JOINT VALIDATION & VERIFICATION REPORT

PROYECTO CARBONO FORESTAL VICHADA ALIANZA FIDUCIARIA S.A.

BCR-CO-139-14-001

Validation & Verification Report	
Project Title	Proyecto de Carbono Forestal Vichada Alianza Fiduciaria S.A.
Project ID	BCR-CO-139-14-001
Project holder	Alianza Fiduciaria SA - Fideicomiso
Project Type/Project activity	AFOLU
Grouped project	No
Version number of the Project Document to which this report applies	V3
Applied methodology	METHODOLOGICAL DOCUMENT. AFOLU SECTOR. BCR0001 Quantification of GHG Removals. AFFORESTATION, REFORESTATION. AND REVEGETATION. Version 4.0
Project location	La Primavera, Vichada, Colombia.
Project starting date	01/01/2018
Quantification period of GHG emissions reductions/removals	01/01/2018 - 31/12/2057 (40 years)
Estimated total and mean annual amount of GHG emission reductions/removals	Total amount of GHG emissions removals 834,425 tCO_2 eq. With an average of 20,861 tCO_2 eq./year.

Monitoring period	First monitoring period: 01/01/2018 – 31/12/2019
Total amount of GHG emission reductions/removals	29,508tCO2. With an average of 14,754tCO2/year.
Contribution to Sustainable Development Goals	SDGs 8, 12, 13 and 15
Special category, related to co-benefits	N/A
Version and date of issue	V.1.3. 23/08/2024
Work carried out by	Lead Audit: Claudia Polindara. Audit: Daniel Bermejo. Audit: Richard Gonzales Audit in training: Joao Barata Technical Reviewer: Javier Cócera.
Approved by	José Luis Fuentes.

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1 Executive summary

The Vichada Alianza Fiduciaria S.A. Forest Carbon Project (VAF) is based on changing land use from the traditional extensive cattle ranching model to sustainable forestry production systems, to create a landscape of biological and productive corridors that promote multiple economic, social and environmental benefits, including actions for climate change mitigation, regulation of water flows and conservation of the fauna and flora of the Upper Orinoquia, among others.

This is an afforestation and reforestation (A/R) project of 1,641.70 ha of *Pinus caribea* of the 1,645.85 eligible hectares. The project is located in the municipality of La Primavera, department of Vichada in the Eastern Plains of Colombia. The responsible entity is Alianza Fiduciaria S.A. as trustee of the autonomous Patrimonios Fidecomiso Galicia and Andalucía.

The start date of the VAF project is 01 January 2018, until 31 December 2057, with a first verification period from 01/01/2018 – 31/12/2019.

The project generates net 29,508 tCO2 GHG removals from ARR activities in the monitoring period (01/01/2018 – 31/12/2019) that is being submitted for verification, for all sinks considered (above-ground and below-ground biomass, soil organic carbon, shrubs, leaf litter and dead wood on soil).

Likewise, the project contributes to SDGs 8, 12, 13 and 15 through the development of its activities. This takes into account not only benefits to the community of the area and the biodiversity of the area, but also generates GHG removals.

The validation confirms that the ex-ante analysis of the project's GHG removals has been carried out in an accurate, transparent, and conservative manner, being estimated a total of 834,425 tCO2e, for a GHG removal quantification period of 40 years, and average of 20,861 tCO2e. For the first monitoring period, AENOR issues a positive verification opinion for the verified GHG emission removals of 29,508 tCO2e from 01/01/2018 – 31/12/2019.

2 Objective, scope and criteria

The objective of the validation and verification audit was to carry out an independent assessment of the project in order to determine:

- That the project complies with all the requirements of the BioCarbon Registry Standard Version 3.3. March 1, 2024.

- That the PD (Project Description) and supporting information comply with the requirements of ISO 14064-2:2019 and the Colombian Legal Framework.

- That the project complies with the rules and criteria of the Colombian carbon market.

- That the project, its activities, methods and procedures, described in the PD document and its corresponding annexes, including the monitoring plan, comply with the criteria established in this report;

- That the activities, methods, and procedures, including monitoring procedures, have been implemented in accordance with the PD; and follow the national regulations that apply to climate change mitigation initiatives.

- Verify compliance in the implementation of mitigation project activities, including those associated with the methodology selected for the project.

- Assess and verify compliance with the principles of the monitoring, verification and reporting system necessary to comply with current legislation.

The following criteria were used to evaluate this project:

- Methodological Document. AFOLU Sector. BCR0001 Quantification of GHG Removals. Afforestation, Reforestation. and Revegetation. Version 4.0.
- BCR Standard from differentiated responsibility to common responsibility. Version 3.3. March 1, 2024.
- Validation and Verification Manual Greenhouse Gas Projects. V2.4. March 23, 2024.
- Tools and guidelines
    - Permanence and Risk Management. BCR Tool. V1.1. March 19, 2024.
    - Avoiding double counting v2.0. February 7, 2024
    - Monitoring, Reporting and Verification Tool. v 1. February 13, 2023
    - Biocarbon Guidelines. Baseline and Additionality BCR projects generate verified carbon credits (VCC) that represent emissions reductions, avoidance, or removals that are additional. Version 1.3. March 1, 2024
    - Sustainable Development Safeguards (SDSs) Version 1.0. April 5, 2024.
    - Tool. Sustainable Development Goals (SDG). Version 1.0. June 2023

The scope of the validation and verification audit of the GHG mitigation project is the following:

1. to validate the project activities, its monitoring plan, its GHG Greenhouse Gas sources, sinks and/or reservoirs, its period of quantification of GHG emission reductions by removal activities, its baseline scenario, its legal and information

requirements management processes, maximum mitigation potential and the BioCarbon Registry v2.0 guidelines and methodological documents.

2. Verify GHG emission removals, implementation of activities and their reported impact from 01 January 2018 to 31 December 2019.

In addition, the following documents were used as reference during the audit process:

- Good practice guide for land use, land use change and forestry. IPCC, 2003
- Good Practice Guidance for Land Use, Land Use Change and Forestry. IPCC, 2006
- AFOLU non-permanence risk tool. V.04
- Estimation of NON-CO_2 GHG emissions resulting from burning of biomass attributable to an A/R CDM project activity.
- ISO 14064:2019
    - Part 2: Specification with guidance, at project level for the quantification, monitoring and reporting of emission reductions or enhancements in greenhouse gas removals.
    - Part 3: Specification with guidance for the verification and validation of greenhouse gas declarations (2019)
- ISO 14065:2020 (EN) Greenhouse gases - Requirements for bodies performing validation and verification of greenhouse gases, for use in accreditation or other forms of recognition.
    - .

3 *Validation and verification planning*

As part of the validation and verification process (first validation phase), a field visit was carried out in the project area in order to assess its state of implementation, the quality of the field data collection techniques, compliance with the monitoring plan, the opinion of the parties involved and the management of the forest plantation /16/.

AENOR carried out a thorough and meticulous review of the spreadsheets to verify the correct application of the methodology (formulas, equations, spreadsheets) and checked that the data necessary for the calculation of GHG removals and reductions were adequately provided. Based on the assessment carried out, AENOR confirms with a reasonable level of assurance that the claimed emission reductions and removals are free from material errors, omissions, or inaccuracies.

As described below, findings were issued to ensure that the project complied with all requirements.

Given that the initial validation and verification process was carried out under NTC 6208 the guidelines of the ProClima standard, and the calculation methodology AR-ACM0003 v2.0, this second process was required to perform a gap analysis between this standard

and the BCR 2.0 standard, to establish the differences between the first and the second validation process. Finally, the project updates the project according to the Standard BCR v3.3.

Section 3.2 of this report indicates the roles and responsibilities of the audit team, Section 3.3. concludes the level is assurance and materiality.

AENOR reproduced and verified 100% of the spreadsheets in the Excel file Section 3: Exante-Alianza-FID for the ex-ante estimates during the GHG emission removals quantification period and Excel file: Ex-post 2018 – 2019. V02.1

The project boundaries in the project area and the monitoring period were 100% verified using the GIS database, provided in Section 1. Project type and eligibility. Legal land tenure was validated in Section 5. Carbon ownership and rights. Changes in carbon pools (*P. caribaea*) in the project area were 100% verified.

In addition to the review of compliance with the requirements of ISO 14064-2:2019, the development of the validation/verification includes the strategic and risk analysis, with the issues indicated in ISO 14064-3:2019 being assessed by the audit team.

AENOR considers that the project manager has sufficient knowledge of forestry projects, monitoring activities and the requirements of the Standard for the Voluntary Market - BCR from differentiated to common responsibility Version 3.3, so the risks are minimal and assumable. However, AENOR performed the following sampling:

The activities where risks were assessed were the monitoring system assessments (data flow, data control procedures, etc.) but mainly the quality of the raw data, as well as the sources and calculations of the spreadsheets. AENOR reproduced and verified 100% of the sheets annexed to the PD and MR /1/ and the other spreadsheets for the monitoring period for the project area /2.1/. The project boundaries and land cover changes in the project area were also 100% verified using the GIS database /15/. Carbon stock changes by vegetation class in the project area were also 100% verified, using the sources cited in the PD and MR.

Furthermore, AENOR confirms that sufficient evidence was presented for the reported anthropogenic net removals of GHG emissions and that there is a clear audit trail containing the evidence and records that validate the figure stated in this Validation and Verification Report due to:

- Sufficient available evidence: The project proponent has provided 100% of the data used in the calculations to achieve the final reported amount of GHG emission removals.
- Nature of evidence: the raw data was obtained from credible and consistent sources. They are detailed in the project documents and have been provided to the verification team, which are listed in Annex 3.

- Cross-checked evidence: AENOR cross-checked the information gathered through an on-site inspection of the project area and by reproducing the calculations.

Therefore, AENOR confirms that the figures indicated in the Monitoring Report (as part of the PD document) are correct and confirms that it is able to certify the requested net anthropogenic GHG removals based on verifiable and credible evidence.

Based on the assessment carried out, AENOR confirms with a reasonable level of assurance that the project complies with the conditions established by the AFOLU Sector Methodological Document for the Quantification of GHG Removals Afforestation, Reforestation. and Revegetation. - BCR0001 V4.0) and the BioCarbon Registry Version 3.3 standard; and that the requested emission removals are free from material errors, omissions, or misstatements.

3.1 Validation and verification plan

The verification audit was performed through a combination of documentation review, site visit and interviews and communications with relevant personnel of the project proponent. The project was assessed for compliance with the criteria described in Section 2 of this report.

The validation and verification started in 2019, of this process obtained a first report, which it didn´t registered by the holder. In 2023 restarted the process with the changes of the standard, and this final report joint evaluations and the process finished in February 2024.

3.2 Audit team

AENOR team has work experience and technical knowledge of GHGs, awareness of the Standard BCR, and general rulers corresponding to the described criteria in Section 2 of this report. In summary, the audit team complies with the skills and sectoral competencies required in the CR Validation and Verification Manual (VVM).

Before being presented to the client, all versions of the verification report were subjected to an independent internal technical review to ensure that all verification activities were done in accordance with the relevant AENOR guidelines. The technical review was performed by a technical reviewer qualified by AENOR's qualification scheme for program BCR.

Annex 1 of this report submits the information corresponding to the professional training and competencies of the audit team. The audit team consisted of the following members:

Table 1 Audit Team

Name	Role in the Team	Activities carried out
Claudia Polindara	Lead Auditor	- Documentation Review

Name	Role in the Team	Activities carried out
		- Identification of findings - Validation and Verification Report
Daniel Bermejo	Auditor	- Documentation Review
Richard Gonzales	Auditor	-Visit on site - Documentation Review - Validation and Verification Report (first document)
Joao Barata	Auditor in training	Documentation Review
Javier Cócera	Technical reviewer	Technical Review

The audit team compliance with the requirements of Sections 8.2.1. and 8.2.3. and requirements of ISO 14065:

- Team Competence: The team has knowledge of the BCR Standard and its requirements, such as eligibility, law and regulation applicability, GHG reduction emissions scope, the AFOLU sector, and methodologies (in this case, BCR0001). Likewise, the team has knowledge of the application of material errors and discrepancies, GHG sources and reservoirs, and procedures to ensure data quality. The audit team is trained to audit methodologies in the AFOLU sector, assess methodologies, develop sampling techniques, and assess information management and GHG data.

- Sectoral competences: the audit team has the competences related with Section 8.2.3. of the VMM. The auditors have developed validation and verification in several standards concerning to AFOLU projects, including BCR Standard and BCR0001 and BCR0002 methodologies.

The professionals belong to the audit team indicates to AENOR that they there are any conflicts of interest before to start the validation and verification, hence, the auditors can act objectively and independently, in accordance with the laws that govern the purpose of mentioned services.

According to section 8.2.4 of the Validation and Verification Manual v2.2 of the BCR Program, AENOR indicates the following:

- The audit team has the compromise to not transmit or reveal to third parties any Company information to which they access as a result of the performance of the audit process.

- The Audit Team of AENOR complies with all the provisions of the BCR´s Code of Ethics.

In addition, in accordance with the OEC contract and the validation and verification team, the requirements of the BCR anti-bribery policy detailed in Section 8.2.4 of the BCR Validation and Verification Manual are met." AENOR has the commitment to avoid any relationship with people or organizations that may have the purpose of money laundering or terrorist financing, and it makes sure the companies they make deals with operate under the law.

3.3 Level of assurance and materiality

Through the audit process and in accordance with the non-conformities and requests for clarification generated, a positive assessment statement is issued which provides reasonable assurance that the project meets the criteria set out in Section 2 and the GHG statement is materially correct and credible.

For validation and verification, the guidelines of BCR Standard 3.3 - from differentiated responsibility to common responsibility.

a) The validation and verification assurance level shall not be less than 95%.

b) The material discrepancy of the data supporting the baseline and the estimate of GHG emission removals or reductions may be up to ±5%.

c) The consistency of the baseline of the Project in accordance with the methodology applied, for the specific case of this project, the Methodology for the Quantification of GHG Emission Reductions. Removal Activities. - BCR0001 Version *4.0*.

d) Quantification of the mitigation results against the validated baseline, in accordance with the Quantification of GHG Emission Reduction Methodology. Removal Activities. - BCR0001 Version 4.0.

e) Co-benefit assessment and indicators related to the Sustainable Development Goals.

