

LOS EUCALIPTUS

VERIFICATION REPORT 2018

Document Prepared By ECOCERT SA

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Summary:

This report describes the verification audit of the Iberpapel Silvipastural System on Degraded Land project. This project activity is implemented on degraded lands, which are expected to continue to degrade in the absence of the project and hence the land cannot be expected to revert to a non-degraded state without human intervention.

Forests will be based on Eucalyptus globulus plantations managed with a rotation length from 10 to 20 years depending on achieved growth rates and access to wood market. Some areas were already harvested for production of pulp for cellulose. The plantations are established on land previously used for cattle grazing. The implementation of the project

activity is not causing any displacement of cattle, on the contrary, the combination of grazing within project boundaries and the improvement of pastures on land outside project boundaries but under control of project participants will result in the maintenance or even increase of the cattle population as in the baseline.

The main objectives of the project activity are wood production, land restoration and carbon sequestration through afforestation. Forest plantation was completed by year 8 of project and forests are permanently replanted after clear-cut harvest. To avoid trees damage, cattle is allowed to enter the forest areas only sixteen months after planting. Silvicultural practices applied are compatible with FSC standard. Planted forests is removing carbon dioxide from the atmosphere and storing it in different carbon pools (living above-ground and below-ground biomass, soil organic carbon, litter, and dead wood). Monitoring event covers carbon stock changes in above ground biomass in direct way, while below ground biomass, litter and dead wood pools are calculated indirectly, based on above ground biomass. During the course of the verification audit 6 findings were raised. The issues raised in these findings were successfully resolved, resulting in their closure. The project complies with all of the verification criteria, and the assessment team has no restrictions or uncertainties with respect to the compliance of the project with the verification criteria. The GHG reductions and removal enhancements claimed for the reporting period are free of material error

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INTRODUCTION

1.1 Objective

The objective of the verification was to conduct an independent assessment of the Los Eucaliptus Iberpapel Silvipastural System on Degraded Land project to determine whether the quantification of GHG emissions reductions or removals for the period 10th September, 2004 to 23 March, 2018 complies with the verification criteria as set out in the guidance documents listed in Section 1.2 of this report.

1.2 Scope and Criteria

In accordance with Section 4.3.4 of ISO 14064-3:2006, the scope was defined as follows:

- The project and its baseline scenarios;
- The physical infrastructure, activities, technologies and processes of the project;
- The GHG sources, sinks and/or reservoirs that are applicable to the project;
- The types of GHGs that are applicable to the project; and
- The reporting period, as discussed in Section 5 of this report.
- In accordance with Section 5.3.1 of the VCS Standard, the criteria for verification were the VCS Version 3 program documents, including the following:
 - VCS Program Guide
 - VCS Standard
 - VCS AFOLU Requirements
 - VCS AFOLU Non-Permanence Risk Tool

Unless otherwise indicated, the assessment was performed against the most recent version of the relevant VCS guidance document. Ref 1, 8 to 10, 12 and 13

The assessment was also performed against the CDM methodology, AR-ACM0001 "Afforestation and reforestation of degraded land" version 05.2.0, EB 65.

1.3 Level of Assurance

In accordance with Section 5.3.1 of the VCS Standard, the level of assurance of this report is reasonable.

1.4 Summary Description of the Project

The project comprises a total 4,999 ha of land previously under extensive grazing by beef cattle, on which afforestation for obtaining timber products and for stocking carbon dioxide from the atmosphere was established. The forests are to be managed on a 10 to 20 year rotation of *Eucalyptus globulus*.

Ecocert team emitted a corrective action (CAR 3, closed) regarding this point:

According to the information provided by the project proponent in the monitoring report, the area of strata and monitoring of the strata were done for the monitoring event. However different numbers are found throughout the audit regarding years of stratum and then inventory plots number.

According to the section 6.2 of AFOLU requirements, the project proponent is asked to correct and give the final table of strata, overlaying map from validation and map of the final size of area of the project that will be fixed after the first verification for the project lifetime.

VERIFICATION PROCESS

2.1 Method and Criteria

The verification was performed through document review, interviews with relevant staff (Table 1) and on-site inspections, as discussed in Sections 2.2 through 2.4 of this report. At all times, the project was assessed for conformance to the criteria described in Section 1.2 of this report. As discussed in Section 2.5, findings were issued to ensure that the project was in full conformance to all requirements.

Prior to the site inspections documented in Section 3.2 below, a sampling plan was assembled that highlighted the areas of highest risk of material error. These included the inventory and quantification procedures and land area determinations. A verification plan was constructed that took the sampling plan into account.

2.2 Document Review

The monitoring report and supporting documentation were carefully reviewed for conformance to the verification criteria. The verification was performed as an audit where the project description, monitoring report and any supporting documents were reviewed, cross checked and compared with identified and stated requirements. The description and accounts of this review are described in detail in the sections below.

In addition to the monitoring report, the following written documents were reviewed to ensure conformance of the project to the VCS rules and the methodology

Ref.	Title Author date	Electronic Filename
1	VCSA	AFOLU Requirements v3.6
2	Augustin Inthamassou	Iberpapel carbon stock calculation_01042018.xlsx
3	Augustin Inthamassou	Los Eucaliptus 11042018.kmz
4	Augustin Inthamassou	Los Eucaliptus-Non-Permanence-Risk-Report-Template-v3.2 10042018
5	Factor C02	MONIT_REP_961_30APR2009_25MAR2013
6	Augustin Inthamassou	Monitoring Report Los Eucaliptus, v3.4_11042018
7	Factor C02	PROJ_DESC_961_11SEP2012
8	VCSA	VCS_Standard_v3.7
9	CDM-EB	ar-am-tool-02-v1
10	CDM-EB	ar-am-tool-08-v4.0.0
11	Factor C02	Financial Viability and Opportunity cost verification GFP2
12	CDM-EB	EB75_repan30_AR-ACM0003_ver02.0
13	Factor C02	Cash flow_Afforestation_60 years_SE and N.xls
14	VCSA	AFOLU_Requirements_v3.6
15	Notarial act , Uruguay	Land contract and ownership: "LESA-CARBOSUR"
16	Minsiterio del Ambiamte, Uruguay	Uruguay Forest Law Forestry Laws and Decrees: a) Law N°15939, Law N°16002, Law N°16170, Law N°16226, Law N°16906, Law N°16466 (Environment Impact Evaluation), Law N°15239 (Soil conservation), Decree N°333/990 (Soils with Forestry admission), Decree N°504/005 (Fire prevention and combat). b) Labour applicable laws and decrees: c) Law Decree N°14785, Decree N°647/978, Law N°13619, Law N°10.471, Decree N°372/999. -International Conventions applicable:

Ref.	Title Author date	Electronic Filename
		a) CITES b) OIT Conventions (N°29, 87, 98, 100, 105, 111, 138, 182) c) Convention on Biological Diversity d) United Nations Convention to Combat Desertification e) United Nations Kyoto Protocol.
17	FSC	FSC certification Los Eucaliptus (fsc database)

2.3 Interviews

Interviews constituted an important component of the audit process. The following personnel associated with the project proponent and/or implementing partner were interviewed. The phrase “throughout audit” under “Date Interviewed” indicates that the individual in question was interviewed on multiple occasions throughout the audit process. The primary interviews for this verification audit were conducted during the office meeting described below. The verification team presented questions to the project development team. The questions were addressed by the most appropriate member of the project development team. In addition to the office meeting, the verification team maintained a continuing dialog via email and phone conversations with Carbosur throughout the audit.

