andean forests) was retained to be the most adapted to our project's context, as it was the context that fitted the most the project location, and it was below the average of the other value, thus guaranteeing conservativeness. The Mean Annual increment considered was of 10 tdm/year/ha, as justified in table 7.

For the calculation of GHG removals, the mean annual increment of each parcel was adjusted based on its density. A study about tree diversity⁽⁵⁾ conducted in seven locations in the Amazon basin found one instance over 700 trees/ha (842), 1 between 600 trees/ha and 700 trees/ha (650), and 5 below 600 (minimum 493). Based on those results and given that forests in the project location - tropical montane areas – have a lower overall tree density than the Amazon basin, 700 trees / ha was chosen as a conservative value for the reference number of trees per hectare, at which the mean actual increase of biomass reaches the chosen reference level of 10 tdm/year/ha. For densities over 700, the same mean actual increment have been considered. For lower densities, the mean annual increment has been adjusted linearly to the tree density.

Therefore, in the GHG removals calculations, though the same long-term biomass stock per hectare have been applied for all plots (consequences of similar pedoclimatic conditions), the parcels with lower densities (due to initial low planting density and / or mortality) never reach the maximum theoretical level of 150 tdm/ha within the project duration.

Supporting documents and references:

Biodiversity 1: Alvarez-Davila E, Cayuela L, Gonz lezCaro S, Aldana AM, Stevenson PR, Phillips O, et al. (2017) Forest biomass density across large climate gradients in northern South America is related to water availability but not with temperature. PLoS ONE 12(3): e0171072. <https://doi.org/10.1371/journal.pone.0171072>

Table:

Table 1. Mean and standard deviation of aboveground biomass (AGB) across geographic regions of Northwest South America.

Region	N	AGB (Mg ha ⁻¹)		BA (m ² ha ⁻¹)		Stem density (N ha ⁻¹)		WD _{BA} (g cm ⁻³)	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Amazonia	52	259.7	51.8	26.9	4.5	658.5	135.9	0.63	0.04
Andean total	63	211.9	70.8	26.0	7.3	689.6	191.0	0.57	0.02
Andean (Quercus present)	19	229.9	85.8	28.3	8.9	798.6	258.2	0.59	0.03
Andean (Not Quercus present)	44	204.1	62.8	25.0	6.3	642.6	131.1	0.57	0.02
Inter Andean valleys (Dry)	16	44.5	20.0	8.9	4.5	297.3	151.9	0.60	0.06
Inter Andean valleys (Moist)	10	156.6	41.6	20.8	4.8	618.5	225.0	0.57	0.05
Caribbean	19	75.4	52.7	14.4	8.6	340.8	195.0	0.59	0.07
Choco	35	217.5	46.6	24.8	5.0	554.3	155.7	0.55	0.05
Orinoquia	5	138.7	43.3	16.9	3.3	402.0	64.9	0.53	0.03
	200	194.4	87.4	23.1	8.2	582.6	214.7	0.59	0.05

N = plot number per region; AGB Aboveground Biomass; BA = Basal area; WD_{BA} = Wood density weighted by basal area.

Biodiversity 2: Sierra & Al 2006, Total carbon stocks in a tropical forest landscape of the Porce region, Colombia, Elsevier.

Table:

Table 4
Estimates of aboveground biomass for different pools in primary and secondary forests

	Primary forests		Secondary forests	
	Mean biomass (Mg ha ⁻¹) ± S.D.	Percentage of TAGB	Mean biomass (Mg ha ⁻¹) ± S.D.	Percentage of TAGB
Trees > 1 cm	228.9 ± 37.8	92.4	43.9 ± 3.94	94.6
Palms (<i>O. bataua</i>)	8.9 ± 2.7	3.6	0	0
Other palms	5.8 ± 1.7	2.3	0.3 ± 0.3	0.6
Lianas	3.5 ± 0.7	1.4	1.3 ± 0.3	2.8
Herbaceous vegetation	0.6 ± 0.1	0.3	0.9 ± 0.1	1.9
Total aboveground biomass (TAGB)	247.8 ± 40.5	100	46.4 ± 4.3	100