The nature and extent of the validation and verification activities have been developed in accordance with sections 9, 10 and 11 of the BCR GHG Project Validation and Verification Manual Version 2.4 of 2024.

Considering the above, the following criteria have been taken into account for the assessment of the project Carbono Forestal Vichada Alianza Fiduciaria S.A.:

a) In accordance with the BCR Standard , the level of assurance used in the audit was not less than 95% and the maximum material discrepancy of the data accepted was ±5%. Errors found in the spreadsheets were corrected, errors never exceeded 5%.

b) The quantification of the mitigation results against the validated baseline is in accordance with the methodology applied.

c) The evaluation of the contributions to the Sustainable Development Goals (SDGs) in the activities implemented was carried out.

3.4 Sampling plan

To evaluate possible mistakes, omissions, or misinterpretations in the validation and verification process, the audit team conducted a risk assessment. The risks evaluated were inherent risk, control risk, and detection risk *(R-DTC-868.02 -risk assessment)*. The assessment allows us to determine whether the sampling plan requires major intensity according to the rating of the risks. The audit team determined the sampling plan according with ISO 14065.

The following factors for the sampling plan were taken into consideration for the audit process of the verification, with reference the BCR validation and verification manual:

The level assurance was no less than 95%. The spreadsheet mistakes and project boundary errors were adjusted; these errors never went major 5% in relation to the emission reductions presented. As a result, it is guaranteed that the level of assurance is at least 95%.

The sampling plan used the criteria described in Section 2 and ISO 14064-3. Any modifications applied to the verification sampling plan were made based on the conditions observed for monitoring to detect the processes with the highest risk of material discrepancy. To ensure compliance with the BCR standard criteria, the audit team developed field activities and evaluated the supporting documentation, made a field visit to identify monitoring activities, conducted interviews with the PP, and a review of the tools, calculations, and procedures for determining GHG emission removal. The activities can be observed in Section 4 of this report.

Following these assessments, and considering the BCR standard criteria, the following sampling was carried out:

- Thoroughly review the Project Description and Monitoring Report along with supporting documentation for compliance with verification criteria and consistency between the two documents.
- Reviewing baseline data collected from the baseline determined, spreadsheets were used to input and compile the information required by the methodology. This included the parameters and equations used.
- Replicate 100% of spreadsheets for the monitoring period in the verification project area and cross-check them against the methodological requirements used.

- Check 100% of changes in project boundaries and land cover during the monitoring period using the GIS database and cross-check in the field through checkpoints.
- Verify 100% and compare with values of changes in carbon stocks in the project area.
- Reviewing mandatory tools to the standard BCR and check 100% the procedure and results of it.

To develop the sampling plan, the audit team determined following items to reach the level of assurance required by the Standard BCR:

Assessment Main Process		Item	Factor	Description	Sampling
First Validation and Verification Process	Document Reviewer	Carbon Rights	Legal documents	CTL (Acronym Spanish)	100%
		Project Boundaries	Cartography	GIS File	100%
		Quantification Results	Ex Ante and Ex post Calculator	Spreadsheet	100%
		PD and MR	N/A	Supporting Annex	100%
	On-Site-visit	Stakeholders	Owner	Interviews	100%
			Stakeholder	Interviews	100%
		Checkpoints Eligible Area	Boundaries	Track in Project Area	2%
Second Validation and Verification Process	Document Reviewer	Report of Validation and Verification (Developed by AENOR)	NA	Annexes, Sampling Plan, Audit Plan, Visit Results	100%
		PD and MR updated according to BCR Standard	NA	Annexes, tools applied	100%
		Quantification Results	Ex Ante and Ex post Calculator	Spreadsheet	100%
		Project Boundaries	Cartography	GIS File	100%

4 *Validation and verification procedures and means*

4.1 Preliminary assessment

AENOR determined the sampling plan. The documents prior assessed were GIS information/2/, calculations ex - post /4/, PD and MR/1/, land tenure /6/ BCR tools, the first report elaborated by AENOR /16/, among others. The information provided by the PP was enough to elaborate the audit plan and the risk assessment and to determine the purpose and scope of the validation and verification.

The project's information was very detailed, which made it possible to thoroughly assess the project data and make sure that it met the requirements to move forward with the audit planning in accordance with the set criteria. Similarly, the PP considered the data

from the initial validation and verification report. The auditor examined all the project documentation, confirmed its alignment with the project type, and checked for completeness. Similarly, the project proponent updated the information to reflect the most recent version at the time of evaluation. The evaluated documents are listed in Annex 3 of this report.

In the validation and verification of the project, the audit team considered Section 10.5 of the BCR Standard v3.3. This section mandates that the quantification period for removal projects should be at least 40 years. The Project Proponent ensured the condition mentioned and were met during the validation and verification process, as detailed in the Project Design.

4.2 Document review

The Project Description, including the Monitoring Report, and supporting documentation were carefully reviewed for compliance with the validation and verification criteria. The audit team examined the spreadsheets to reproduce the removal calculations, obtaining the same results as those in the PD and MR. The supporting documentation has been meticulously assessed to ensure it meets the validation and verification criteria set forth by the BCR Standard and VVM.

The validation and verification team performed a documentary review which encompassed the following:

- A review of the Project Document/1/, the methodology applied /4/, including, monitoring plan and quality assurance and control procedures.
- A review of the Monitoring Report/1/ and project implementation.
- A review of the data /4/ and information submitted to validate its completeness.
- An assessment of compliance with applicable regulations to validate the regularity of the activity /5/.
- An evaluation of documents evidencing land tenure and carbon rights /6/ for the project.
- An assessment of the controls in place to ensure the quality of information and documentary control of the project.
- Reliable sources to cross-check the information provided by the PP /13/.
- Other documentation: spreadsheets/4/, tools/7;8;9;11/, GIS file/3/, first validation and verification report /16-17/.

Given the specifics of the project, the audit team requested a gap analysis to identify any discrepancies between the information from the first validation process and the second validation and verification process. The Project Proponent (PP) used this analysis to enhance the information to conform to the revised standard, allowing the audit team to verify the gaps and the additional information, thereby mitigating the risk of inconsistencies.

The completeness of the project database was also assessed. Annex 3 of this report details the list of documents provided by the project manager and reviewed by AENOR during the validation and verification process.

4.3 Interviews

AENOR, conducted the site visit between 25 and 27 November 2019. The relevant stakeholder was identified priorly the visit. Since the project is privately owned by a single proponent, the audit team asked ahead of time for a commitment to interview the project developers (consultants), at least one worker, and the responsible personnel. The aims the interviews were to evaluate the status of project implementation, assess compliance with the monitoring plan, assess whether project activities are implemented in accordance with the PD, the quality of field data collection techniques, the opinion of stakeholders and participating landowners regarding the project, their knowledge of the project, and their perception of its benefits, thereby ensuring the required level of assurance. During the interviews, both the Project Proponent and the stakeholder exhibited a thorough understanding of the project and extensive experience in its development.

The following table lists name, organisation, position, and the issues discussed during the validation and verification process.

Table 2 Interviews

Name	Entity/Charge	Topics Covered	Means to conduct the interview
Juan Esteban Guarnizo Orjuela	Forestry Nucleus/ CDM Manager	- Obtaining and processing satellite images - Definition of strata - Obtaining areas by strata - Monitoring of variables: DBH and Ht	Presential
Luis Fernando Gómez Ávila	Forestry Projects/ Technical Manager	- Forest Health - Forest Management - Project coordination	Presential
Luis Antonio Avella Platal	Bosques La Primavera/ Field Operator	- Monitoring of variables: DAP and Ht	Presential
Guido Enríquez Viveros	Alianza Fiduciaria/Administrator	- Ownership of the project	Presential

		- Project characteristics (strata and species)	
Andres Sierra Buitrago	Consultant	- Preparation of the validation and monitoring report - Carbon stock calculation - Additionality - Compliance with the standard	Presential

Information obtained from the first validation and verification.

4.4 On-site visit

The objectives of the visit were to assess the implementation status of the project, assess compliance with the monitoring plan, assess whether the project activities are implemented in accordance with the PD and the MR, the quality of the field data collection techniques, the opinion of the parties involved and owners of the participating properties regarding the project, their knowledge of it and the perception of the benefits it brings them. A first validation and verification report /16/ were obtained from this process, which was not registered by the Project Proponent. During the visit the audit team reviewed the GIS database with the project manager.

A remeasurement of a sample of the monitoring plots surveyed for the calculation of removals was carried out, checking the diameter and height values measured in situ with the records taken by the monitoring team.

In addition, as part of the visit, interviews were conducted with project staff and stakeholders (View Table 2).

For the second validation and verification process, the information from the visit was taken and all documentary information was re-evaluated under the BCR 3. standard, and the GHG Emission Reduction Quantification methodology. Removal Activities. - BCR0001 Version 4.0. Given that the initial validation and verification process was carried out under NTC 6208 the guidelines of the ProClima standard, and the calculation methodology AR-ACM0003 v2.0, this second process was required to perform a gap analysis between this standard and the BCR 3.3 standard, to establish the differences between the first and the second validation, which was required to the project proponent in CL1.

4.5 Clarification, corrective and forward actions request.

During the first validation process, non-conformities and requests for clarification were generated, which were rectified. For the second validation and verification process, 8 requests for clarification were generated and 2 NC/CAR which corresponded to the inclusion of the requirements of the BioCarbon Registry v.02 program and updating of the

land tenure supports, and specifically to the requirements in the GHG Emission Reduction Quantification Methodology. Removal Activities. - BCR0001 V4.0. These were fully addressed. This information is detailed in Annex 2 of this report. Given that the PP had not compliance with Section 17 of the BCR Standard, the CL5 was generated in order to fulfill the SDGs tool of this project. The specifics are detailed in Annex 2 of this report.

All the findings of the AENOR audit team during the validation and verification process have been resolved and closed.

4.5.1 Clarification requests (CLs)

8 clarification requests were generated during the audit process and were resolved adequately by the project holder. The requests addressed changes and gaps in the updated version templates and the standard; the audit team sought clarification on documents supporting land tenure; required supplemental information about calculations; highlighted inconsistencies in the project area; identified no compliance in the SGD tool and uncertainty requirements; noted gaps in the baseline scenario; and additionality information. Detailed solutions to all the findings mentioned, along with the corresponding documentation, are available in ANNEX 2 of this document.

4.5.2 Corrective actions request (CARs)

A total of 2 NC/CARs were delivered during the validation and verification process. In Annex 11.2 of this report, complete information concerning the assessment process and the input for their closure is found. These corresponded to compliance with the start date and baseline scenario. Annex 2 of this report outlines the response and resolution to these findings.

4.5.3 Forward action request (FARs)

Throughout the validation and verification process, no forward action request was presented.

5 Validation findings

The PP provided the information contained in the PD; the assessment to validate the project was based on the BCR standard v3.2 and the Validation and Verification Manual v2.3. During the validation phase, AENOR reviewed the project design documentation and information to ensure compliance with the BCR standard and the BCR002 methodology. For that, CAB considered the following:

- Through the crosscheck ex ante calculation /4/, it was evaluated GHG mitigation and results.
- Across the documentation described in the PD /1/ and the calculation provided by the PP /4/, AENOR verified the applicability of the methodology to confirm its appropriate use.

- AENOR validated the compliance with the uncertainty indicated in Section 3.5 of the PD.
- The baseline scenario was assessed (CAR2), the detailed is described in Section 5.5.4 of this report.
- AENOR assessed criteria and steps to determine the additionality, see detailed in Section 5.5.5 of this report.
- The ownership and carbon rights were assessed through the documentation and complemented with the interviews conducted. Likewise, the consultation stakeholder was confirmed.
- The environmental and social aspects were evaluated.
- The PP included the contribution to SGDs, and AENOR assessed the SGD tool and its compliance.

In conclusion, the CAB made the validation according to the BCR standard, and the details of the assessment are in the following sub-numbers of this report.

5.1 Project description

The Carbono Forestal Vichada Alianza Fiduciaria S.A. project is an A/R project based on changing land use from the traditional extensive cattle ranching model to sustainable forestry production systems, to create a landscape of biological and productive corridors that promote multiple economic, social, and environmental benefits, including actions for climate change mitigation, regulation of water flows and conservation of the fauna and flora of the Upper Orinoquia. The main activity of the project is the planting and commercial management of 1,641.7 ha of *P. caribaea* of the 1,645.85 eligible hectares of properties on which the project is developed.

The start date of the project initiative is January 1, 2018. Over the first 40 years of accreditation, the forestry project is estimated to achieve net removals of anthropogenic emissions amounting to approximately 834,425 tCO_2. This includes an average of 20,861 tCO_2 in GHG removals and 29,508 tCO_2 in carbon credits from Afforestation, Reforestation, and Revegetation (ARR) activities during the monitoring period from January 1, 2018, to December 31, 2019, which is currently under verification.

The project holder established the commercial model on managed pasture areas with extensive cattle ranching; for that, the *Pinus caribaea* species was selected to convert pasture areas on forest land. Technologies were applied to establish forest stands, corresponding to soil preparation, nursery production, plantation establishment, weed control, fertilization and pruning regimes, thinning, and harvesting. PP has described the process in detail in Section 2.3. of the PD and Annex “Section 2 - General description of the project” /3-3.1-3.2-3.2.1/.

AENOR has validated that the Project Description document, and verified the Monitoring Report, accurately reflects the proposed project, which consists of the implementation of A/R activities through the planting and management of commercial species. Through the on-site visit, interviews with key personnel, and documentary review, the auditor's team confirmed the main objectives of the project activity and the implementation of the project.

As explained and detailed in Section 4 of this report, the audit team assessed the PD and compliance with the requirements and tools of the standard; likewise, the audit team conducted interviews with the staff of the project to confirm the procedures described in the PD; furthermore, the calculations were assessed and contrasted with the baseline established in the project.

Therefore, AENOR can confirm that the implementation of the project described in the MR has been carried out in accordance with the validated PD. There are no material discrepancies between the project implementation and the PD.

5.2 *Project type and eligibility*

The Vichada Forest Carbon Project initiative, Alianza Fiduciaria S.A., is developed under activities in the Agriculture, Forestry and Other Land Use (AFOLU) sector, other than REDD+.