The verification team emitted New Information Requests at the opening meeting about project ownership and agreement with local livestock farmers.

No information was yet provided by the project proponent with the monitoring report that shows the continuity of the ownership and the control of area and emitted at the closing meeting a corrective action request (CAR 4).

The project proponent is asked to provide before the issuance of the draft report the proof of ownership and agreement with local livestock owners.

Date	Name	Title / Role / Institution
Throughout audit	Agustin Inthamoussu	Carbosur Ltda.; Project development team leader
On-site visit	Victoria Petrini	Iberpapel SA

Opening meeting	Francisco Cabello	Iberpapel SA
Opening meeting	Alvaro Pérez	Pike and Co
Throughout the audit	Yamile Tejera	Pike and CO

Table 1: List of staff interviewed

2.4 Site Inspections

A Site Inspection in Las Molles was conducted from on 18th and 19th, 2018. An office meeting was held in April 18th in the office of Carbosur, Ltda in Montevideo, Uruguay followed by visits to selected plantations on 18th to 19th of April and a closing meeting held on 20th of April at Carbosur's Montevideo office. The objectives of the office visit were:

- To interview project personnel to gather information pertaining to project implementation and monitoring procedures;
- Discuss with project personnel issues that were raised by the verification team during review of project documents including the Monitoring Report;
- As certain whether any Methodology Deviations were implemented during the monitoring period; Interview project personnel to gather information pertaining to Project Description Deviations;

Review the inventory methodology, data processing procedures, and quantification methodologies employed during development of the monitoring report

The objectives of the field inspections performed were to:

- Select samples of data from on-the-ground measurements for verification in order to meet a reasonable level of assurance and to meet the materiality requirements of the project, as required by Section 5.1.3 of the VCS Standard;
- Perform a risk-based review of the project area and project activities to ensure that the project conformed to the requirements of the VCS rules and the methodology throughout the monitoring period; and ensure that monitoring was conducted in accordance with the requirements of the validated monitoring plan, the methodology employed and the VCS rules.

The parcels chosen were remeasured with the same material and same staff that at the monitoring event by Pike and Co and controlled by Ecocert team.

2.5 Resolution of Findings

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

A Corrective Action Request (CAR) 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 verification 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 verification 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 prior to release the assessment report.

Following the conducted verification activities 5 CARs, 1 FAR were identified. Following responses provided by project proponent, all findings issued by the audit team during the validation & verification process have to be closed. In accordance with Section 5.3.7 of the VCS Standard version 3, all findings issued during the verification process, and the impetus for their closure, are described in Sections 3 to 5 and Appendix I of this report.

A total of 6 findings were raised during the verification process: 5 CARs, 1 FAR

2.5.1 Forward Action Requests

One Forward action request was made to the Project proponent (FAR 1 see section 4.1), the verification team observed in the permanent plots of Las Molles parcel 403, a difference of 2 meters higher than the inventory values on every tree in the plot. Also the DBH appeared thinner than reported 5 months ago on other parcels.

However it doesn't affect the carbon stock and the error wasn't find on the other permanent plots monitored by the same team, the project proponent is asked to improve the procedure at next monitoring event.

The QAQC independent verification has to be done to avoid this discrepancy.

2.6 Eligibility for Validation Activities

Not Applicable

VALIDATION FINDINGS

Not Applicable

3.1 Participation under Other GHG Programs

3.2 Methodology Deviations

3.3 Project Description Deviations

3.4 Grouped Project

VERIFICATION FINDINGS

4.1 Project Implementation Status

The project's implementation during the reporting period was consistent with the Project Description. Extensive evidence that vegetation management activities are being implemented as described in the PD, including pruning and thinning, was observed during field reconnaissance. The verification team confirmed that the Project remains certified under FSC by visiting the FSC web site and confirming that the certification status of Los Eucaliptus S.A. is "valid".

The project is permanently being actualized in terms of harvestings and subsequent plantations. The first plantation occurred in 2004 and after 10 to 20 years rotation length, these stands were clear cut. The wood obtained from the harvesting was sold to other companies, as pulp-wood. After some months, the forest was re-established by managing the sprouts of the stumps. Normal operations includes leaving two or three sprouts (the thickets and straights) out of ten or twenty that each stump can have. All harvested areas and their management for each stand or farm can be visualized in the Geographical Information System.

It was demonstrated during validation, the project implementation does not and did not cause any displacement of activities. The only activity in the project area prior to the start date is extensive grazing by beef cattle, which continues to occur after project start.

The verification team confirms the implementation during on site visit.

The verification team visited and re-measured 6 randomly selected inventory plots during the field reconnaissance portion of the site visit. The verification team obtained printed maps and field data sheets for these plots to perform visual confirmation the accuracy of the mapping, to assess whether the plots could be relocated, to confirm that the inventory data for these plots were collected in accordance with the monitoring plan. The verification team found no discrepancies with respect to the mapping and was able to locate all of the selected sample plots. Some plot data on the field data sheets were not consistent with the height of trees on the plot, an indication that the data management system is not functioning adequately. The sampling intensity was sufficient to achieve a standard error of less than 10% of the estimated mean carbon stocks.

There was some evidence of bias or error with respect to the inventory measurements. The forest inventory measurements were taken by Pike and Co, a professional forestry consulting firm located in Montevideo, Uruguay. The project proponent responded adequately to this request of correction

As there is no emission trading system in Uruguay, the emission reductions and removals generated by the project have not become included in an emissions trading program or any other mechanism that included GHG allowance trading. As attested by Carbosur Ltda, the

project has neither received nor sought any other form of environmental credit, nor has it been rejected by another GHG program.

The forest area of the project slightly changed to 4,999 ha in the first verification. The difference is explained by the continuous upgrade of the project Geographical Information System, which resulted in the detection of some minor modifications. The area now is fixed for the whole crediting period of the project.

The new total area is presented in this verification with a detailed explanation of the modification, but the project boundaries will always be the same. The reduction in the forest area does not represent a reversal (according to the VCS document Program Definitions) or a catastrophic event, then the project participant did not communicate this to the VCS and monitored the loss.