Table 5
Estimates of biomass pools for primary and secondary forests

	Primary forests		Secondary forests	
	Mean mass ± S.D. (Mg ha ⁻¹)	Percentage of total mass	Mean mass ± S.D. (Mg ha ⁻¹)	Percentage of total mass
TAGB	247.8 ± 40.5	71.6	46.4 ± 4.3	58.6
Fine litter	6.0 ± 0.4	1.7	4.9 ± 0.3	6.2
CWD	6.1 ± 1.3	1.8	2.0 ± 0.5	2.5
Snags	2.7 ± 0.9	0.8	0.4 ± 0.1	0.5
TN	14.7 ± 2.2	4.2	7.3 ± 0.8	9.2
Coarse roots	67.1 ± 16.4	19.4	9.9 ± 1.3	12.5
Fine roots	17.4 ± 2.6	4.8	15.5 ± 2.1	19.6
TBB	83.7 ± 17.2	24.2	25.5 ± 3.0	32.2
TM	346.2 ± 52.8	100	79.2 ± 6.8	100

Biodiversity_3: Ministerio de Ambiente, vivienda y desarrollo territorial, Instituto de Hidrología Meteorología y Estudios ambientales - Estimación de la biomasa aérea usando datos de campo e información de sensores remotos Versión 1.0

Table:

Tabla 4. Estimación de las reservas de Carbono almacenadas en Bosques Naturales de Colombia por Zonas de Vida.

Zona de Vida	Símbolo	Media (tn C/ha)	STD (tn C/ha)	C (tn* 1000000)
Bosque húmedo Montano	Bh-M	81,92	21,31	2,37
Bosque húmedo Montano-bajo	Bh-MB	129,76	26,83	202,61
Bosque húmedo Pre-montano	Bh-PM	112,20	28,41	117,70
Bosque húmedo Tropical	Bh-T	131,87	25,94	5,926,10
Bosque muy húmedo Montano	Bmh-M	90,72	22,59	93,04
Bosque muy húmedo Montano-bajo	Bmh-MB	128,52	25,41	202,08
Bosque muy húmedo Pre-montano	Bmh-PM	118,73	21,70	280,63
Bosque muy húmedo Tropical	Bmh-T	135,29	37,51	659,10
Bosque muy seco Tropical	Bms-T	65,16	21,50	3,77
Bosque pluvial Montano	Bp-M	91,65	23,79	37,80
Bosque pluvial Montano-bajo	Bp-MB	131,64	24,15	17,49
Bosque pluvial Pre-montano	Bp-PM	127,70	23,11	59,24
Bosque pluvial Tropical	Bp-T	113,84	22,06	18,88
Bosque seco Montano-bajo	Bs-MB	95,48	26,08	1,91
Bosque seco Pre-montano	Bs-PM	83,21	18,65	0,28
Bosque seco Tropical	Bs-T	84,18	28,58	59,35
Otras Zonas de vida	-----	-----	-----	127,83

⁽⁵⁾ Gentry & Al 1988, Tree species richness in upper Amazonian forests, Missouri botanical garden. <http://www.pnas.org/content/pnas/85/1/156.full.pdf>

Figures have been updated in the PDD and the LTA has been corrected.

Supporting document:

VCS_Regenerating Colombian Coffee Ecosystems_PDD_v2.0.docx

ECOCERT Assessment of PP responses: The relevant corrections have been conducted in the updated Excel workbook on GHG calculations provided by the project proponent in response to this finding. The figures on the updated PD (doc. Ref. 01) have been corrected consequently. Relevant references have been provided. LTA calculation has been added to the Excel workbook on GHG calculations (doc. Ref. 02). Values on factors and parameters utilized by PP for the ex-ante estimation of project net GHG removals are considered conservative and adequate in the context of the project activity.

Status: Closed

CLARIFICATION REQUESTS

CL1 dated 06/17: Participation in other GHG emission programs

According to section 1.12.4 from the PD, the project does not participate and does not intend to participate in other GHG emission program. However, in section 1.2 the project proponent indicates that the project appertains to the CDM categories Grassland to forested land and Cropland to forested land. Furthermore, in section 1.5 the project proponent indicates a project start date for an AR CDM project. Section 1.12.3 indicates VERs generated by the project instead of VCUs. The project proponent is asked to clarify if the project is participating or will participate in another GHG program.

Timeline for Clarification: Prior to validation

Client Response: Indeed, the project does not participate and does not intend to participate in other GHG emission program. New instances will not be included in another GHG program. The PDD has been corrected.

Supporting document: VCS_Regenerating Colombian Coffee Ecosystems_PDD_v2.0.docx

ECOCERT Assessment of PP responses: The new version of the PD presented by the project proponent has been updated. This version does not make reference to other GHG program nor a type of emission reduction different from VCU

Status: Closed

CL2 dated 06/17:

According to AFOLU requirements section 3.1.6, activities that convert native ecosystems to generate GHG credits are not eligible under the VCS Program. Evidence shall be provided in the project description that for any ARR project areas were not cleared of native ecosystems to create GHG credits. The project proponent is asked to explain the assessment conducted in order to verify that the areas intended for the project meet this requirement.