The audit team verified the SIG information to confirm the area eligibility, this assessment was complemented by the visit on field, likewise the audit team assessment the information based on the Validation and Verification Manual, and the procedures and steps are detailed in Section 5.5.3.1.

The project is located in the municipality of La Primavera, department of Vichada. The following table includes the specific location of the sites that are part of the project:

Table [#] [Name of table]

Eligibility criteria	***Evaluation by validation body***
Scope of the BCR Standard	
Project type	
Project activity(es)	
Project scale (if applicable)	

Validation/Verification
AFOLU
AR
Not applicable

5.3 *Grouped project (if applicable)*

No applicable.

5.4 *Other GHG program*

The audit team has not found evidence that the project has been registered nor is seeking registration under other GHG programs, nor has it been rejected by other GHG programs.

The PP applied the Tool "Avoiding Double Counting (ADC)" v2.0 in an adequate way. Likewise, the audit team verified the tool's compliance. Furthermore, they reviewed the BCR registry and other standards for potential overlaps and confirmed that there is currently no overlap with other AFOLU projects.

Therefore, AENOR confirms that the project holder complies with the requirements in section 25 of the BCR Standard and verifies that the project is no registered under other GHG program.

5.5 *Quantification of GHG emission reductions and removals*

5.5.1 *Start date and quantification period.*

The start date of the project is 01 January 2018, the purchase date of the service for the preparation and establishment of the plantation, as part of the afforestation activities of the project, along with the rental of the necessary machinery for site preparation. The purchase was agreed between the PP and INCOMSER LTDA /4.3/.

Likewise, Section 10.4 of the BCR Standard states that "Project holders can only certify and register, with the BCR Program, projects whose start date is defined within the five (5) years prior to the start validation." In light of this, and considering footnote 11 of the same section, which states "Validation begins once a commercial agreement has been signed with the CAB," the pertinent evidence is the contract signed with AENOR on 2022-08-09, which is also part of the proof for the start date /4.3/.

The project was submitted for validation and verification in November 2019, where the AENOR audit team reviewed the documentation provided /14/, and was included in the evidence mentioned in Annex 3 of this report. The documentary review carried out for the present (February 2023-2024) validation and verification report corroborated what was observed and assessed during the first validation process by AENOR in 2019.

Notice that sowing began in 2015, thus the project holder considered it when making the estimates; nevertheless, the project's removals, both ex ante and ex post, began in 2018.

The duration of the project is 40 years, starting on 01 January 2018 until 31 December 2057; and a first verification period from the start of the accredited period until 31 December 2019.

AENOR, after reviewing the supporting documents and the information gathered during the visit, considers that the start date of the project and its duration is appropriate.

5.5.2 *Application of the selected methodology and tools*

5.5.2.1 Title and Reference

The climate change mitigation initiative is developed under the requirements of the Agriculture, Forestry and Other Land Use (AFOLU) projects, and the BCR0001 V4.0 methodological guidelines Quantifying GHG Removals. Afforestation, Reforestation. and Revegetation.

AENOR was able to verify the relevance of this methodology for the baseline, removal of emissions, project emissions and leakage. This verification was based on information provided by the project developer, verified during the audit process.

AENOR verified that the use of this methodology is consistent and that the conditions for its applicability are met and that it complies with the provisions of the BioCarbon Registry Standard v3.3, and the Quantification Methodology BCR0001 v.4.0.

5.5.2.2 Applicability

The project holder is addressing each of the applicability conditions correctly, ensuring consistency between the requirements and the project activities. The PD lists all the evidence used to demonstrate compliance with each condition of the chosen methodology. The applicability criteria for the methodology have been evaluated as shown in the table below:

Table 4. Applicability BCR001 Methodology

Condition	**Applicability**	**Assessment**
a) The areas in the project boundary shall not correspond to the forest category (according to the definition adopted by the country in which the project activity is proposed), nor natural vegetation different to a forest, at the beginning of project activities and not	The areas to be reforested do not meet the forest condition established by the national government.	Audit team verified the information through the PD, SIG information /2/ and official supports of use land /4.1/. Environmental Information System of Colombia, by acronym in Spanish. (http://www.siac.gov.co/catalogo-de-mapas).

Condition	Applicability	Assessment
five years before the project start date.		
b) Project activities do not result in the transformation of natural ecosystems.	Project activities do not result in the transformation of natural ecosystems since the project location did not include natural ecosystems at the start of the project.	The project proponent has shown that the activities did not lead to the alteration of the natural ecosystem by using the GIS procedure to determine eligibility /2.1/. Furthermore, the audit team verified the land use against official information /4.1/.
c) The areas in the project boundary do not fall in the wetland category.	This condition is applicable, since the areas to be reforested do not link wetlands, flooded lands or lands susceptible to flooding	The audit team assessed the GIS procedure to establish eligibility /2.1/ and confirm that the areas do not fall in the wetland category. In addition, the audit team verified the official data in the SIAC (https://siac-datosabiertos-mads.hub.arcgis.com/datasets/humedal-versi%C3%B3n-3/about) and confirmed the eligible area does not belong to this category.
d) The areas in the project boundary do not contain organic soils. (The organic soils are soils with organic carbon content equal to or greater than 12%. FAO, adopted IPCC).	The Project Holder provided following arguments: - The project area is dominated by Typic haplustox isohyperthermic, kaolinitic soils, with a high presence of iron oxides, giving the special characteristics of Oxisols. - The soils of the project are poor in organic matter, and because of the inadequate use of the soils under baseline conditions (extensive cattle ranching without pasture management or improvement).	Audit team verified the information through the PD (joint bibliography references), SIG information /2/. The arguments in Section 3.1.1 of the Project Design (PD) and the accompanying evidence suggest that soil carbon levels do not significantly increase without the project. This takes into account the baseline scenario, which assumes that activities causing soil degradation, such as agriculture and livestock grazing, will continue if the project is not carried out. The evaluation of the baseline scenario is elaborated in

Condition	Applicability	Assessment
	According with, Amezquita (1999), the soils in the project area have serious restrictions for agricultural use, due to their high susceptibility to degradation. - The pastures did not present management or external nutritional inputs; on the contrary, they were subjected to periodic burning processes for years, so that the grass shoots would grow and be more edible or digestible for livestock.	Sections 5.5.4 and 5.5.5 of this report.
e) Carbon stocks in soil organic matter, litter and deadwood decrease or remain stable, in the absence of project activities, that is, relative to the baseline scenario.	The baseline as described are areas dedicated to the production of unmanaged pastures which are periodically subjected to burning. According to the IPCC, 2003 guidelines, an area that is subject to periodic slash and burns is considered to have a baseline of zero (0), so that soil, litter and dead wood stocks remain stable at zero (0).	Audit team verified the information IPCC, 2003 guidelines, and the PD.
f) Flood irrigation is not used.	The project does not implement flood irrigation; the proposed species do not support this type of conditions.	Audit team verified the information through the PD and interviews conducted in the field visit (2019).
g) Project activities do not include the planting and/or management of species reported as invasive.	It should be noted *that Pinus Caribaea* is considered an introduced species in Colombian territory, but not invasive (Franco, Baptiste, Díaz, & Montoya, 2011, pag. 18).	The audit team reviewed the regulations stipulated by the PP and confirmed the official list of invasive species for Colombia on the Natural National Parks website. Pinus Caribea is not

Condition	Applicability	Assessment
	Also, according to Article 2 of Resolution 474 of 2013, this species is considered within the list of introduced forest species for projects that benefit from the Forestry Incentive Certificate – CIF (Ministerio de Agricultura y Desarrollo Rural, 2013).	included in the list of invasive species in Colombia. (https://old.parquesnacionales.gov.co/portal/es/especies-exoticas-con-potencial-invasor/listado-oficial-de-especies-invasoras-para-colombia/)
h) The effects of drainage are negligible, so that GHG emissions, other than CO2, can be omitted.	In the project area effects of drainage are negligible, so that GHG emissions, other than CO2, can be omitted, as shows the carbon pools and sources included	Audit team verified the information through the PD (joint bibliography references) and interviews conducted in the field visit (2019).
i) Soil disturbance due to project activities, if any, is carried out following appropriate soil conservation practices and have not been repeated for less than 20 years	The established areas stand out for being degraded soils due to the historical burns to which they have been subjected for the annual renewal of pastures, depleting the organic layer	

5.5.2.3 Methodology deviations (if applicable)
N/A.

5.5.3 *Project boundary, sources and GHGs*

To verify the project boundary and sources, the audit team confirmed the compliance with the Methodology, and verified through the national legislation and contrast this information from the visit field.

Considering the sources identified to the Methodology BCR001 in Table 2, Section 9.2, AENOR confirmed that:

Table 5. Sources GHG emissions from project implementation

Source or reservoir	**GHG**	***Assessment***
	CO_2	According to Table 2, Section 9.2 of the Methodology BCR001, the emissions from biomass burning are not

Source or reservoir	GHG	*Assessment*
Burning woody biomass		accounted for as a change in carbon content. For that reason, it is adequate that the PP does not select this source of GHG.
	CH_4	The methodology allows the burning of woody biomass as part of site preparation and as part of forest management. However, these sources are not considered by the PP, given that the project complies with DECREE NUMBER 4296 OF 2004, which this activity is sanctioned by the environmental regional authority. This information was confirmed in the field visit.
	N_2O	

The project holder has selected adequately the sources GHG emissions, according to the methodology, as can see in the above table. The use of these sources were confirmed in the calculation developed by the PP.

The following table shows the carbon reservoirs considered in the accounting of carbon stocks in the Project according to the BCR001 Methodology:

Table 6. Reservoirs considered in the accounting of carbon stocks in the Project.

Carbon reservoir	Selection according to methodology.	Justification of the choice
Above-ground biomass	Yes	Included. Hosted because it is the main carbon pool in land-change activities in the transformation from grassland to forest. The parameter is according to methodology. Audit team confirmed the supplementary bibliography used to select the value and considers that it is a reliable source. /13.1/
Below-ground biomass	Yes	Included. This is accepted because with the project proposal the carbon content will be higher than those defined in the baseline. Audit team confirmed the supplementary bibliography used to select the value and considers that it is a reliable source. /13.1/

Carbon reservoir	Selection according to methodology.	Justification of the choice
Biomass in dead wood, litter and soil organic carbon.	Optional	Included. According the PP and through the confirmation on-site visit by the audit team, targeted areas for the project, specifically the unmanaged pastures, lack substantial leaf litter or dead wood on the soil surface because of regular burning, which precludes the accumulation of organic matter. Similarly, the level of organic matter in the soil is extremely low or absent in certain areas, which is why this reservoir will be increased with the project proposal.

The audit team assessed the supplementary bibliography /13.1/ based on consistent sources and institutional information to confirm the reservoirs of the project; likewise, it was compared to the applicability of the equations used on the baseline to conclude that the project holder included the sources per the BCR Standard's methodology and requirements; additionally, this information is consistent with the ex-ante calculator /4/. The detail of the quantification is described in section 5.5.4 of this report.

5.5.3.1 Eligible areas in the GHG project boundaries (for AFOLU projects)

The methodology document states that the GHG project holder must demonstrate that the eligible areas do not correspond to the forest category at the start of the activities, and at least 10 years before the project start date.

The PP presented the analysis of the eligibility area in Annex /2.1/, and described following steps:

- Interpretation of satellite images:

Section 3.7.1 of the PD and Annex "Section 1 - Project type and eligibility" /2/ describe in detail the steps of the multi-temporal analysis carried out for the identification of land cover using satellite imagery (LANDSAT 7), which were selected and downloaded from the server of the Earth Resources Observation and Science Center - EROS of the United States Geological Survey – USGS through of the Glovis viewer for the years 2013, 2018 and 2019.

The PP performed polygon sampling by means of photointerpretation, and the toolbar "Image calculator", taking into account the established categories, with which subsequently, applied the tool "Interactive Supervised Classification", however, given the

resolution of the images, a normalization of the result was performed with the tool 'Majority Filter'.

- Land Cover

The project holder applied the Corine land cover to identify the covers through the supervised classification. The project excluded the no eligible areas considering the standard conditions, which than: Very dense vegetation (class 3.1.4. Gallery and riparian forest).

AENOR confirmed the cover through GIS information /2/, and satellite images provided by the PP, using the free software QGis, and verified that the areas in the geographical boundaries of the project correspond to the non-forest category at the beginning of the project activities and ten years before the project start date and confirmed through the GIS information that the project boundaries are correctly determined and comply with the eligibility requirements set out in the methodological document BCR0001. Version 4.0 and national legislation

- Identification of special handling areas

The project owner analyzed the presence of management areas through the Trematos server, such as wetlands (RAMSAR), areas belonging to RUNAP (National Single Register of Protected Areas), lands of black communities, indigenous reserves, AICAS (important areas for bird conservation and biodiversity), archaeological parks, tropical dry forest zones, paramo complexes and Law 2 of reserve areas.

In addition, the PP took into account the discounts of areas considered as retreats for protection of river courses, creeks, and their springs, as defined by the procedures established by the corporation CORPORINOQUIA (Resolution 1130 of 2011)[1].

AENOR has cross-checked the areas analyzed by the PP via the SIAC (Environmental Information System of Colombia), which contains all the official data (in shapefiles) to substantiate the information given by the Project Holder.

- Identification of soil characteristics

[1] https://www.redjurista.com/Documents/resolucion_1130_de_2011_corporinoquia_-_corporacion_autonoma_regional_de_la_orinoquia.aspx#/

The Instituto Geográfico Agustin Codazzi (IGAC) provided the cartographic information in its Digital Map of Soils of the Department of Vichada, scale 1:100.000, which the PP used to evaluate the soil formations present in the project area.

AENOR cross-checked the information through the IGAC´s Geoportal, (https://geoportal.igac.gov.co/contenido/datos-abiertos-agrologia)

Taking into account the above and according to the assessment of GIS data and the eligibility analysis, the PP made the multi-temporal analysis of satellite images according to the requirements of the BCR0001V4. Similarly, AENOR considers that the procedures are adequate to confirm that the project area is not covered by forest or natural vegetation cover other than forest, and the land is not a part of a forest area that is temporarily unstocked due to human intervention or natural causes, like as it is not covered for young natural stands, in addition, are not expected to revert to a forest without human intervention.