Ecocert team emitted one Corrective action Request (CAR2) regarding the change of area:

QA/QC procedures described for the elaboration indicates a number of 78 plots. However, following the results from the analysis of data and accuracy assessment provided, the project proponent seems not to apply this sampling method. The project proponent shall clarify the sampling method utilized for verification and justify if this corresponds to the sampling method indicated in the validated QA/QC procedures and. Further, the project proponent shall justify the size of the sampling and correct the different numbers shown in the calculations table and the monitoring report.

The verification team can state after the field visit with a reasonable level of assurance that the project is not being implemented as described in the monitoring report and that the monitoring system implemented is incomplete at verification. The project proponent proposed immediate corrective actions that are satisfactory.

4.2 Accuracy of GHG Emission Reduction and Removal Calculations

Under the terms of the methodology, changes in carbon stocks under the baseline scenario can be assumed to be zero. Therefore, project GHG emission reductions and removals are based on project actual carbon stocks. The carbon pool considered were: above-ground tree biomass, below-ground tree biomass, dead wood, litter, and soil organic carbon.

Carbon in above and below ground tree biomass is calculated using the CDM tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities" Ref 10, as described in the project description. Forest inventory data including dbh and a sample of tree heights were collected as described in the monitoring report. Tree volume was calculated by applying a Tree Shape Factor to the volume of a cylinder calculated from dbh and tree height.

The appropriateness of the volume calculation method and TSR were demonstrated based on the tool “Demonstrating appropriateness of volume equations for estimation of aboveground tree biomass in A/R CDM project activities”. Volume was converted to biomass using the appropriate wood density and age-specific BEF factors that were approved at validation. Below ground biomass was estimated by applying root-to-shoot ratios calculated using the default procedure specified in the tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”, as approved at validation. Biomass of individual trees was summed to plot level, then to strata level. Strata level carbon stocks were weighted by area and summed. Biomass in dead wood and litter was calculated by applying the default percentages described in Section 3.3.4 of this report to the live tree biomass estimates.

Default values from Table 3 of the “tool for estimation of change in soil organic carbon due to the implementation of A/R CDM project activities” were adequate and applied to the soil strata.

The project developer applied a value of 0.7 for the relative stock change factor. This value is appropriate since the lands are degraded lands using the “Tool for the identification of degraded or degrading lands for consideration in implementing CDM A/R project activities”.

The verification team reviewed the calculation workbook used to calculate project carbon stocks and found the spreadsheet formulae, conversions, and aggregations were performed in accordance with the requirements of the respective tools, and that the data and parameters were applied consistently. The methods and formulae used are consistent with the project description except for the project description deviations that have been identified.

The verification team emitted a Corrective action request on the volume of VCUs resulting to the new calculation of size area. The project proponent corrected the table of VCUs calculation.

Baseline carbon stocks and leakage, are assumed to be zero, as allowed by the methodology and assessed at validation. Under the applicability conditions of the methodology only activity displacement leakage can occur, being the displacement of agricultural activities, which for the Project is cattle grazing. Under the methodology and associated tools, if displacement of cattle resulting from implementation of project activities would be onto lands that are considered degraded or degrading, then leakage can be assumed to be zero.

4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

The GHG removals for the project reporting period are based on forest inventory measurements and calculation procedures and factors that have been assessed by the verification team, as described in Section 4.2 of this report. The verification team has attained a reasonable level of assurance that these measurements and procedures, including the internal quality control measures such as check plots, were designed and have been implemented to the highest level of quality. The project proponent has enlisted 3 professional forestry consulting companies in the development of the project: Carbosur Ltda in development of the VCS project and the carbon offset calculations; Pike and Co to plan and manage forestry operations including land acquisition, selection of planting stock, silvicultural treatments and also to collect and process

the forest inventory data. The verification team interviewed personnel from these firms relevant to the project and confirmed their qualifications and expertise.

The verification team conducted a risk based sampling of the field inventory plots and data management systems to assess the reliability of the evidence, and the source and nature of the evidence for the determination of GHG removals. Forest inventory measurement data were transferred to electronic spreadsheets for analysis. Quality control procedures from the terms and References and 10% control of total measurements are missing.

The documents were transmitted to close this CAR (CAR 1).

Ecocert team emitted a CAR regarding the old version of the terms and reference describing all procedures for the monitoring:

The monitoring plan suggests the terms of reference for contracting Pike and Co to perform the monitoring. However, the terms of Reference shown was not updated. The Project Proponent is asked to provide The Terms of Reference corresponding to the second monitoring event.

The verification team reprocessed the calculation from tree measurement data to the GHG removal estimate and the calculations regarding the GHG removals reported in the monitoring report were reviewed.

The project relies on monitoring conducted by field crews and inventory data collected by inventory field crews and the frequency of calibration of monitoring equipment was also checked especially in inhomogeneous plantations (high tree height difference)

The verification team found, with a reasonable level of assurance that the evidence used to determine GHG removals is of sufficient quantity and appropriate quality.

However, the QAQC procedure of data control from Pike and CO on 10% samples of the entire permanent plots was not transmitted.

Ecocert team emitted a CAR. The Project Proponent states in the QA/QC procedure that 10% of the sampling plots have to be remeasured to check the quality of the inventory. However, no remeasurement was done. The project proponent is asked to follow the QAQC control procedure as stated in the Monitoring report (CAR 1).

The remeasurements were done to answer to this CAR.

4.4 Non-Permanence Risk Analysis

The verification team reviewed the Non-Permanence Risk Assessment provided at project validation. There has been no change regarding the status or applicability of any of the risk

factors since project validation, including political factors, socio-economic factors, environmental factors, or factors relating to implementation of project activities. The verification team therefore concludes that the default minimum 10% risk rating is appropriate for the current reporting period.

Please see Appendix 2 for a detailed description of the steps taken to assess the non-permanence risk rating determined by the project proponent.

SAFEGUARDS

5.1 No net harm

Iberpapel Silvipastural System on Degraded Land project does not cause negative environmental and socio-economic impacts.

5.2 Local Stakeholder Consultation

Iberpapel Silvipastural System on Degraded Land project does not follow a formal process for local stakeholder communication. There was no stakeholder consultation as this is a property of Iberpapel and Iberpapel have contracts with the farmers in the neighborhood for the use of grazing land for their livestock.

VERIFICATION CONCLUSION

The verification team has a reasonable level of assurance that the project and the GHG emission removals for the reporting period comply with the verification criteria set out in VCS Version 3. The project has been implemented in accordance with the project description, except for project description deviations which have been adequately described and determined by the verification team to be valid.

The verification team finds that the GHG removals in the amount of 761,124 tonnes, CO₂ equivalent, for the current reporting period are calculated in accordance with the requirements of the methodology and the VCS rules and are free of material error.