Timeline for Clarification: Prior to validation

Client Response: As part of PUR Projet proceedings, the project technicians make a first visit to the parcel to be reforested before planting, and they make sure that the area fulfils the eligibility criteria of AFOLU requirements.

Parcels to be planted are visited once prior to the distribution of the tree seedlings. This first visits includes the recording by the technician of the land-use history for as far back as possible (and minimum 10 years), and the characterization of the pre-existing tree-cover. This ensures that the parcels chosen, to be included in the project area, fulfill the eligibility criteria (not cleared of native ecosystem within the last 10 years, less than 30% pre-existing tree cover and 5m of average tree height). This information is then aggregated and saved in the plantation registry.

The PDD has been corrected.

Supporting document: VCS_Regenerating Colombian Coffee Ecosystems_PDD_v2.0.docx
ECOCERT Assessment of PP responses: The project proponent has provided the clarification required.
Status: Closed

CL3 dated 06/17: Project crediting period and Management plan
The project proponent is asked to provide a project management plan with clear indication of activities to be implemented along the entire project crediting period.
Timeline for Clarification: Prior to validation
Client Response: To clarify the activities that will be implemented along the entire project crediting period PUR Projet provided a project management plan.
Supporting documents: Project Management Plan – Project Activities.xlsx Project Management Plan – Proceedings Plantation Wave.pdf
30.04.2018: PUR Projet provide a more detailed information about the activities to be implemented in the framework of the forestry management and about the trainings of the producers related to the forestry management.
Supporting documents: Etapas MF_ Colombia v1.0.xlsx 2. PFS_Technical Sheets_Colombia_v1.0.pdf
ECOCERT Assessment of PP responses: 30.03.2018. The audit team considers that the document provided by the project proponent (project management plan-project activities) does not contain enough information concerning the activities that will be developed in the frame of the project implementation. The document provided only provide general information on planting and monitoring but no detail is provided on maintenance and harvesting practices even if this last activity is being contemplated by the ARR project activity. According to the AFOLU requirements, Projects with tree harvesting shall demonstrate that the permanence of their carbon stock is maintained and shall put in place management systems to ensure the carbon against which VCU's are issued is not lost during a final cut with no subsequent replanting or regeneration. The project proponent is asked to provide a more detailed management plan with specific information on activities to be implemented during the project lifetime.
28.05.2018: A document with detailed information on activities that will be implemented by the PP during the project lifetime have been provided to the team (doc. Ref. 46).
Status: Closed

CL4 dated 06/17: Project location and conditions prior to project initiation
The project proponent is asked to provide clarification on the information provided in section 1.9 of the PD related to climate conditions. According to the PD, following the Köppen Classification System, the climate present in the project area is of AM type. However, the geographic area defined by the project proponent for the implantation of the project presents many climate types different from the AM type.

The project proponent is asked to clarify this point and if necessary, to implement the corrective action necessary to resolve this finding.
Timeline for Clarification: Prior to validation
Client Response: The proposed A/R CDM project activity takes place in the Tropical Rainforest (IPCC, 2006 – Chapter 4: Forest Land; GPG LULUCF 2006, IPCC). To avoid any confusion or misunderstanding any reference to the Köppen Classification System have been removed. The PDD has been corrected. Supporting document: VCS_Regenerating Colombian Coffee Ecosystems_PDD_v2.0.docx
ECOCERT Assessment of PP responses: section 1.9 of the updated PD presented to ECOCERT has been modify to include clarification on the information provided on Climate conditions in the project area.
Status: Closed

FORWARD ACTIONS REQUESTS

FAR1 dated 06/17: Project management
The project proponent is asked to provide, by the time of the first verification, new monitoring tracks on the parcels monitored by the technician Wilfredo Rodriguez. During the inspection to the areas planted by the project it was found that in one parcel the track did not correspond to the parcel planted. According to the producer, the technician did not perform an accurate track measure.
Client Response: All the track did by the technician Wilfredo Rodriguez will be verified (double check) and the project coordinator will reinforce the technical skills of the FNC staff about the GPS tracks collection and management.
FAR2 dated 05/18: Emissions trading programs and other binding limits
The project proponent shall monitor the implementation of the Colombian iNDCs and the development of the GHG national registry, in order to ensure that the project is not taking into account in the iNDCs objectives.