5.5.4 Baseline or reference scenario

The PP stablished the baseline scenario, according to BIOCARBON GUIDELINES. BASELINE AND ADDITIONALITY. BCR Version 1.3. March 1, 2024 and the BCR001 methodology. During the assessment of the baseline, the audit team confirm that the assumptions and justification provided by the holder project be adequate, for that, it was evaluated the steps described in Sections 3.3. and 3.4 of the PD:

- Step 0: Start date: The start date of the project is 01 January 2018. The conclusion of this step is described in Section 5.5.1 of this report.

- Step 1: Identification of alternative land-use-scenarios: The project holder adequately defines the identification of land-use scenarios, given that they use the reference base as the continuation of economic activities that have occurred historically, exist today, and are unlikely to change in the absence of the project activity. To the above, the project stablished the following sub steps:

    - *Sub-step 1a*. Identification of probable land use alternatives in the project areas: The project holder made the characterization and provided general information about possible scenarios. The extensive cattle grazing has been the common land use historically in the project area; the project holder also indicates that Primavera municipality is dedicated to extensive, non-technician cattle ranching. As argued, 2% of the municipality's soils are being exploited for agricultural activities, many of which are in the valleys of the Meta River, which are more than 60 km from the project area.
      The characterization of the project area was established under official information, which could then be corroborated by the audit team.

Project holder demonstrated that the forestry and agricultural activities are not developed effectively in the project area, although there are national policies, likewise the project holder indicated with official information that occurs financial barriers to developed reforestation project. For the above conditions, the most viable land use in the planned project regions would be grasslands on deteriorated soils that sustain substantial livestock systems. Similarly, agricultural activity appears to be another feasible alternative. Forestry is a feasible alternative land use due to government financial backing, early development in the 2000s, and lengthy production cycles. All information is adequately supported by the project holder /13.1/.

- *Sub-step 1b*. Consistency of land use alternatives with applicable laws and regulations: The activities mentioned in sub step 1a have the respective regulations, given that the project decided to go to step 3 corresponding to barrier analysis. This procedure is according to BCR Additionality Guidelines v1.3, and it is described and assessed in Section 5.5.5 of this report.

According to the above, AENOR considers that the procedure to identify the scenarios of baseline is consistent with the standard BCR and the BCR001 methodology. In addition, the audit team conducted an intensive review of the parameters, equations and calculations provided by the project proponent. The results and assessment are described in section 5.5.6.

In addition, the project holder has applied the recommendation of the AR-Tool14 tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities" and its indicates that the removals of the baseline as zero when "Land is subjected to periodic cycles (e.g. slash-and-burn, or clearin gregrowing cycles) so that the biomass oscillates between a minimum and a maximum value in the baseline". Accordingly, changes in baseline removals are assumed to be zero. Also, the PP clarify the compliance with numeral 5, paragraph 12 of tool mentioned. The audit team confirmed during reviewing documentary.

During the baseline assessment, the audit team confirms:

a) Assumptions, methods, parameters, data sources, and factors:

- Following the evaluation of steps 1, 1a, and 1b, the audit team has determined that the project holder's assumptions and justifications for the probable baseline scenarios are adequate. Therefore, the audit team considers the procedure used to identify these scenarios as compliant with the BCR Standard.
- The methods established for AR activities are detailed in Section 3.7 of the Project Design (PD), and are supported by the calculations in file /4.2.1/.

These have been assessed by the audit team and confirmed to comply with the methodology equations, as observed in Section 5.5.4.1 of this report. The Audit team reviewed the parameters, equations, and calculations supplied by the Project Proponent. The calculations have been reproduced, and no substantial discrepancies were found that could impact the results. Consequently, it is considered that they are accurately and clearly depicted in the provided spreadsheets. Thus, the ex-ante estimated net GHG emission removals amount is deemed to be precise and realistic.

b) The Project holder has considered the uncertainty, according with Section 11.1 of the BCR Standard, and Section 15 of the Methodology 001. The details are assessed in Section 5.5.6 of this report.

c) The project evaluated the relevant regulations and demonstrated that it incorporates periodic monitoring of legislative compliance as part of its development/5/. AENOR acknowledges that the project meets legal requirements; further details are provided in Section 5.7 of this report.

d) The project's baseline aligns with the requirements of the applied methodology as outlined in the PD and the calculations. Consequently, the audit team deems the ex-ante estimation results presented in the PD to be credible, consistent, and precise. For further details of the assessment conducted, refer to Section 5.5.4.1 of this report.

e) The audit team has validated the implementation of procedures that guarantee data quality in accordance with ISO 14064-2 and the requirements of the BCR001 Methodology version 4.

Taking into account the above, the project proponent complies with the BCR standard, so it can be said that the carbon pools, variables and parameters used for the estimates of GHG emission reductions were appropriate and justified based on appropriate international references, also, the estimates of reduced GHG emissions were based on the use of data, variables and models, from recognized and technically supported sources.

5.5.5 Additionality

The project complies with the additionality criteria established in BCR standard v3.3 "*Baseline and Additionality Guidance v1.3*" by producing GHG removals and the implementation of GHG removal forestry activities which were developed in areas other than natural forest demonstrating the net positive change of carbon stocks in the area of development of the activity.

In accordance with this process the audit team notes the following:

- The project proponent presents alternatives or likely land use scenarios, based on the description of constraints that demonstrate that the GHG removals associated with the forestry project would not have occurred under baseline conditions, given that these constraints would allow the continuity of extensive livestock farming in the territory.
- Identification of probable land use alternatives in the project areas:

Land Use Scenario	Main Conclusion	Assessed Sources
Cattle grazing - Extensive cattle ranching	This production system has come to dominate over 90% of the arable land in the municipality of La Primavera, due to the area's remoteness, inadequate infrastructure, and the high cost of transporting other agricultural products	Territorial planning scheme EOT. Alcaldia municipal de la Primavera. 2000. ttps://repositoriocdim.esap.edu.co/handle/20.500.14471/10909
	Vichada Region, and especially the municipality of La Primavera, bases its economy on cattle ranching. It is carried out extensively across herds and estates, characterized by low production costs.	Alternativas para Aumentar la Productividad en el Sistema de Explotación Bovina Extensiva de Cría en el Municipio de La Primavera, Departamento del Vichada https://repository.javeriana.edu.co/bitstream/handle/10554/1091/TrillosGualterosDaniel%202010.pdf?sequence=1
	Government policies and incentives for reforestation have been very limited. Agriculture, cultivation, and cattle ranching have been promoted by policies and programs, but not commercial forestry.	Martínez Covaleda, Héctor. 2005. La cadena forestal y madera en Colombia :una mirada global de su estructura y dinámica 1991 - 2005. http://hdl.handle.net/20.500.12324/1261
Forestal plantation	Colombian forestry legislation provides incentives for commercial reforestation through the Forestry Incentive Certificate (CIF) under Law 139 of 1994.	https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=30220
	The Development Plan of Vichada indicates that La Primavera is the foremost of the Vichada municipality, with a significant area dedicated to commercial forestry plantations.	Plan de Desarrollo del Departamento 2020-2023 Vichada: Trabajo para todo. http://hdl.handle.net/20.500.12324/37208
Agriculture	The main sector of Vichada's economic activity, according to its participation in the departmental GDP, are public administration and defense activities with 35.0%, followed by agriculture, livestock, hunting and forestry with 32.69% and commerce with 10.2%.	Vichada: Ruta de desarrollo sostenible. https://www.colombialider.org/wp-content/uploads/2020/04/Vichada.pdf

Land Use Scenario	Main Conclusion	Assessed Sources
	In the Vichada department, agriculture is focused on crops like yellow corn, which had 18,897 hectares planted in 2014, along with rice, soybeans, and others. Sugarcane also features, with 93 hectares planted, contributing 0.03% to the national production. Additionally, bananas, cassava, cashews (notable for their wide range of by-products), cocoa beans, cotton, and timber trees.	Rodríguez Rodríguez, J. C. (2022). Estado actual de los proyectos tecnológicos de agricultura en el Departamento de Vichada (2014-2021). Retrieved from https://ciencia.lasalle.edu.co/negocios_relaciones/276

AENOR cross-checked the sources and has considered that the arguments developed in sections 3.3.1 and 3.3.2 of the PD are coherent and come from reliable sources /13/.

- The project proponent has carried out a barrier analysis *(Step 3. Barrier analysis*), which is sufficiently well argued, given the lack of investment in the sector and the social and infrastructure conditions in the project's area of jurisdiction. Furthermore, these barriers do not prevent the continuation of activities other than forestry that have been carried out historically.

- The barriers of political nature: The project holder detailed the main national and local politics from different institutions, such as CORPOICA, the Department of Vichada, and various studies made by several organizations that are trying to consolidate the forestry potential; however, the most significant limitation to developing the projects in the department corresponds to vial infrastructure. The bibliography /13.1/ provided by the holder project is from official institutions, and the visit made complemented the information related to the deficient vial infrastructure.

- Investment barriers: the forestry development in Colombia and specifically, Vichada Department, is an activity that less contribute to the country economy, although Colombia has a great potential, there are barriers of investment. That information can be corroborated in the UPRA institution /13.1/. The studies were assessed by the audit team.

1) Barriers due to social and infrastructural conditions: The PP revealed that the biggest impediment is vial infrastructure, which has an impact on socioeconomic situations. There is formal documentation /13.1/, and the greatest evidence is an on-site inspection when the situation is clear.

- The PP developed the follow steps according to the “Baseline and Additionality Guidance”, and in the sub step 3, PP states that “extensive livestock farming continues to be the most feasible scenario, both from the point of view of public

policies, due to the great agricultural vocation of the country, and of the department; Likewise, being one of the most predominant activities in the rural area of the country, this scenario is not affected by investment and cultural barriers". Which is realistic and verifiable through the local and national documentation, as well as is confirmed on-site visit.

- Consequently, the PP could demonstrate that the policies alternatives no prioritize commercial reforestation as an alternative for soil recovery and protection, mechanisms to reduce pressure on ecosystems, improve livelihoods, or employment alternatives for the region. For that, the policies are not coherent with the potential land soil, given that the investigations[2] have demonstrated that the main potential in Vichada are the forestry activities.

- The project demonstrates that the project area does not correspond to compensation attributable to any legal obligation, such as concessions or requests for subtraction of national forest reserves, nor is it the result of preservation and restoration activities in strategic areas and ecosystems for which payments for environmental services for GHG reduction and capture are available. Colombian legislation establishes that mandatory environmental offsets must be made with native species. One of the main regulations is Resolution 1517 of 2012 of the Ministry of Environment and Sustainable Development. This resolution adopts the "Guide for Offsets for Biodiversity Loss" and is a key regulatory framework in the country. Said Resolution 1517 of 2012[3], in its article 4, establishes that mandatory offsets should focus on the ecological restoration of degraded areas and that these restorations should be carried out using species native to the region. Likewise, Decree 1076 of 2015[4], which compiles and updates environmental regulations in Colombia, also mentions that offsets should preferably be carried out with native species. Its regulatory part on biodiversity and natural resource management reaffirms the mandatory use of native species for reforestation projects, ecological restoration, and other compensation activities.

  These legal frameworks ensure that environmental offsets, in terms of ecological restoration or reforestation, must be aligned with local biodiversity conservation, using only species native to the affected region. The Pinus or Eucalyptus plantation is not included as an option to comply with the mandatory environmental compensation. With the legal documentary and interviews with the stakeholder in the field visit, AENOR confirmed that the project does not stem from activities

[2] UPRA. (2015). Zonificación para Plantaciones Forestales con Fines Comerciales Escala 1:100.000. Ministerio de Agricultura y Desarrollo Rural MADR. http://bibliotecadigital.agronet.gov.co/handle/11438/8496
[3] https://www.minambiente.gov.co/documento-normativa/resolucion-1517-de-2012/
[4] https://www.suin-juriscol.gov.co/viewDocument.asp?id=30019960

related to environmental license compensation, concessions, timber extraction requests, or the subtraction of national forest reserves.

- The project adequately supports the impact of the project registration, and is therefore considered additional, according to the guidelines of the methodological document BCR0001. Version 4.0.

Taking the analysis above, AENOR considers that the project complies with the additionality criteria established in the methodology applied, by producing a net benefit to the atmosphere in terms of reduced emissions and that the mitigation result would not have occurred in its absence. Likewise, the audit team considers that once the documentary annexes supporting, in addition have been evaluated the compliment of the national legislation.

5.5.6 Conservative approach and uncertainty management

The project holder has adhered to the requirements set forth in Section 14 of the BCR Standard, which addresses the management of uncertainty in AFOLU sector projects. This section outlines the criteria and guidelines for managing the uncertainty associated with models used to estimate removals; this is indicated in the quantification, according to Methodology BCR001 V4, specifically table 3, where the discounts are established according to the quality and origin of the estimation data applied. For this case, the project holder applied the 20% for national aboveground biomass data and the R:S factor for belowground biomass.

Additionally, AENOR confirmed the procedures for monitoring net removals by sinks and data acquisition, as well as overseeing the physical boundaries of the project and the establishment of the forest, based on the documentary review and the field inspection. Documents that proved consistency with the BCR requirements include the eligibility criteria (Sections 1.1.1 and 3.7.1 of the PD), the project's spatial limits (3.2.1), and procedure GIS/2. Finally, the audit team was able to access and verify the parameters and data used in both ex-ante and ex - post calculations.

The calculation procedure used by the project proponent for the ex-ante quantification of GHG removals as a consequence of project implementation during the GHG emission removal quantification period and its result is summarized below:

5.5.6.1. GHG emissions reduction/removal in the baseline scenario

According to Section 16.1 of the BCR0001 Methodology, the carbon stocks in the Baseline scenario correspond to those stored in the biomass of plant species present in the areas identified as eligible, for case of the project, are areas covered by unmanaged grassland or

savannahs that have historically been subject to continuous burning and no trees or shrubs are evident.