The project proponent, regarding the large error on the calculation has applied the good value of discount on its carbon credits volume:

"The error found in the field work was 63.4% and the methodology considers a discount rate of 21% in this case"

Verified GHG emission reductions and removals in the above verification period:

The VCS Registration and Issuance Process v3.5 Procedural Document, Section 4.1.7 shows the breakdown of VCUs into individual vintages within a verification period. Therefore the tradable

VCUs and Buffer pool contribution are calculated against the Total Net GHG emission removals for the monitoring period.as follows:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2005	0	579	0	579
2006	0	11,823	0	11,823
2007	0	14,926	0	14,926
2008	0	15,038	0	15,038
2009	0	28,497	0	28,497
2010	0	30,622	0	30,622
2011	0	33,871	0	33,871
2012	0	59,903	0	59,903
2013	0	83,327	0	83,327
2014..	0	90,048	0	90,048
2015	0	95,007	0	95,007
2016	0	114,662	0	114,662
2017	0	182,822	0	182,822
Total		761,124	0	761,124

APPENDIX 1: LIST OF FINDINGS

CLOSING MEETING 20/04/2018

FINDINGS

CORRECTIVE ACTION REQUESTS

CAR 1 dated 04/18: Monitoring Report 3.2 Data and parameter monitored

The Project Proponent states in the QA/QC procedure that 10% of the sampling plots were checked for the quality of the inventory.

However, no evidence of the remeasurement was found.

The project proponent is asked to produce proof of the QAQC control procedure as stated in the Monitoring report.

Timeline for Conformance: Prior to verification

Client Response: Between 16th and 23rd March, 2018, 99 plots were measured in diameter at breast height and total height. The field work was carried out by Pike & Co. consultancy firm. However, after updating the land use map, the project proponent realized that many plots were allocated outside the project boundaries and at the end 85 plots were considered for the carbon stock calculation of the project proponent.

As it was mentioned in the PD, the Project proponent performed the re-measurement of 10% of the sampling plots within the project area. This re-measurement was done by another staff member from Pike & Co. in order to demonstrate that the variables monitored do not differ with the change in personnel. The expert conducted the measurement on the 4th May, 2018.

The 8 plots re-visited and re-measured are:

Plot	Catastral Unit	Farm	Plantation year	Species	Date of measurement
P113	15281	SAN LUIS	2008	E GLOBULUS	04/05/2018
P134	70195	SAN LUIS	2009	E GLOBULUS	04/05/2018
P147	6047	SAN LUIS	2005	E GLOBULUS	04/05/2018
P38	17162	SALUS2008		E GLOBULUS	04/05/2018
P400	1931	LOS MOLLES	2012	E GLOBULUS	04/05/2018
P406	2008	LOS MOLLES	2011	E GLOBULUS	04/05/2018
P409	7031	EL GORDO	2016	E DUNNII	04/05/2018
P411	7031	EL GORDO	2014	E DUNNII	04/05/2018

The results from the re-measurement were statistically contrasted with the data obtained in the first monitoring event. A final report was prepared and the raw data is also presented as part of the analysis. This report is in Spanish and the following is the translation of its index is: 1) Introduction, 2) Methodology, 2.1) Data input and measurement, 2.2) Statistical analysis, 2.3) Maps, 3) Results, 3.1) Dasometric variables, 3.2) Statistical analysis, 3.2.1) Density, 3.2.2) DBH, 3.2.3) Height, 3.2.4) Total volume, 4) Conclusion.

Chapter 3.2.1, 3.2.2, 3.2.3 and 3.2.4 shows that there is no statistical difference in any of the variables considered between the measurements done in March and May, 2018, despite the time elapsed between them.

In addition to this, Pike & Co. prepared a SOP for Forest Measurements that summarizes the operational work performed for this inventory. The document is attached in this answer.

ECOCERT Assessment of PP responses: The response of the pp is satisfactory. The QAQC and SOP documents have been transmitted

Status: Closed

CAR 2 dated 04/18: VCS Monitoring report – data and parameters monitored

QA/QC procedures described for the elaboration indicates a number of 78 plots. However, following the results from the analysis of data and accuracy assessment provided, the project proponent seems not to apply this sampling method. The project proponent shall clarify the sampling method utilized for verification and justify if this corresponds to the sampling method indicated in the validated QA/QC procedures and. Further, the project proponent shall justify the size of the sampling and correct the different numbers shown in the calculations table and the monitoring report.

Timeline for Conformance: Prior to verification

Client Response: The estimation of the number of sampling plots was done with the Methodological Tool “Calculation of the number of sample plots for measurements within A/R CDM project activities” (Version 02.1.0), available at https://cdm.unfccc.int/methodologies/ARmethodologies/tools/ar-am-tool-03-v2.1.0.pdf/history_view

The first estimation of the number of sample plots was done with the information available: the information of species and area used for the validation. Other important parameters were the mean biomass stock and the standard deviation, which cannot be known before the measurement and bibliographic data was used.

This preliminary estimation of the number of sample plots resulted in 84 points to be measured in order to obtain an error lower than the benchmark (10%), according to the methodology (see table below).

Table 1. Estimation of the number of sample plots with the information of the PD (2011)

In this first estimation, the project developer decided to put at least 3 plots per stratum. The methodological tool accepts that the minimum value could be one plot, but in order to have a statically analysis three plots per stratum is considered.

The project developer estimated again the number of sample plots using different values. The main difference is the area, which includes some other area owned by the project developer. The new estimation considers a Mean Annual Increment of 12 m3/ha/year to estimate the Mean Biomass Stock and a standard deviation of 55%, both values are extremely conservative (almost pessimist). The result is a sample size of 73 plots in the same number of strata.

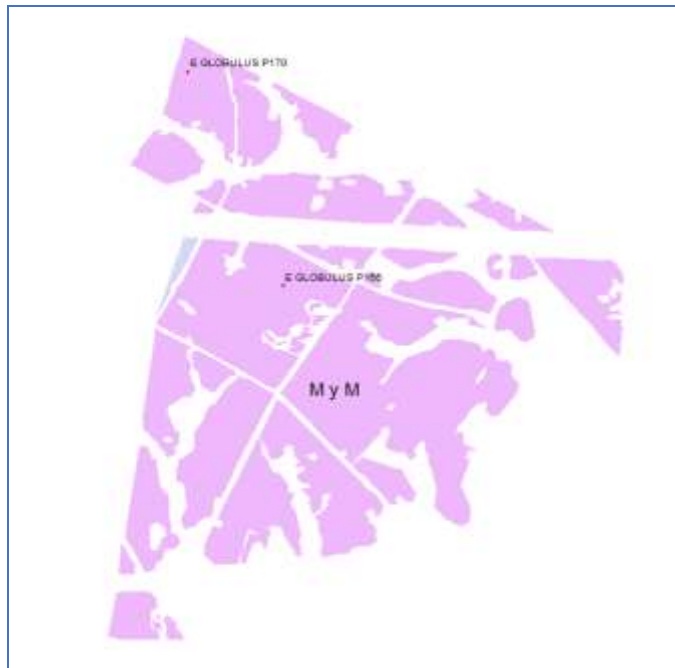
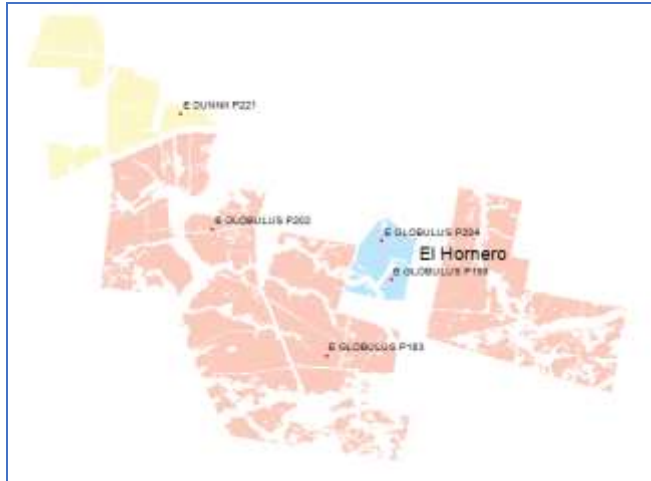
Table 2. Estimation of the number of sample plots with the information of 2018