Equation 9 of the BCR001 indicates that the removal balances for the baseline are defined by*:*

$$\Delta C_{BSL,t} = \Delta C_{TREE\_BSL,t} + \Delta C_{SHRUB\_BSL,t} + \Delta C_{DW\_BSL,t} + \Delta C_{LI\_BSL,t}$$

$\Delta C_{BSL,t}$ = *Net removals of greenhouse gases by sinks (GHGs) at the baseline in year t; t CO2-e*

$\Delta C_{TREE\_BSL,t}$ = *Changes in carbon stock of Arborea biomass in the baseline for the project area. Apply the methodological tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities"; t CO2-e*

$\Delta C_{SHRUB\_BSL,t}$ =*Change in carbon stock of shrub biomass in the baseline, for the project area. Apply the methodological tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities"; t CO2-e*

$\Delta C_{DW\_BSL,t}$ =*changes in the baseline carbon stock of dead wood above ground in year t. Apply the tool, "Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities"; t CO2-e*

$\Delta C_{LI\_BSL,t}$ =*Change in baseline carbon stock of above-ground litterfall in year t. Apply the tool, "Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities"; t CO2-e*

The project proponent justifies in section 3.7.3 of the PD that the carbon stocks correspond to those stored in the biomass of the plant species present in the areas identified as eligible.

Moreover, the project proponent extensively discussed about the productivity of Orinoquía's native Savannah grasses, which average between 3.60 and 5.22 tons of dry matter per hectare (t MSha-1). In addition, the PP is based to the Intergovernmental Panel on Climate Change (IPCC) in 2003 reported that these grasses contain between 1.80 and 2.61 tons of carbon per hectare (t C ha-1), based on the assumption that carbon constitutes 50% of the biomass. Additionally, the Orinoquia region has suffered from improper soil management, leading to a decrease in carbon accumulation rates. According to Trumbore (1995)[5], the annual carbon accumulation rates at 20 years fall to about 10% of the net accumulation seen in the first three years of growth. This evidence indicates that carbon

[5]*Trumbore, S. E., Davidson, E. A., Nepstad, D. C., & Martinelli, L. A. (1995). Belowground cycling of carbon in forests and pastures of eastern Amazonia. Global Biogeochemical Cycles, 9(4), 515-528. https://doi.org/10.1029/95GB02148.*

sequestration in savannahs could present constant or even negative values or even decline, affecting both native savannahs and introduced pastures.

The PP was able to demonstrate that the carbon incorporated in the baseline for the Proyecto de Carbono Forestal Vichada Alianza Fiduciaria S.A. initiative is between 1.8 and 2.9 tCha-1, therefore, is within the values of aboveground and belowground biomass incorporated in different pastures of the tropical region (1.8 and 5.0 t C ha-1), reported IPCC (2003). Through document reviewing and during the on-site visit and the interviews, these arguments were confirmed.

- ***GHG emissions removal in the project scenario***

The project defined the net removals balance as the relationship between changes in net removals from the project activity and the emissions generated by its implementation. The BCR standard assumes that accounting in terms of carbon balances for the establishment of forestry systems will be supported by individual contributions from above and below ground biomass sinks, litter, dead wood, shrubs and soil organic carbon. AENOR is agree with the project holder about the emissions are valued as zero, based on the standard BCR which establishes that emissions derived from the removal of herbaceous vegetation, burning of fossil fuels, application of fertilizers among other sources, not related to the elimination of tree or shrub components for soil preparation, can be considered NOT significant.

The project proposal follows The BCR0001 methodology for calculating net anthropogenic removals:

$$\Delta C_{ACTUAL,t} = \Delta C_{P,t} - GHG_{E,t}$$

$\Delta C_{ACTUAL,t}$ =*Current net GHG removals by sinks in year t; t CO2-e*

$\Delta C_{P,t}$ =*Changes in carbon stock in the Project and occurring in selected sinks in year t; t CO2-e*

$GHG_{E,t}$ =*Increases in GHG emissions, other than CO2, in the Project area as a result of implementation, in year t. Estimated with the tool "Estimation of non-CO2 GHG emissions resulting from burning of biomass attributable to an A/R CDM project activity"; t CO2-e*

The changes in carbon stock are defined by:

$$\Delta C_{P,t} = \Delta C_{TREE\_PROJ,t} + \Delta C_{SHRUB\_PROJ,t} + \Delta C_{DW\_PROJ,t} + \Delta C_{LI\_PROJ,t} + \Delta SOC_{AL,t}$$

$\Delta C_{P,t}$ =*Changes in carbon stock in the Project occurring in the selected pools, in year t; t CO2-e*

$\Delta C_{TREE\_PROJ,t}$ =*Changes in carbon stock in the biomass of trees in the Project in year t, estimated with the tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities"; t CO2-e*

$\Delta C_{SHRUB\_PROJ,t}$ *=Changes in carbon stock in shrub biomass in the Project in year t, estimated with the tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities"; t CO2-e*

$\Delta C_{DW\_PROJ,t}$ *=Changes in carbon stock in dead wood above ground in year t, estimated with the tool, "Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities"; t CO2-e*

$\Delta C_{LI\_PROJ,t}$ *=Changes in carbon stock in litter litter above ground in year t, estimated with the tool, "Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities"; t CO2-e*

$\Delta SOC_{AL,t}$ *=Changes in soil organic carbon stock in year t, in areas of land that meet the applicability conditions of the tool "Tool for estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities"; t CO2-e*

- ***Balance Anthropogenic Removals Derived from the Implementation of the Project***

The balance Anthropogenic Removals Derived from the Implementation of the Project was defined under the following equation:

$$\Delta C_{PROJ,t} = \Delta C_{ACTUAL,t} - \Delta C_{BSL,t} - LK_t$$

$\Delta C_{PROJ,t}$ *=Net anthropogenic GHG removals by sinks, in year t; t CO2-e*

$\Delta C_{ACTUAL,t}$ *=Current net GHG removals by sinks, in year t; t CO2-e*

$\Delta C_{BSL,t}$ *=Baseline net GHG removals by sinks, in year t; t CO2-e*

LK_t *=GHG emissions due to leakage, in year t; t CO2-e*

Regarding to the uncertainly, the holder project used Table 3 "Discounts for quality and applicability of GHG estimation models" of the BCR0001 methodological tool was taken into account in the project calculations, where it indicated the quality discount factors associated with GHG removal data, applying a discount value of 20%, for national aboveground biomass data and (R:S) factor for belowground biomass. The percentage applied is according to BCR requirements.

Tools applied to estimation of current net GHG removals:

According to the AR-TOOL14 Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities in the eligible area on baseline, the holder demonstrated that the value for this sink is zero, considering the activities developed before the start date of the project. However, it is appropriate to calculate on the project scenario, which described the project holder.

ARTOOL12 "Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities", to baseline the same concept of the non-presence or accumulation of leaf litter is based on the periodic burning processes. However, in project activities promote the formation of a layer of leaf litter that remains on the ground for long periods, and the sinks are considered of importance in the carbon balances for the project.

- ***Aboveground biomass***
  - ***Estimation for trees***

In accordance with the information provided in the PD about the parameters, equations, and variables, AENOR verified that the information used in the ex-ante estimation is complete and consistent and therefore considers these equations validated.

Parameters to estimate changes in C content in living aboveground biomass			
Name of parameter	**parameter**	**units**	***P. caribaea***
Annual mean increment. (Including bark, excluding decreases in biomass due to thinning)	$I_{ARB,v,ij,t}$	$m^3\ ha^{-1}\ yr^{-1}$	12,3
Basic wood density	D_j	kg/m^3	0,424
Biomass expansion factor (over bark)	BEF_{1j}	dimensionless	1,418
Root:shoot ratio	$R1_j$	dimensionless	0,25
Carbon content	CF_j	kg C/kg	0,46

Parameters included in Ex-Ante Calculation Excel File/4.2.1.2/

Taking the above into account, AENOR confirms that the project holder has applied the uncertainty management procedure adequately and considers that it conservative given that the project holder has used mainly national parameters and factors for both the ex-ante and ex-post quantifications /4.2/. And considers that the percentage is adequate, given that the project holder was based on national factors[6].

It is assumed as good practice (IPCC, 2003) to develop projections from their mean annual increment (MAI), or from growth curves by forest species and stand model in volume (m3ha-1yr-1), which is converted by expansion factors to carbon. Estimates were developed with information sources for IMA (m3ha-1year-1) and wood density from Roncancio et al (1998). From the information, carbon accumulation curves were generated for each of

[6] The project holder took into account one of the sources recommended by the BCR program as parameters for estimating GHG emission reductions or removals: "Establecimiento de factores de emisión para plantaciones forestales de Colombia y en particular de la región Orinoquia" (Table 9).

them after assuming 50% according to the National Forest Inventory (IPCC 2003). In order to estimate the carbon content stored by them at different ages. The von Bertalanffy model was parameterised:

$$C = A[1 - exp(-bt)]\ 1/(1 - m)$$

C is carbon (t ha-1),

t is time (years)

A, b and **m** are parameters of the equation.

exp*:* denotes the exponential operator and A is the asymptote or maximum amount that the organism can reach as time progresses, which controls the maximum growth rate of the species.

The results for the productive stand model based on Pinus caribaea is presented is following:

P. caribaea (vol m3)	
A	234,00
IMA Vol	13,00
C_0	78,00
r	0,38
n	2,32
m	0,67
b	0,1256
1-m	0,33
1/1-m	3,00
k	0,13
edad de C_0	9,41

Parameters of the Projection *Pinnus C*. included in Ex-Ante Calculation Excel File/4.2.1.2/

The models developed by the PP, based on von Bertalanffy equations, were designed to simulate silvicultural interventions like volume reduction and subsequent carbon decrease due to thinning. These models incorporated 25% interventions, equating to a 25% reduction in the coverage of total trees, applied to each commercial stand model at years 10 and 14, culminating in a final harvest at year 18. The models also accounted for an assumed 20% mortality rate. The calculated equations were confirmed in Sheet "Proyección_cto P. Carib" of Ex-Ante Calculation Excel File/4.2.1.2/. Likewise, the PP demonstrated that the natural regeneration model remains without interventions. The results of the behavior of the projections for the commercial stand model with *Pinus caribaea* dominant species of the system for a first rotation.

AENOR deems the equations, thinning periods, and mortality rates to be appropriate and conservative.

- ***Shrubs***

Based on the information from the project proponent and verified during the site visit, the audit team concurs that the eligible areas are deemed as clean pastures, devoid of scattered trees or shrubs, due to regular burning activities. The periodic burning limits the occurrence of such vegetation in the baseline scenario; thus, it is assumed to be zero.

$$C_{SHRUB,t} = \frac{44}{12} \times CF_s \times (1 + R_s) \times \sum_i A_{SHRUBS,i} \times b_{SHRUBS,i}$$

$$b_{SHRUBS,i} = BDR_{SF} \times b_{FOREST} \times CC_{SHRUBS,I}$$

Where:

$C_{SHRUB,t}$	=	Carbon stock in shrubs within the project boundary at a given point of time in year. t CO_2-e
CF_s	=	Carbon fraction of shrub biomass $(t.d.m.)^{-1}$. Default value of 0.47.
R_s	=	Root-shoot ratio for shrubs a. Default value of 0.40.
$A_{SHRUB,t}$	=	Area of shrub biomass estimation stratum *i,* ha.
$b_{SHRUB,t}$	=	Shrub biomass per hectare in shrub biomass estimation stratum *i, td.m.ha*$^{-1}$
BDR_{SF}		Ratio of shrub biomass per hectare in land having a shrub crown cover of 1.0 (i.e. 100 per cent) and the default above-ground biomass content per hectare in forest in the region/country where the A/R CDM project activity is located A value of 0.10 may be used unless transparent and verifiable information is provided.
b_{FOREST}	=	Default above-ground biomass content in forest in the region/country where the A/R CDM project activity is located. *td.m.ha*$^{-1}$
$CC_{SHRUBS,i}$	=	Crown cover of shrubs in shrub biomass estimation stratum i at the time of estimation, expressed as a fraction (e.g. 10 per cent crown cover implies $CC_{SHRIBS,i}$= 0.10*)*

Parameter	Value	Source
$A_{SHRUB,t}$	Sowing year 2017 148 ha. Sowing year 2016 440.50 ha.Sowing year 2015 1,053.2 ha	Strata Area /2/
BDR_{SF}	0.10 (Methodological tool default. AR-Tool14)	Methodological tool default. AR-Tool14
$CC_{SHRUBS,i}$	0.5	
b_{Forest}	231.7 td.m ha-1	Phillips et al, IDEAM, 2014

- ***Belowground biomass*:**

Parameters to estimate changes in C content in living belowground biomass				
Name of parameter	**parameter**	**units**	***P. caribaea***	***Shrubs***
Root:shoot ratio	R_{1j}	dimensionless	0,25 (Biocarbon Foundation, 2021)	0.40 (IPCC 2006 Table 4.4)

Parameters included in Ex-Ante Calculation Excel File/4.2.1.2/

- ***Dead wood and litter on the ground***

Methodological process (*AR-TOOL12 "Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities")* assumes that dead wood is not removed and remains on the plantation soil. This is what actually happens in the project activities, the organic matter derived from pruning or self-pruning and due to natural mortality of some individuals is not removed. This matter is left inside the plantations during the rotation cycle.

$$\Delta C_{DW,i,t} = C_{TREE,i,t} \times DF_{DW}$$

Where:

$C_{DW,t}$	=	Carbon stock in deadwood in stratum i at a given point of time in year, t CO_2-e
$C_{TREE,i,t}$	=	Carbon stock in trees biomass in stratum i at a point of time in year t, as calculated in the tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities; t. tCO_2-e
DF_{DW}	=	Conservative default factor expressing carbon stock in deadwood as a percentage of carbon stock in tree biomass, percent, %.
i	=	1,2,3,... biomass estimation strata within the project boundary
t	=	1,2,3,... years elapsed since the start of the project activity

According to Methodology,

DF_{DW} = 6% (Tropical biome, elevation <2000; Precipitation >1600 myr^{-1})

- ***Litter and fine debris***

It is estimated conservatively with default factors for estimating the carbon content of this deposit.

$$C_{LI,i,t} = C_{TREE,i,t} \times DF_{LI}$$

Where:

$C_{LI,i,t}$	=	Carbon stock in litter in stratum i at a given point of time in year t *t* CO_2-e
$C_{TREE,i,t}$	=	Carbon stock in trees biomass in stratum i at a point of time in year t, as calculated in the tool "*Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities*". *t*CO_2-e
DF_{LI}	=	Conservative default factor expressing carbon stock in the litter as a percentage of carbon stock in tree biomass
i	=	1,2,3,... biomass estimation strata within the project boundary
t	=	1,2,3,... years elapsed since the start of the project activity

Applied values:

DF_{LI}	=	10% is assumed as the default value, analyzed from scientific literature for Pinos. sp in tropical areas. See analysis Annex Section 3 - Quantification of GHG emissions reduction/Quantifications/Ex post/DFli_Hojarasca.xlsx

- Soil organic carbon (SOC)

$$SOC_{INITIAL,i} = SOC_{REF,i} \times f_{LU,i} \times f_{MG,i} \times f_{IN,i}$$

$SOC_{INITIAL,i}$	=	SOC stock at the beginning of the project activity in stratum i of the areas of land, *t* C ha^{-1}
$SOC_{REF,i}$	=	Reference SOC stock corresponding to the reference condition in native lands (i.e., non-degraded, unimproved lands under native vegetation forest) by climate region and soil type applicable to stratum i of the areas of land *t*C ha^{-1}
$f_{LU,i}$	=	Relative stock change factor for baseline land-use in stratum i of the areas of land; dimensionless.
$f_{MG,i}$	=	Relative stock change factor for baseline management regime in stratum i of the areas of land; dimensionless.
$f_{IN,i}$	=	Relative stock change factor for baseline input regime (e.g., crop residue returns, manure) in stratum i of the areas of land; dimensionless.
i	=	*1, 2, 3,* ..... strata of areas of land; dimensionless.