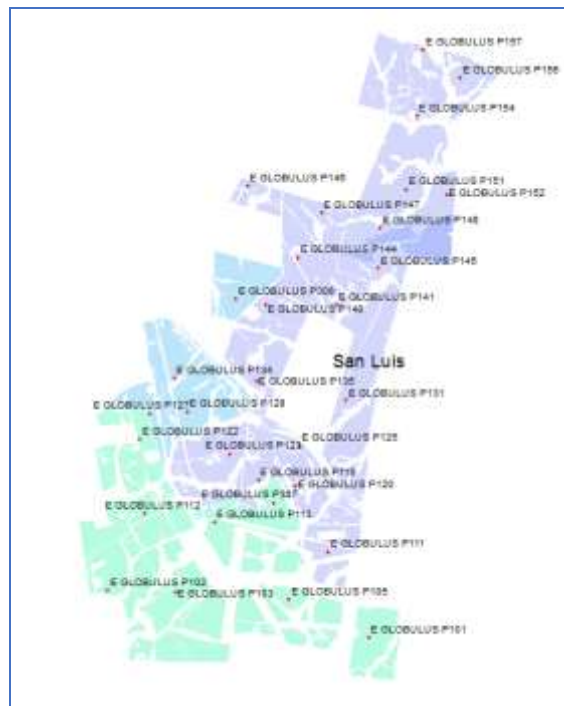
However, given the uncertainty associated the assumed values used in both estimations (area, biomass stock, standard deviations), the project developer decided to install arbitrarily many more plots: 99. Given that the cost of doing 73, 84 or 99 plots is similar, the project developer decided to assure that they doesn't need to re-visit the field to measure more plots because uncertainty is above benchmark. And 99 plots were installed in all strata.

The plots are installed with a random start within the project boundaries. All the plots are measured and recorded in the system. The sheet “1.Bomass” in the Excel sheet “Iberpapel carbon stock calculation_01042018.xlsx” shows the totality of measurements: 2153 trees measured in 99 plots in 13 strata.

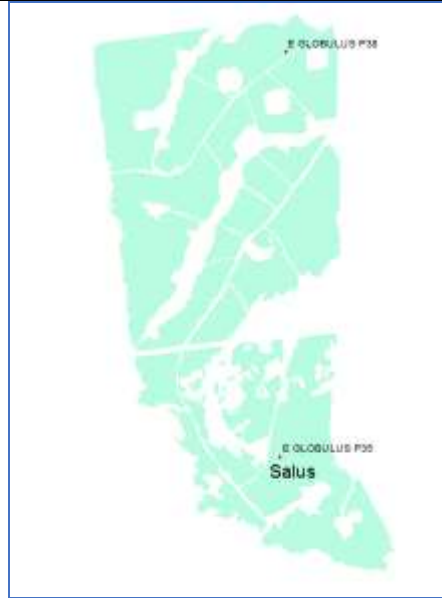
After the 99 plots are measured, the Geographical Information System was updated and the areas within the project corrected. The result is that 85 plots, out of the 99 installed, are within the project area. The rest are located in Los Eucalyptus property but in areas that were left apart because they did not comply with the methodology requirements (the analysis was done at validation but after some years it was done again for re-check). The actualization of the project boundary resulted in 4,999.07 ha. The difference between the area in validation and the area in verification is explained in the response to CAR 3.

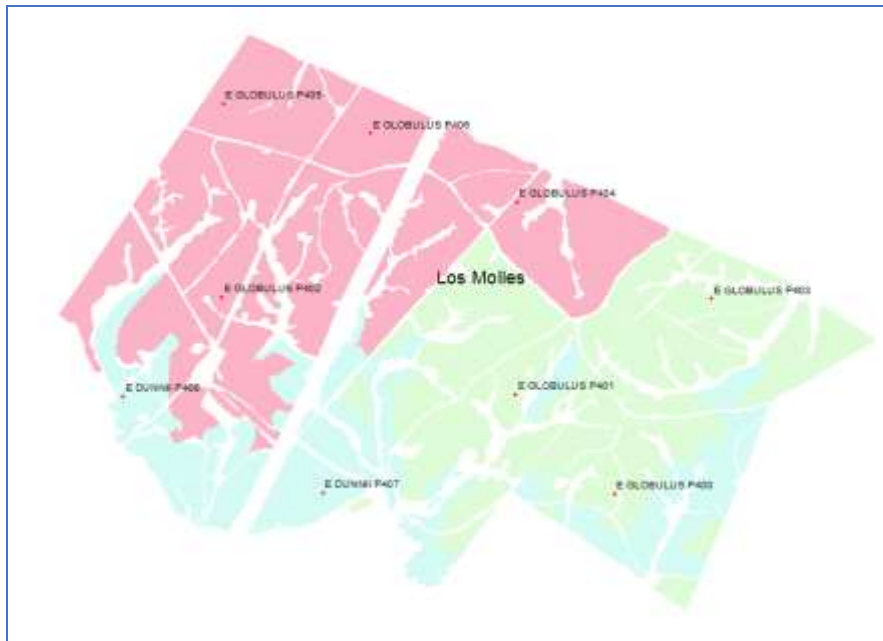
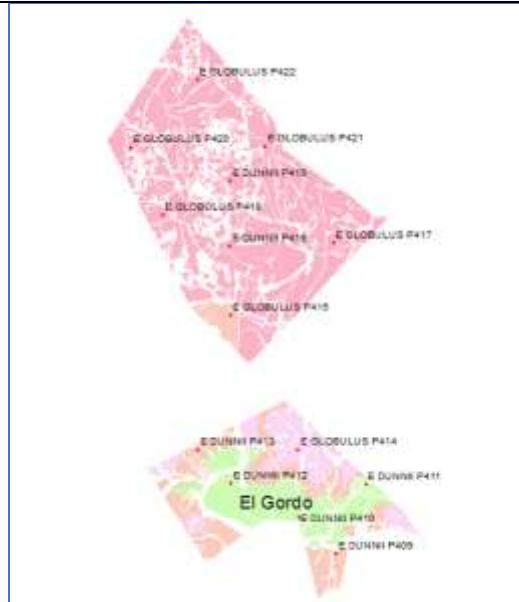
The following figures show each farm with the plots included in it.











The following table also shows the difference in the number of plots used along the verification process.

Farm	N plots total installed	N plots used for the carbon estimation	N plots mentioned in the PD	N plots (definitive values)
COSTAS DEL MOSQUITO	6	5	5	5
DON ALCIDES	2	2	2	2
DONIA SARA	14	8	8	8
EL GORDO	14	14	14	14
EL HORNERO	7	5	5	5
LOS MOLLES	9	9	2	9
LOS TOCAYOS	7	5	5	5
My M	3	2	2	2
SALUS	2	2	2	2
SAN LUIS	33	31	31	31
SOPHIE POINT	2	2	2	2
Total general	99	85	78	85

In conclusion, the monitoring report says that there are 78 plots, but it is an editorial mistake (not including 7 plots in Los Molles). At the moment of elaborating the Monitoring Report, the project developer hadn't updated the Geographical Information System. Once updated and knowing the exact project boundaries, the total amount of plots is 85 plots within Los Eucaliptus carbon project. The Monitoring Report is corrected accordingly.

The shapefiles about the project boundaries and the location of every plot had been provided to the verifier. As a consequence of this CAR, the project developer decides to submit the latest version again.

ECOCERT Assessment of PP responses: The project proponent responds in a satisfactory manner to this CAR.

Status: Closed

CAR 3 dated 04/18: Monitoring report: Data and monitored parameters: area of strata

According to the information provided by the project proponent in the monitoring report, the area of strata and monitoring of the strata were done for the monitoring event. However different numbers are found throughout the audit regarding years of stratum and then inventory plots number.

According to the section 6.2 of AFOLU requirements, the project proponent is asked to correct and give the final table of strata, overlaying map from validation and map of the final size of area of the project that will be fixed after the first verification for the project lifetime.

Timeline for Conformance: Prior to verification

Client Response: During validation there were some farms that were in the process of being planted. At that moment, it was not possible to determine the planted area because the planted area is known only when the forest is established. That was the case of "Doña Sara", "Los Tocayos", "El Gordo" and "Los Molles".

During validation the project developer decided to report the project boundaries considering a 55% of utilization of those four farms quoted before. It is very common in Uruguay to have between 50% and 60% of forest utilization in each farm. The net area results in that value because there are other areas that cannot always be planted: roads, fences, swamps, rocky areas, high tension cables, low areas, etc.

The area considered during validation is:

Etiquetas de filaPD	Comments
Costas del Mosquito	186.6 This area is exact given that the Forest was already established
Don Alcides	746.7 This area is exact given that the Forest was already established
El Hornero	588.7 This area is exact given that the Forest was already established
M y M	125.4 This area is exact given that the Forest was already established
Salus	66.7 This area is exact given that the Forest was already established
San Luis	967.1 This area is exact given that the Forest was already established
Sophie Point	319.4 This area is exact given that the Forest was already established
Doña Sara	500.0 This area is 55% of the total area of the farm
Los Tocayos	140.0 This area is 55% of the total area of the farm
El Gordo	667.0 This area is 55% of the total area of the farm
Los Molles	384.0 This area is 55% of the total area of the farm
Total	4,691.4

After the project is validated and before the first verification event, the mentioned farms concluded their plantation phase and the exact project area is now known. What is important to remark is that the net area is always within the catastral units presented in the PD. No new farms are incorporated to the project, only existing farms (catastral units) where planted forest is established.

The final project boundaries are presented below under the column "area at verification" and correspond to the net forest area in each farm. Note that "Doña Sara", "Los Tocayos", "El Gordo" and "Los Molles" ended having 62%, 41%, 73% and 63% of utilization (average of 60%).

The rest of the farms varies insignificantly, and the reason of change is the actualization of the Geographical Information System.

The correspondent shapefile and kml file is provided along with this response.

ECOCERT Assessment of PP responses: The area of the project has been clarified and is the final area of the project

Status: Closed

CAR 4 dated 04/18: Monitoring report: Project ownership

The verification team emitted New Information Requests at the opening meeting about project ownership and agreement with local livestock farmers.

No information was yet provided by the project proponent with the monitoring report that shows the continuity of the ownership and the control of area.

The project proponent is asked to provide before the issuance of the draft report the proof of ownership and agreement with local livestock owners.

Timeline for Conformance: Prior to verification

Client Response: Los Eucaliptus's notary has prepared a document expressing and validating the ownership of the fields that are within the project boundaries. The document is attached to this set of answers for review. Ref 15

ECOCERT Assessment of PP responses: The act was transmitted to Ecocert and confirms the ownership of the land.

Status: Closed

CAR 5 dated 04/18: Monitoring report Front Page
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The project proponent is asked to fill all the information on the front page of the monitoring report.
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Timeline for Conformance: Prior to verification
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Client Response: The monitoring report has been amended.

ECOCERT Assessment of PP responses: The monitoring in its last version is including all corrections requested
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Status: Closed

FORWARD ACTION REQUESTS

FAR1 dated 04/18: Field observations

The verification team observed in the permanent plots of Las Molles parcel 403, a difference of 2 meters higher than the inventory values on every tree in the plot. Also, the DBH appeared thinner than reported 5 months ago on other parcels.

However, it doesn't affect the carbon stock and the error wasn't find on the other permanent plots monitored by the same team, the project proponent is asked to improve the procedure at next monitoring event.

The improvement of the existent monitoring protocol (mark center of plots, removal of bark, measures of height with same technology) could enhance the monitoring practices on the field. The regular evaluation on the field of the technical team will also contribute to reduce the presence of inconsistencies in the monitoring practices.
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The QAQC independent verification could have avoid this discrepancy.

Timeline for Clarification: Next verification
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Client Response:

ECOCERT Assessment of PP responses:
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Status: Pending up to next verification
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APPENDIX 2: NON PERMANENCE RISK ANALYSIS

Ecocert team checked the non permanence risk analysis report below and confirm the minimum buffer of 10%.