To estimate Soil Organic Carbon, the project proponent utilized the "Tool for estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities." Accordingly, the proponent supplied the Excel file "COS_ARWG30_SOC_Tool_Multizones_FID.xlsx" /4.2.2.6/ for the calculations in the ex-post results

The results of the ex-ante analysis were developed for all sinks considered with projection to 40 years of implementation. The calculation document /4.2.1/ linked to the annexed documentation was reviewed. The results are as follows:

Table 7. Summary of Results Ex ante

year	Baseline net GHG removals by sinks		GHG removals by sinks	GHG emissions by sources	Actual net GHG removals by sinks
	t CO2	t CO2/year	t CO2	t CO2	t CO2
-2	0,0	0,0	0	0	0
-1	0,0	0,0	6.106	0	6.106
0	0,0	0,0	16.939	0	16.939
1	0,0	0,0	15.605	0	15.605
2	0,0	0,0	35.785	0	35.785
3	0,0	0,0	60.225	0	60.225
4	0,0	0,0	88.154	0	88.154
5	0,0	0,0	118.658	0	118.658
6	0,0	0,0	150.819	0	150.819
7	0,0	0,0	183.821	0	183.821
8	0,0	0,0	214.400	0	214.400
9	0,0	0,0	246.100	0	246.100
10	0,0	0,0	275.134	0	275.134
11	0,0	0,0	299.643	0	299.643
12	0,0	0,0	324.388	0	324.388
13	0,0	0,0	348.784	0	348.784
14	0,0	0,0	372.398	0	372.398
15	0,0	0,0	394.823	0	394.823
16	0,0	0,0	416.082	0	416.082
17	0,0	0,0	429.263	0	429.263
18	0,0	0,0	439.617	0	439.617
19	0,0	0,0	448.163	0	448.163
20	0,0	0,0	459.375	0	459.375
21	0,0	0,0	474.716	0	474.716
22	0,0	0,0	494.329	0	494.329
23	0,0	0,0	517.443	0	517.443
24	0,0	0,0	543.130	0	543.130

year	Baseline net GHG removals by sinks		GHG removals by sinks	GHG emissions by sources	Actual net GHG removals by sinks
	t CO2	t CO2/year	t CO2	t CO2	t CO2
25	0,0	0,0	570.475	0	570.475
26	0,0	0,0	598.662	0	598.662
27	0,0	0,0	624.426	0	624.426
28	0,0	0,0	651.310	0	651.310
29	0,0	0,0	675.528	0	675.528
30	0,0	0,0	695.222	0	695.222
31	0,0	0,0	715.150	0	715.150
32	0,0	0,0	734.731	0	734.731
33	0,0	0,0	753.529	0	753.529
34	0,0	0,0	771.162	0	771.162
35	0,0	0,0	787.652	0	787.652
36	0,0	0,0	796.029	0	796.029
37	0,0	0,0	801.532	0	801.532
38	0,0	0,0	808.317	0	808.317
39	0,0	0,0	819.084	0	819.084
40	0,0	0,0	834.425	0	834.425
Total		***0***	834.425		834.425
Years		**40**	**834.425**		**834.425**
Average					***20.861***

Ex-Ante Calculation Excel File/4.2.1.2/

AENOR reproduced the calculations and considers that no significant material discrepancies were found that could affect the results, and therefore considers that they are clearly and correctly represented in the spreadsheets provided. The formulae used comply with the monitoring plan and as reflected in the PD document, and the methodology and default values used are appropriate. Therefore, the ex-ante estimated net GHG emission removal amount is considered accurate and realistic.

AENOR found no inconsistencies between the information in the PD, the technical annexes, and the spreadsheets.

After a thorough and exhaustive review and reproduction of the calculations, AENOR considers that the parameters available in the validation are correct, credible and consistent and that the estimates are consistent with the emission factors and activity data from the national inventories. The quantification complies with that expressed in the PD, the calculations provided, and the methodology applied. Therefore, AENOR considers that the ex-ante estimation results shown in the PD are credible, consistent and accurate.

5.5.7 Leakage and non- permanence

The project proponent conducts the leakage analysis and identifies that the project complies with BCR001 document 16.3 (a), which states that a) Animals are moved to existing grazing land and the total number of animals on the grazing land to which they are moved does not exceed the carrying capacity of the grazing land. As expressed in section 3.6 of the PD, the project does not foresee leakage from displacement activities, as it focuses on a land use change model in areas dedicated to extensive livestock farming, with very low livestock units per hectare, in addition, the project owners are not intervening in all areas of the properties, allowing for livestock rotation areas as the remaining heads are sold. These livestock are not expected to be replaced in the future in the project areas. Consequently, the leakage emissions are zero. This information was confirmed through the interviews during on-site visit.

The assessment of non-permanence is consistent with that described in the PD. According to the BCR standard, to assurance the permanence of the project activities the project holder applied the BCR Tool "Permanence and Risk Management" v1.1. The PP detailed the information in Sections 3.6 and 7. The PP identified risks to affect the project and, likewise, defined the action to maintain the project over time; these actions are detailed in Table 37 in Section 7. During the assessment, the audit team confirms that the actions stated are achievable, coherent, and adequate to avoid or manage the project risks identified. The details of assessment are described in Sections 5.9;5.10 and 5.11 of this report.

Therefore, the AENOR audit team can verify that the project proponents ensure the permanence of the project activities during the period of quantification of emission reductions by removals.

5.6 Monitoring plan

Following the audit team present the summarize about the process to assess the monitoring plan of the project:

The project holder described adequately the project boundaries monitoring, and indicated that to define these limits, it taken the criteria mentioned in the section of eligibility areas (3.2.1 of the PD); the monitoring of physical limits is indicated in Section 16.1 of the PD. Likewise, the project holder described the procedures to comply with the monitoring of the execution of project activities, which ones must it be followed during the three years after establishing each lot and with longer periods, especially when pruning, thinning and final harvesting activities are carried out for each lot. The activities are described in Sections 16.2, 16.3 and 16.4 of the PD.

It is appropriate that the project holder to consider forest management monitoring, which includes activities such as cleaning of plots after sowing (biomass removed and left within

the plots), pruning (intensity, biomass, or volume removed), thinning, or harvesting (intensity, biomass, or volume removed), replanting of stands that are in several rotations over the duration of the project, monitoring disturbances such as burning, diseases, and biomass loss, and therefore evaluating the development of the trees through growth monitoring plots. The monitoring plots is realized through stratification of the stands of following way: Low, Regular, Half and High.

In general, the project holder has described in detail in Section 16.5 of the PD report the procedures for verifying field data, developing the quality control and assurance procedures, and finally presenting the data required to comply with the BCR standard's monitoring plan, in addition, the project holder provided the Annex Section 17 - Monitoring plan /12/ that complements the information.

Likewise, the procedures set out for monitoring project activities and GHG emission removals at the project level were verified. It was also verified how the monitoring plan is sufficient to perform the collection of all data necessary to meet the applicability conditions of the methodology used; that they give sufficient information on carbon stock changes in the selected pools; and sufficient information to estimate project emissions and removals.

In accordance with the VVM requirements and following the validation guidelines pertinent to the monitoring plan, the audit team carried out the subsequent assessment:

a) Necessary data and information to estimate GHG reductions or removals during the quantification period: The data presented to be monitored it complies with the BCR requirements about the estimation of GHG removals during the quantification period, which described following table:

Table 8. Parameters and Data to be monitored. (Data to estimate GHG reductions or removals during the quantification period)

Data/ Parameter	Description	Source	Assessment
APLOT, i, ASHRUB,i, Ai	Area of the sampled plot; Stratum Area	Field Measurement	The Project Holder provided the data through the GIS files /2/. The calculation /4/ and procedures /12/ were assessment in desk reviewed and corroborated through the visit inspection.
To	Stratum *I* Area	Field Measurement	
APLOT,i	Total area of the sample plots in stratum *i*		
ap,i	Area of shrub biomass estimation stratum i; ha	Field Measurement	
CC_{SHRUB}, *i*	Shrub cover in stratum *i* of shrub biomass	Field Measurement	

Data/ Parameter	Description	Source	Assessment
BLI_WET,p,i	Wet weight of leaf litter sample collected from plot *p* of stratum *i*; kg	Field Measurement on Sampling Plots**	
DAP	Diameter at chest height of a tree. To determine this, equations (1) and (2) are proposed, DBH could be any diameter or dimension measurement (e.g., basal diameter, root neck diameter, basal area, etc.) used as a data source for the model.		
Dn	Diameter of the n piece of dead (fallen) wood that intersects (or falls) with the transect. This applies to debris sampling.		
H	Tree Height		
T	The length of time between successive carbon storage estimates.	Time Logged	The Project Holder provided the calculation /4/ which could be evaluated the estimated values.

The audit team compared all parameters and indicators presented in the monitoring plan with the requirements of the methodology.

b) Data and supplementary information for determining the baseline or reference scenario

About the data and supplementary information for determining the baseline or reference scenario, it is important notice that according to BCR001 methodology, the removals of the baseline as zero when "s*oils are subject to cyclical periods of slashing and burning, causing biomass contents to oscillate between a minimum and maximum baseline value"*. For that, changes in baseline removals are assumed to be zero. Therefore, the analysis of the leakage is according to Section 15.3 BCR0001, then the leaks are considered zero (See Section 5.5.7 of this report).

* *In the absence of these, project holder will apply the manual published by SOPs, or that of IPCC GPG LULUCF 2003*

Furthermore, as stated in Section 16.1 of the BCR0001 Methodology and numeral 5, paragraph 12 of AR-Tool 14, three requirements are satisfied for accounting for baseline removals as zero:

Criteria	Compliance
(a) The pre-project trees are neither harvested, nor cleared, nor removed throughout the project horizon;	Complies. The PP does not contemplate the harvesting or removing any pro-project trees.
(b) The pre-project trees do not suffer mortality because of competition from trees planted by the Project, or damage because of implementation of the project activity at any time during the project horizon;	Complies. Trees have been planted by the project but have not been included in project emissions, nor have they been removed or suffered mortality. The information was verified through the forest inventory /12/ and on-site visit.
(c) The pre-project trees are not inventoried along with the project trees during carbon stocks monitoring.	Complies. The pre-project trees have been planted by the project but have not been included in project emissions, nor have they been removed or suffered mortality. The information was verified through the forest inventory/12/, calculator file /4.2/, and on-site visit.

c) Specification of all potential emissions that occur outside the project boundaries, attributable to the activities of the GHG Project (leakage): The assessment of the leakage is detailed in Section 5.5.7 of this report.

d) Information related to the assessment of environmental and social effects of the project activities: The PP has developed the Environmental Management Plan, which was presented to the Environmental Regional Authority/8/. The project holder established other elements to monitor related to the biodiversity components and through the preliminary fauna inventory, which were identified according to the IUCN Threat Category and CITES protection. The species mentioned by the PP in Table 25 of the PD were confirmed on the official website[7][8]. In addition, the Project Holder included the environmental characterization of the area using the official information /13/. The PP will carry out periodic monitoring

[7] https://www.iucnredlist.org/en
[8] https://cites.org/eng/disc/species.php

of biodiversity in compliance with the biodiversity component in the areas of influence of the project.

The project holder established monitor related to the social components; the employment is main variable corresponding to social component. Table 41 of the PD demonstrated that the project has been training 30 people during the forestry activities. This information was confirmed through the documentary review /9/ and the interviews on-site visit.

e) Procedures established for the management of GHG reductions or removals and related quality control for monitoring activities: Appendix Monitoring Plan /12/ included the procedures and responsibilities for monitoring and reporting the variables used to calculate removals. This was confirmed by the audit team through the interviews conducted. Likewise, the PP included quality control (QA/QC) to protect the information taken in the field for each verification.

f) Description of the methods defined for the periodic calculation of GHG reductions or removals and leakage. Section 16 of the PD, the project holder described the procedures under the quality assurance:

- Monitoring of physical limits of the project: The project encompasses areas that are already planted, those scheduled for planting, and all are under management. Audit team confirmed the procedure through the eligibility analysis developed /2/.

- Monitoring of the forest establishment: The PP will ensure the quality of the planted stands by verifying their compliance with the procedures outlined in the proposed project. The audit team verified the Environmental Management Plan /8/ and on-site visit in the project area.

- Forest management monitoring: The PP defined the stratification to monitor the development of the project. The stratification seeks to unify areas with similar carbon content, regardless of management or species, since these can have effects such as pests, fires, and site qualities, among others, that make stratification reformulate in each verification. The project plan incorporated variables for monitoring areas, establishment forest, and forest management. The audit team verified the stratification by cross-referencing the forestry inventory /12/ and measuring certain plots during the field visit. Additionally, through interviews, the auditor validated the processes and variables utilized in forest management.

- Proposal for the implementation of the monitoring plan for changes in carbon content in established stands: The monitoring process involves verifying species and strata, as well as quantifying them in the field by

sampling within temporary circular plots designated for survival studies, each covering an area of 200 m². The audit team confirmed these actions by measuring several sample plots during the field visit.