Financial Viability		
Risk Factor	Risk Factor and/or Mitigation Description Rating	Risk
a)	Project cash flow was calculated for the validation and the breakeven point is greater than 10 years (23 years). Nowadays, the scenario is worst given that the the cost of living in Uruguayan pesos increased more than 86% (accumulated PCI since project start date - 2017, see: http://www.ine.gub.uy/c/document_library/get_file?uuid=361cf1e4-7d00-416a-960b-d618a0b7d7e8&groupId=10181) and labor union negotiations transferred the inflation to logistic and labor costs. Moreover, the rotation length of <i>Eucalyptus globulus</i> is between 10 to 12 years and the income occurs always after harvesting.	3
b)	Project cash flow breakeven point is between 7 and up to 10 years from the current risk assessment	Not applicable
c)	Project cash flow breakeven point between 4 and up to 7 years from the current risk assessment	Not applicable
d)	Project cash flow breakeven point is less than 4 years from the current risk assessment	Not applicable
e)	Project has secured less than 15% of funding needed to cover the total cash out before the project reaches breakeven	Not applicable
f)	Project has secured 15% to less than 40% of funding needed to cover the total cash out required before the project reaches breakeven	Not applicable
g)	Project has secured 40% to less than 80% of funding needed to cover the total cash out required before the project reaches breakeven	Not applicable
h)	Project has secured more than 80% of funding needed to cover the total cash out before the project reaches breakeven. Total cost of purchased land and plantation costs represented more that 80% over the accumulated cash out Los Eucaliptus, as calculated during validation. Spreadsheet with cash flow analysis will be available during verification process.	0
i)	Project had available as callable financial resources more than 50% of	total cash

-2

	out before project reaches breakeven. If the project has already expended more than 80% of its total cash out, it is enough proof to demonstrate that it has had callable financial resources. Balance sheet was available for the validation team and will be available for the verification team.	
Total Financial Viability (FV) [as applicable, ((a, b, c or d) + (e, f, g or h) + i)]		1

Total may not be less than zero.

Opportunity Cost		
Risk Factor	Risk Factor and/or Mitigation Description Rating	Risk
a)	N/A	0
b)	N/A	0
c)	N/A	0
d)	N/A	0
e)	N/A	0
f)	NPV from the most profitable alternative land use activity is expected to be 4 between 50% and up to 100% more than from project activities. The baseline scenario (extensive beef cattle production) is the only possible alternative land use activity within Los Eucaliptus's project boundaries. According to the National Directorate of Agriculture Statistics, the land lease paid in 2016 for livestock production is USD 68, while for forestry production is USD 165¹, which is 43% higher. According to Pike Consultora Forestal (which is a relevant expert judgement), the net income of livestock production in the area of Los Eucaliptus can have USD 55/ha/year (at maximum). While forest production can easily result in USD 360/ha/year (MAI 12m³/ha/year x 11 years rotation length x 30 USD/m³), which is 5 times greater (555%).	-
g)	N/A	0
h)	N/A	0
i)	N/A	0
Total Opportunity Cost (OC) [as applicable, (a, b, c, d, e or f) + (g + h or i)]		-4
Total may be less than 0.		

Project Longevity

a)	Uruguay offers both excellent natural conditions and a very good regulatory framework for the development of forest plantations. Because of this, the country has attracted very important investments in the forestry sector, mostly by foreign capital, in a process that started after the implementation of a specific policy by the Uruguayan government concurred with a very favourable international situation in the late 1980's and early 1990's. There is an important presence of leading global wood products companies in the country. "Los Eucalyptus S.A. is a typical example of this. Los Eucalyptus SA is a company based in Uruguay with the aim of buying land, develop forest plantations, organize the activity of additional livestock production, maintaining and monitor the development of production systems implemented, develop research issues regarding forestry and silvipastoral activities, harvest timber and export it to Spain or sell it to other destinations. The company Los Eucalyptus S. A. integrates Iberpapel Group, based in Spain. Is registered in Uruguay by notarial deed, registered with the Internal Revenue Service / Taxpayer Registry, which details the integration of society and was registered in the Register of Legal Persons / Section Trade. Iberpapel Gestion S.A. is the head of a group of companies engaged in different activity areas that involve paper production activity and forming a fully integrated group: IBERPAPEL Group. IBERPAPEL Group is present in different levels of business, among which we can highlight farming and forestry wood supply and cellulose production. All properties of the company Los Eucalyptus S.A. are legally owned and are covered by deeds duly registered with the National Records, registered with the corresponding number for the Registration of Real Estate. Iberpapel Group –Spanish company established in 1935 – made the definitive and long-term decision of investing in Uruguay, among several other possible alternative countries, given the benefits our country offers. Decisions like this cannot be changed without a considerable reason in a short period of time. After every final harvest, Iberpapel is internally committed to replant or naturally regenerate forest stands. Ecology and nature conservation are two of the group most important pillars when making investments in timber and paper production. Therefore, all properties will be certified by Forest Stewardship Council, currently, more than half of the sites have been already certified and the other half is in the process of the certification (are being standardizing for certification), which ensures the forest management sustainability. One of the main aims of the certification is to guarantee the long term commitment of the company. FSC Public Summary Report can be found in FSC website: www.fsc.org. Project longevity will be established in 120 years and there is not any legal agreement to continue the management practice	24-(120/5)=0
b)		
Total Project Longevity (PL)		

May not be less than zero	
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Internal Risk	
Total Internal Risk (PM + FV + OC + PL)	0
Total may not be less than zero.	

2 EXTERNAL RISKS

Land Tenure and Resource Access/Impacts			
Risk Factor	Risk Factor and/or Mitigation Description	Risk Rating	
a)	Ownership and resource access/use right are held by same entity. Forest Stewardship Council certification ensures that all properties managed by the company are backed up with property rights, legally registered in the National Directorate of Land Registry. There is a notarial deed of incorporation of the Company's Eucalyptus S. A., registered in General Tax/Register of Taxpayers, and registered in the Register of Legal persons/ Trade Section. There are leases and usufruct of plantations for third grazing and a contract for research on silvopastoral activities. All properties have adequate mapping, in which is marked the boundaries for the identification of properties and neighboring fields. The operations and its planning cover the whole rotation period and post-harvest handling. There are no legal or customary tenure or use by local communities. All properties are privately owned and legally registered. There were no claims to rights of possession or use of resources. There are no indigenous groups in Uruguay in general, or in areas where the farms are located in particular. There are no sites of interest to local communities within the premises of the company..	0	
b)	Ownership and resource access/use rights are held by different entity(s) (eg, land is government owned and the project proponent holds a lease or concession)		Not applicable
c)	In more than 5% of the project area, there exist disputes over land tenure or ownership		Not applicable
d)	There exist disputes over access/use rights (or overlapping rights)		Not applicable
e)	WRC projects unable to demonstrate that potential upstream and sea impacts that could undermine issued credits in the next 10 years are irrelevant or expected to be insignificant, or that there is a plan in place for effectively mitigating such impacts.		Not applicable
f)	Mitigation: Project area is protected by legally binding commitment (eg, a conservation easement or protected area) to continue management practices that protect carbon stocks over the length of the project crediting period		Not applicable

g)	Mitigation: Where disputes over land tenure, ownership or access/use rights exist, documented evidence is provided that projects have implemented activities to resolve the disputes or clarify overlapping claims	Not applicable
Total Land Tenure (LT) [as applicable, ((a or b) + c + d + e + f + g)]		0

Total may not be less than zero.

Community Engagement		
Risk Factor	Risk Factor and/or Mitigation Description Rating	Risk
a)	Local population are not reliant on the project area, the risk is not relevant to the project.	0
b)	Less than 20 percent of households living within 20 km of the project boundary outside the project area, and who are reliant on the project area, have been consulted	Not applicable
c)	Mitigation: The project generates net positive impacts on the social and economic well-being of the local communities who derive livelihoods from the project area	Not applicable
Total Community Engagement (CE) [where applicable, (a + b + c)]		0

Total may be less than zero.

Political Risk		
Risk Factor	Risk Factor and/or Mitigation Description Rating	Risk
a)	Governance score of less than -0.79	Not applicable
b)	Governance score of -0.79 to less than -0.32	Not applicable
c)	Governance score of -0.32 to less than 0.19	Not applicable
d)	Governance score of 0.19 and 0.82	Not applicable
e)	Governance score estimation, according to the World Bank Institute Worldwide Governance Indicators is 0.84.	
f)	Mitigation: 1) Uruguay has received REDD+ Readiness funding from the World Bank Forest Carbon Partnership Facility and is implementing a REDD+ policy framework covering key components such as GHG credit ownership, clear government authority over REDD+ projects, and/or national	-2

	measurement, reporting and verification systems. 2) Uruguay has an established national PEFC standard body, which is PEFC URUGUAY 3) Uruguay has an established Designated National Authority under the CDM (http://cdm.unfccc.int/DNA/index.html?click=dna_forum) and has one registered CDM Afforestation/Reforestation project	
	http://cdm.unfccc.int/Projects/DB/BVQI1278956093.58/view	
Total Political (PC) [as applicable ((a, b, c, d or e) + f)]		0

Total may not be less than zero.

External Risk	
Total External Risk (LT + CE + PC)	0
Total may not be less than zero.	

3 NATURAL RISKS

Explain the significance and likelihood of the natural risk and any mitigation activities implemented, (copy table for each natural risk).

Natural Risk (Fire)	
Significance	Insignificant (less than 5% loss of carbon stocks)
Likelihood	Every 25 to less than 50
Score (LS)	2 Conservative approach has been applied considering the inexistent forest fires in the area. There are no updated official data provided by National Emergency System (Presidency of the Republic) as previously done. It was conservatively assumed a significance of "less than 5%" and likelihood was "less than 10 years". Combination of both, results in a score of 2.
Mitigation	0.5 Mitigation of risks factor are applied, prevention measures are described in the "Protection Plan Against Forest Fires" (archived as part of the project documentation).

Natural Risk (Pest and Disease outbreaks)	
Significance	Minor (5% to less than 25% loss of carbon stocks)
Likelihood	Every 50 to less than 100
Score (LS)	1 Eucalyptus globulus, one of the most planted Eucalyptus sp. in Uruguay is well known to be susceptible to some pest and diseases in our growing conditions.

	<i>Eucalyptus globulus</i> is more vulnerable to diseases than <i>Eucalyptus grandis</i> (the other most planted <i>Eucalyptus</i> specie in Uruguay). According to Morey and Porcile (who conducted a deep historical analysis of pest and diseases in Uruguay) concluded that there were few incidents or losses due to those events: 1937: first detection of <i>Gonipterus</i> ssp. They had little influence on biomass losses due to the prompt introduction of its natural enemy in 1941. They are present in forest plantation all over the country, but it does not represent a significant loss in biomass growth or timber production. They are not declared as plague in agriculture fields. Significance: 4%, according to expert judge. 1981: <i>Platypus</i> ssp. affecting <i>E. grandis</i> and red gum <i>Eucalyptus</i> in Paysandú (northwestern part of Uruguay). It had a great incidence in <i>Populus</i> ssp. but it does not affect <i>Eucalyptus</i> in a significant level. Significance: 0% 1983: <i>Diloboderus abderus</i> larvae affecting young plantations. It did not have any influence on <i>Eucalyptus</i> plantations. Significance: 0% 1989: in 1932 it was detected by the first time <i>Phoracantha semipunctata</i>. Twelve years later it was declared as a plague in agriculture fields. Damages related to this insect are associated to the occurrence of adverse weather conditions. In 1989 drought, it was the first and unique time when the plague affected plantations over the entire Uruguayan territory; all other diseases and pest were always located on specific sites and weather conditions. There is no official record about the magnitude of the incidence in volume or area affected, according to Morey and Porcile the pest attacked more than 5% of all planted trees in stand of more than 3 hectares. Significance: 10% according to expert judge and assuming conservative values. 1990: <i>Phytophthora</i> ssp and leaf spots diseases. It has not been estimated and is not possible to determine the real loss value. In the same year, it natural enemy was introduced. Significance: 0% Along with the diseases slightly affecting forest plantations, <i>Micosphaerella</i> is one of the most important fungi affecting nowadays. Considering the data presented above and the relatively lack of information available at a national or local level, a conservative approach has been applied: mean significance value 7%, and like hood every 50 to less than 100 years.
Mitigation	0.5 In 1995 the Uruguayan Government signed and became part of the Montreal Process which involved the adoption of several indicators and criteria related to the Sustainable Forest Management. Criteria number 3 refers specifically to the Sanity Maintenance and Vitality of Forest Ecosystems. Uruguay has freely committed itself to periodically evaluate the evolution of the forest health in time and space and maintain its health. When referring specifically to “Los Eucaliptus”, the same procedures are applied within the entire project boundaries: they have –through contractual agreement – implemented a Continuous Forest Inventory which monitors and assess –among

Likelihood

Risk associated to earthquakes and volcanoes are not applicable to the project area since no such activities have occurred during the last 100 years in Uruguay.

	According to CERESIS (Regional Center for Seismology for South America – acronyms in Spanish), there were no earthquakes in the project activity region in the last 100 years (http://www.ceresis.org/ceresis/consulta.htm). In relation to volcanoes, the book <i>Physical Geography</i>, developed by Mcknight, T., Hess, D. (2008) demonstrates that distribution of such geological events are associated to tectonic plates boundaries (Mcknight, T., Hess, D., 2008). The location of the project activity and the whole of Uruguayan territory are far from any plate edge.
Score (LS)	0
Mitigation	Not applicable
Score for each natural risk applicable to the project (Determined by $(LS \times M)$)	
Fire (F)	1
Pest and Disease Outbreaks (PD)	0.5
Extreme Weather (W)	1
Geological Risk (G)	0
Other natural risk (ON)	0
Total Natural Risk (as applicable, $F + PD + W + G + ON$)	2.5

4 OVERALL NON-PERMANENCE RISK RATING AND BUFFER DETERMINATION

4.1 Overall Risk Rating

Risk Category	Rating
a) Internal Risk	0
b) External Risk	0
c) Natural Risk	2,5
Overall Risk Rating (a + b + c)	2.5