- Monitoring of net removals by sinks and data acquisition: The project holder developed a Protocol for inventory plots, which is described in detail in Section 16.5 of the PD. The Protocol defines actions to measurement, defines parameters, sample size, and kind of plot (rectangular plots of 500 m2). This protocol contains specific quality assurance and control in monitoring procedures. During the field visit and staff project interviews, the actions and procedures of the protocol were verified by measuring multiple sample plots.

- Information Control and Quality Assurance. The procedure described in Section 16.7 of PD was confirmed through the documentary reviewing/2; 8; 9; 12/, and interviews with the staff project, who confirmed knowledge about the procedure.

g) Assignment of roles and responsibilities for monitoring and reporting the variables relevant to the calculation of reductions or removals. The project includes responsibility and authority for monitoring activities, this process has been verified with the PD. The knowledge of the staff associated with the project monitoring activities was considered satisfactory by the audit team.

h) Procedure whit the assessment of the project contribution whit the Sustainable Development Goals (SDGs). Audit team was able to access the document that developed the project holder under requirements of the BCR SDGs tool v1.0 and confirmed that the SDGs identified and selected by the project align with those applicable to A/R activities. Therefore, AENOR considers that the project applied adequately the tool for evaluating contributions to the fulfilment of the Sustainable Development Goals of the GHG projects.

i) Criteria and indicators related to the contribution of the project to sustainable development objectives. Based on the procedures stated in the BCR SDGs tool v1.0, the project holder has identified the following SDGs and indicators:

Number of SDGs to contribute	Indicator	Justification	Contributing Activities
SDG 8 – Decent work and economic growth	8.5	The project contributes to the objective in question because it hires personnel to carry out the project activities, contributing to the economic growth of the region.	Contracting.

Number of SDGs to contribute	Indicator	Justification	Contributing Activities
			Is identified in Section 9 of the PD. Evidences /9/
SDG 12 – Responsible consumption and production	12.2	The development of the project as such contributes to the objective in question because it is framed in the strategies of responsible production and consumption, being a forest plantation. In addition, it should be noted that there was no project of this category in the area.	Implementation and development of the project / Training. Is identified in Section 9 of the PD. Evidences /9/
SDG 13 – Climate action	13.1 -	The project contributes to the goal in question because its main objective is to replace greenhouse gases.	Implementation and development of the project / Removal de GEI Is identified in Sections 9 and 6 of the PD. Evidences /2-4/
SDG 15 – Life on land	15.1 - 15.2	The project contributes to the objective in question because it carries out the reforestation and recovery of an area where the soil was previously degraded and had extensive livestock use	Reforestation / Plantation management and control / Reforestation Is identified in Sections 1.1.1; 2 and 3 of the PD. Evidences /2-4/

j) Procedures associated with the monitoring of co-benefits of the special category, as applicable: Not applicable.

k) Criteria and indicators defined to demonstrate the additional benefits and measurement of co-benefits and the specific category: Not applicable.

The permanence risk assessment, which included the financial information provided by the Project Proponent (PP), confirmed the project's financial viability. Additionally, as the PP owns the property of the project area, there is a reduced risk to its permanence. Consequently, the project is feasible for implementation over the 40-year quantification period.

Following review of the evidence provided, the field visit and stakeholder consultations and communications with the project manager, AENOR confirms that the monitoring arrangements described in the monitoring plan are feasible within the project design and that the means considered for implementation, including data management and quality control and assurance control processes are sufficient, likewise the assessment was made according to the ISO 14064-2. Similarly, the project holder has demonstrated compliance with the BCR v.3.3 standard, the BCR 001 V4.0 methodology and the tools used.

5.7 Compliance with Laws, Statutes and Other Regulatory Frameworks

The audit team assessed the legal requirements in Section 4 of the PD and the Annex Section 4 -Legislation /5/. AENOR considers that this legal analysis is complete and complies with national legal requirements. Based on the evidence presented by the PP, the audit team confirmed that the project possesses a system which is updated as required. Additionally, the evidence pertaining to regulations is incorporated into the project's information. Currently, the evidence is organized as follows:

- C.1. CIF
- C.3. Renare
- C.4. Decretos
- C.5. Corporación
- C.6.Leyes

As per the PD, the following is a synopsis of how it conforms with existing regulations:

Law	Characteristics	Compliance
Decree 1449 of 1977. Article 3.	It lists actions aimed at the protection of water resources. For this reason, it defines measures for the areas of retreat and protection. Establishing minimum margins of protection which are ratified by corporations in subsequent decrees.	The project defines the retirement areas in accordance with the regional standards of the Corporinoquia corporation. Likewise, for the Forest Carbon component in the eligibility analyses, the areas that are within the protection and withdrawal band were considered NOT eligible, even if these areas did not historically present forest cover.
Decree 1791-1996	Any person who needs to take advantage of the natural resources of the Forests to satisfy basic needs, to market their products, to carry out scientific research or for the construction of works, must apply for the respective permit from the Corporation, in accordance with the required requirements.	Chapter XI of this decree determines that, for commercial plantations, it is sufficient to develop the registration with the Colombian Institute of Agriculture (see records on annexes Section 2 - General description of the project\Project activities\Forest Records) and the Forest Establishment and Management Plan, presented by the beneficiary of the Forest Incentive Certificate (CIF, see annexes Section 2 - General description of the project\Project activities\Forest Records) will serve for the Corporations to carry out the registration of the plantation. Resolution 0687 of 1997 is incorporated into this decree, which determines the actions by which the forest resource administration

Law	Characteristics	Compliance
		regime of the Orinoquia-Corporinoquia Regional Autonomous Corporation is issued.
RESOLUTION NO. 0687 of 22 December 1997	Whereby the forest resource administration regime of the regional autonomous corporation of the Orinoquia - Corporinoquia is issued.	The project complies with Chapter VIII related to the conditions of commercial forest plantations, and has submitted the required documents (e.g., establishment and management plan) for the start of activities adjusted to regional standards.
DECREE NO. 4296 OF 2004	Regulations for controlled open burns in rural areas.	The project complies with national and regional regulations, and does not include in its management practices the residue of waste in soil preparation activities, or the burning of waste derived from maintenance.
Resolution 200.41-11-1130 of June 22, 2011. Update 0687 of December 22, 1997. And Resolution 50041131571 of November 6, 2013.	Whereby the forest resource administration regime of the regional autonomous corporation of the Orinoquia - Corporinoquia is issued. In order to guide regional productive development, Corporinoquia adopts a tool that requires environmental management and technical procedures to develop in a sustainable way the activities that are immersed within agricultural, forestry and agro-industrial productive projects.	The **¡Error! No se encuentra el origen de la referencia.** has implemented the recommendations of the resolution and its updates by protecting water sources and remaining forests. The project has a registration and monitoring file in the Corporation where compliance monitoring is detailed. Environmental management policies are adopted and presented to the corporation on a regular basis, and their monitoring and follow-up are recorded and included in the project file that rests with the corporation.
Decree 3930 of 2010.	By means of which Title I of Law 9 of 1979 is partially regulated, as well as Chapter 11 of Title VI-Part 11I- Book 11 of Decree-Law 2811 of 1974	The project has the respective applications and approvals for the management of water resources and the potential polluting discharges that are generated. It complies with the due withdrawals for the protection of water

Law	Characteristics	Compliance
	regarding the uses of water and liquid waste, and other provisions are issued	sources dictated by article 40 of said decree (see previous paragraphs). The documents related to this decree are contained in file number 800.44.2.12.004 of the Corporation related to the forestry project.
Ley 1377 of 2010. Articulo 7	The purpose of this Act is to define and regulate forest plantations and agroforestry systems for commercial purposes.	The project conforms to the definition of Forestry Activity for Commercial Purposes, specifically complies with Article 4 on the registration of plantations larger than 10 hectares before the Ministry of Agriculture and Rural Development or whoever takes its place, in this case the ICA and has the due registration of all the lots planted in the project (See Annex Section 2 - General description of the project\Project activities\Forest Records) and Article 7, related to the NON-establishment of commercial forestry activities, protected forest areas, special management areas or any other category of management, conservation or protection that excludes such activity, as well as strategic ecosystems, such as moorlands, mangroves, wetlands. As a principle of eligibility, no area will be established where at least 10 before presented forest cover, also for the registration it was evidenced that the areas to intervene are not within the lagoon figure of conservation or protection of ecosystems.
LAW 139 OF 1994.	Whereby the Forest Incentive Certificate is created and other provisions are issued.	The project complies with the conditions established by said law, complies with the requirements and submits the documentation to access the CIF, having positive approval.
Document National Council for Economic and Social Policy (Conpes) 3827 of 2015.	Distribution of resources for the certificate of forest incentive for commercial purposes (CIF of reforestation) - valid 2015.	The project proposal complying with Conpes 3827, demonstrates the suitability of the territory for the distribution of resources Effective 2012, for projects that begin this year, with prior approval of the suitability of compliance. In addition, the selected species are within those required in Part III, related to suitable forest species Forest species that have technical support that demonstrate export potential, among others such as: Acacia (Acacia mangium), Melina (Gmelina arborea),

Law	Characteristics	Compliance
		Pinus (patula, caribea, tecunumanii, oocarpa, maximinoii), Eucalyptus (grandis, pellita, tereticornis) and Teca (Tectona grandis), Caucho (Hevea brasiliensis) and Guadua (Guadua angustifolia).
Decree 2448 of 2012.	Partial modification of decree 1824 of 1994. Definition of: forest species, native forest species, introduced forest species, protective-producing forest plantation, forest establishment and management plan, eligibility, granting, payment, new plantation and forestry project.	The project is accepted at the time of approval and granting of the disbursements established by said decree, being consistent with Conpes Document 3724 that allocated the resources under the procedures described and defined prior to Decree 2448 of 2012.
Resolution 1447 of 2018.	Which regulates the system of monitoring, reporting and verification of mitigation actions at the national level referred to in Article 175 of Law 1753 of 2015, and other provisions are issued.	This resolution establishes the deadlines for the registration of initiatives with RENARE. In September 2019, the project initiative submitted formal registration to the Ministry of Environment and Sustainable Development (see annex Section 4 – Legislation/C.3. RENARE). In response, it was argued that the RENARE platform should not be launched, so registration should be done at the time of its operation. All processes will be fulfilled as soon as it is fully operational. See letter submitted for registration (see annex Section 4 – Legislation/C.3. RENARE). Currently, after the platform is fully functional, the project is registered in the Feasibility Phase (see RENARE platform[9]) In addition, it establishes the development of the Baseline analysis for emission removal

[9] http://renare.siac.gov.co/GPY-web/#/gpy/datbasreg/13/1721

Law	Characteristics	Compliance
		projects (art. 35). This baseline analysis can be verified in section 6.2.

Source: PD - Proyecto de Carbono Forestal Vichada Alianza Fiduciaria S.A.

Furthermore, the project proponent includes the corresponding land tenure in Section 5 of the PD and adequately supported in Annex Section 5 - Carbon ownership and rights /6/.

In addition, the Project Holder has verified in Section 16.7, item 1, that information pertaining to SST, Environmental, Commercial, and Legal aspects is encompassed within the Information Control and Quality Assurance Procedure.

The AENOR audit team concludes that the Vichada Alianza Fiduciaria S.A. project complies with the regulations and legal requirements in force in Colombia for the implementation of this type of project.

5.8 Carbon ownership and rights

Section 5 of the PD indicates that the properties that make up the project area are the Galicia and Andalucía properties and are registered under public instruments of the municipality of Puerto Carreño (Vichada). The project proponent presented to the audit team the corresponding land tenure, adequately supported in Annex Section 5 - Carbon ownership and rights /6/.

Alianza Fiduciaria S.A. holds the project is the company controls both properties where the project is situated. The PP has included records in the public instruments of the municipality of Puerto Carreño (Vichada), showing that the two properties, Galicia and Andalucia—formerly known as Tatacoa and Pringosa—are part of the project. These current names are listed in the public deed, as provided in the evidence. The legality is also confirmed through Finagro Certificates (Andalucia/Galicia) /6/, considering that the incentive is granted based on the clarification of land tenure.

The project manager provided evidence of the real estate registrations, as well as the documents of constitution of usufruct in favor of ALIANZA FIDUCIARIA S.A (Public Deed /6/).

The project manager provided documentary evidence in Section 10 -Consultation with stakeholders demonstrating that the project area does not overlap with indigenous reservations. Specifically, a Resolution of the Ministry of Interior No. 0167- 2018, certifying the non-presence of ethnic groups in the project area, as well as cartographic evidence with information obtained from the Directorate of Ethnic Affairs attached to the National Land Agency, Colombia's highest land authority of the Ministry of Agriculture and Rural Development.

The audit team checked the administrative acts provided by the project proponent 100% and checked the information against the spatial database, confirming that the sources of information used for its construction were the official ones.

Therefore, AENOR considers that the information provided corroborates the legal quality of the land tenure and land use rights and the area within the project boundaries.

5.9 Risk management

In Section 7 of the PD, the project developer presented the analysis and management of project risks under the guidance of the PMBOK project management fundamentals and the requirements established by the BCR Tool Permanence and Risk Management v1.0.

The project holder identified the risks in three dimensions: environmental, social, and financial. In addition, the guidance PMBOK allows the project holder to assess the potential risks and add the legal risk. The procedure developed guides the project holder to determine the impact variables and, in this way, reduce the uncertainty of the project:

- Anthropic Risk: The PP identified six risk events in this category distributed in inherent risk:

- Moderate Risk:
  - Deficiency in communication routes
  - Damage to seedlings due to cattle entering replanted areas

- Low Risk:
  - Conflicts in the change of activities by cattle ranchers in the area Low.
  - Damage to the delimitation infrastructure of the replanted areas and their fire control stations.
  - Risks associated with the management of the occupational safety of personnel linked to the project.
  - Lack of technical assistance

- Environmental/Natural: The PP identified five risk events belong to Moderate risk:

- Moderate Risk:
  - Pest presence affected throughout the project establishment.
  - Wildfires.
  - Affected by natural phenomena (El Niño) where periods of rain and drought intensify.
  - Low soil fertility.
  - Increasing the physicochemical and biotic properties of the project's area of influence.

- Economic/Financial: The PP identified five risk events in this category distributed in inherent risk:

- Moderate Risk:
  - Increase in production costs.
  - Shortages of fertilizer and pesticide products.
  - Impetus for the development of new economic activities.

- Low Risk:
  - Lack of credit for agricultural development.
  - Delays in the approval and granting of established disbursements.

- Participation Partners/Social:

- Moderate Risk: The PP identified three risk events belong to Low risk:

  - Social conflict due to the presence of ethnic communities.
  - Shortage of trained labor in the area for afforestation activities.
  - Refuse to implement good agricultural practices that allow for the sustainable management of plantations.

As mentioned above, the PP identifies the legal risk as an additional category according to the implemented methodology:

- Legal:

- Moderate Risk:
  - Denial of applications and approvals for water resources management and the potential pollutant discharges they generate.

- Low Risk:
  - Obtaining environmental and operating permits.

"Risk and permanence" tool were assessed by the audit team and confirmed that the process is according with the requirements of the standard, likewise the holder project included the enough supports of each risk assessment /7/, and mitigation actions to the moderate risks:

Category	**Risk Event**	**Improvement Actions**	**Assessment**
Anthropic	Deficiency in communication routes	Request for raw materials, equipment, machinery in advance of the activity so that it is not delayed or affected, routes for	During the on-site visit, the audit team confirmed the

Category	Risk Event	Improvement Actions	Assessment
		personnel who live in places far from the project area	vial infrastructure.
	Damage to seedlings due to cattle entering replanted areas	Have insurance that covers these damages, personnel available to monitor these areas and a well-structured delimitation infrastructure	Interviews have confirmed the risk event. Additionally, the audit team verified the infrastructure during the on-site visit to the plantations.
Environmental/Natural	Pest presence affected throughout the project establishment	Insurance that covers crops, periodic review of the condition of crops and application of pesticides according to pest control	Interviews have confirmed the risk event.
	Wildfires	*Comprehensive insurance, frequent watering of areas prone to fires, policies of not using cigarettes, cigarette butts, matches, bottles, glass, garbage or other elements that cause fire, among other fire control actions*	
	Affected by natural phenomena (El Niño) where periods of rain and drought intensify	Secure all risks, keep an emergency plan active and in place that provides, for example, meeting points, that water outlet channels are free and unobstructed, and that there are irrigation areas in case of drought	
	Low soil fertility	Verify that there is good irrigation drainage, adequate machinery, crop rotation, and incorporation of protection crops that add organic matter to the soil	
	Increase in the physicochemical and biotic properties of the project's area of influence*	These are considered opportunities, so the project will tend to enhance them	

Category	Risk Event	Improvement Actions	Assessment
Social	Promotion for the development of new economic activities**		During the on-site visit, the audit team confirmed through the interviews with project staff.
Legal	Delays or denial of applications and approvals for water resources management and the potential pollutant discharges they generate	Make requests in advance and check their status persistently in case corrections need to be made	

The financial risks are considered low level, and the PP provided the "VICHADA FOREST ALLIANCE TRUST FUND FINANCIAL REPORT" /7.2/, which demonstrate that the result of the internal rate of return (IRR) is that it is significantly higher than the minimum acceptable rate of return, therefore the project is viable and the investment is shown to be economically profitable.

The GHG project holder utilized suitable methodologies for assessing anticipated risks and contemplated mitigation measures within the adaptive management framework. For that, AENOR considers that the procedure is adequate and allows for the establishment of measures and activities to reduce, mitigate, or prevent such risks, as well as reduce the uncertainty.

5.10 Sustainable development safeguards (SDSs)

5.10.1 Environmental aspects

Section 8.1.1 of the PD presents a detailed description of the environmental conditions in the Department of Vichada and the project area in terms of climate, soil conditions, hydrography, physiography, topography, geology, soils, and ecosystems, including life zones, land cover, flora and fauna, and endangered species.

Following the documentary review and the information and documentation collected by the audit team during the visit, it was verified that the information collected in these sections comes from official and reliable sources from recognized institutional and research entities such as the National University of Colombia, IDEAM, CORPORINOQUIA and the Government of Vichada, among others.

Audit team assessed the developing of the tool 0 net Harm Environmental and Social Safeguards, and can corroborate that the project holder complies with the requirements following way:

The project activities do not violate local, state/provincial, national, or international regulations or obligations: AENOR confirmed through the document evidence and field visit.

• The project identifies environmental and social effects resulting from its implementation: The process can be corroborated through the environmental documents that the project must present to the regional authorities (as CORPORINOQUIA).

• The project conducts the assessment and the risk management: The project holder described the information in section 7 of the PD and it was complemented with Annex Section 7 - Risk management /7/.

Therefore, AENOR considers that the information expressed in relation to environmental conditions is credible and sufficient.

5.10.2 Socioeconomic aspects

Section 9 of the PD includes information on social and economic conditions in the project area, based on population and economic censuses, together with indices of living conditions. Furthermore, the project revealed the positive benefits of its development in terms of employment creation through forestry activities. Similarly, included as benefits the project's capacity building efforts for the rural people, as well as technical labor training, ensuring that staff are qualified in areas such as occupational safety and natural resource management.

To evaluate this section, the audit team verified the supplementary information and corroborated that it was obtained of the institutional sources. Audit team assessed the developing of the tool o net Harm Environmental and Social Safeguards, the was confirmed during the on-site visit. Also, the audit team conducted interviews with the staff on the on the project. AENOR reviewed the information contained in this section and considers that the information in relation to social conditions is credible and sufficient, given that it comes from official sources.

5.11 Stakeholder engagement and consultation

Considering that the project has a single owner, consultation is deemed unnecessary. Nevertheless, "Annex Section 10—Consultation with Stakeholders" /10/ contains information demonstrating that the project's activities were communicated to the workers involved, who are families living near the project site, as well as to other stakeholders such as educational institutions and the local government.

AENOR acknowledges the information as adequate and, given the conditions of the projec , confirms that the PP has met the consultation requirements of the BCR standard.

6 Verification findings

6.1 Project and monitoring plan implementation

6.1.1 Project activities implementation

The verification corresponds to the first monitoring period of the project from 01-January-2018 to 31-December-2019.

The project manager has a database that includes all relevant information for the proper monitoring of the implementation of its activities and the GHG emission removals attributable to them. Likewise, the audit team corroborated during the visit that the project does not differences between the MR and the activities developed.

The audit team reviewed the documentation corresponding to this database, including Annex Section 1 - Project type and eligibility, also the information in Annex Section 17 - Monitoring plan which allows for the evaluation of internal processes and QA/QC management. Similarly, the audit team review included evaluating the actions carried out over the project term and ensuring their compatibility with the monitoring plan. To do this, the field auditor collected data from the field and conducted interviews with the personnel of the project. It is not found dissimilarities between project implementation and the project description, except for including passive regeneration, given that the cover was not significant to this period.

The activities to determine removals in the project area are similar procedure and this procedure is detailed in Section 15 of the MR. The audit team verified the activities, as detailed following:

- Monitoring of physical limits of the project: The project holder compared to the hectares established by each stand model, only the commercial one with the presence of forest cover was characterized for the species considered, *P. caribaea*.

  The procedure involves multiple steps outlined in Section 5.9 of this report. Additionally, the analysis of physical limits adheres to the "Eligibility Analysis" guidelines, reference /2.1/, as supplied in the evidence by the Project Proponent. The area was cross-checked through the GIS data /15/ and the visit on the field.

  The variables used by the PP for monitoring project areas are the following:
  - Stratum ID: The stratum was identified through the assessment of the forestry inventory and the field visit.
  - Coordinates of polygons or plots:
  - A_{it}: Polygons of planted areas, at time t, and within a definite stratum j);
  - A_T : Total area that corresponds to the sum of all the lots that are part of the project.

- A_{dist}: Areas altered by natural or human disturbances (harvesting, thinning).

During the on-site visit, the PP tracked the limits and verified the spatial boundaries, planted areas, and corroborated that there were no disturbances.

- Monitoring of the forest establishment. During the on-site visit and activities reported in the "Annex Section 17—Monitoring plan"/12/, the PP confirmed that the species currently planted and included in the monitoring period is *Pinus caribea*.

The variables used by the PP for monitoring the forest establishment are the following:

- Localization: Geographical position where each activity takes place.
- A_{ikt} : Area intervened by activity.
- Site Preparation: Preparation of sites at the beginning of the project in ha.
- Biomass removed prior to establishment: Only tree biomass is considered for site preparation emissions.
- Species that are actually planted by stratum.
- Survival check I, j, k: Survival after planting.
- Plantation: Date of planting of the lots.

According to the activities reported to establishment forest activities reported/12/, the audit team was able to confirm the information.

- Forest management monitoring. The PP developed the strata according to establishment in Section 16.4 of the PD. For this monitoring period, in section 15.1.3 of the MR, the stratification corresponds to:
  - *Forest Stand.* Correspond to species of commercial interest that will be subjected to silvicultural management. As mentioned above, in this monitoring, the species included is *Pinus caribea.*
  - Stratifications based on their development and accumulation of biomass – carbon: This stratification is developed with satellite image processes, using indicators such as the Normalized Difference Vegetation Index, which allows estimating the quantity, quality, and development of vegetation based on the measurement of the intensity of radiation from certain bands of the electromagnetic spectrum from certain satellite images. The results—low, regular, half, or high—are determined by the measures in the forestry inventory presented by the PP.

    The stratification was cross-checked through the GIS data /15/ and the visit on the field.

Stratum	Area (Ha)
Low	902.47
Regular	419.27
Total General	1,327.74

Concerning the aspects related to social and biodiversity matters, the project proponent has confirmed that there is no impact on territories inhabited by ethnic communities /9/. Additionally, the project proponent complies with the environmental requirements regarding biodiversity in the area of influence, as evidenced by the periodic monitoring reports that must be submitted to CORPORINOQUIA /8/.

- Monitoring of net removals by sinks and data acquisition: The PP described in the MR the procedures in compliance wiht the steps mentioned in Section 16.5 of the PD.

  .

  The statistics of the forestry inventory and the results of the carbon stocks were evaluated in the calculation ex-post /4.2/

The verification process was made in accordance the requirements of the VVM v2.3. According to the activities proposed and described in the PD-MR, they are consistent with the documents assessed, the joint field visit and the interviews conducted. Therefore, AENOR considers that the implementation of the project is adequate and coherent with the information provided by the project holder.

6.1.2 Monitoring plan implementation and monitoring report

AENOR reviewed the monitoring documentation, comprised in section 14 of the Monitoring Report, as well as the GIS database /2/ and found them to be in accordance with the procedures described in the validated monitoring plan. AENOR verified the monitoring plan contained in the PD and compared it with the Monitoring Report to check if there were any differences that could cause an increase in the estimates of GHG emission removals in the current monitoring period.

The reported parameters, including their source, monitoring frequency and review criteria, as indicated in the Monitoring Report, were verified as correct and in line with the validated monitoring plan. The necessary management system procedures, including responsibility and authority for monitoring activities, have been verified to be consistent

with the PD. The knowledge of the staff associated with the project monitoring activities was considered satisfactory by the audit team.

6.1.2.1 Data and parameters

The monitoring of this component is carried out through temporary or permanent plots, in which the dynamic growth process of the plantation is evaluated in order to estimate the carbon content present in the aerial and underground tree biomass of the project.

The defined strata are monitored in a database that identifies the species, area, plot, date of planting, age, silvicultural management, possible variation in carbon sequestration, cost-effectiveness of the monitoring process and other disturbances (pests, fires, pathologies, etc.), which is stored in physical and digital format. This database is further supported by the respective cartography.

Sampling plots were established to identify the changes and evolution of carbon accumulation in the stands. These plots will be established based on cost-effectiveness criteria, maintaining a level of precision of ±10% of the mean, with a confidence level of 95%. The Calculation of the number of sample plots for measurements within A/R CDM Project activities v.2 was used to calculate the sample size. Details of the plots, as well as their location and survey are provided in Section 14 of the MR.

The estimates of removals were made using equations available in the scientific literature for environmental conditions similar to those of the project, equations proposed by the IPCC good practice guidelines for stand models and their species. The recommendations of the CDM tool Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities were also considered to define equations to be applied ex post.

From the monitoring plots the dendrometry variables are diameter at breast height (DBH) and total height (H). During the field visit, a demonstration of the monitoring data collection was attended by the responsible persons appointed by the project management.

The above-ground biomass expansion factors are those suggested by the IPCC Good Practice Guidance, in addition to the root-shoot ratios for the estimation of below-ground biomass. The detailed procedures and values used are detailed in the field sampling plan protocol in Annex Section 17. Monitoring plan.

The following table summarizes the data and parameters used by the project proponent to calculate the ex-post GHG emission removals for the monitoring period and which have been assessed by AENOR.

Table 9. Data and Parameters monitored.

Data/Parameter monitored	Purpose of the data/parameter	Value	Assessment procedure
APLOT,i, ASHRUB,i, Ai	Area of the sampled plot;Stratum Area	0.05	• Review of the GDB of the project and consistency of the data with the spreadsheet and reported in the MI. • Corroboration of equations used appropriately. • Review of the procedure according to the quantification methodology applicable to the project. • Field measurement. Correctly collected (initial audit) • Field measurement on sample plots (initial audit)
To (ha)	Stratum area	Low 902.47 Regular 419.27	
		Total area: 1,327.74	
APLOT,i (ha)	Total area of sample plots in the stratum	0.05	
$a_{p,i}$ (m^2)	Sampling area of the selected litterfall on plot p in the stratum	0.50 to 1m^2	
$CC_{SHRUB,i}$	Shrub cover in stratum i of shrub biomass	0.5	
$B_{LI\_WET,p,i}$ (kg)	Wet weight of the litter sample collected from plot p of stratum i; kg	Forestry Inventory (each tree)	
DAP (cm)	Diameter at breast height of a tree. (1.3)		
Dn (cm)	Diameter of the piece of dead (fallen) wood that intersects. This applies to debris sampling.		
H (m)	Tree height		
T (year)	Time period between successive carbon storage estimates.	Two years according this monitoring period 2018-2019	

In relation to quality control in the monitoring procedures, the verification team verified that the project established a management structure that allows visualising a scale of command and responsibilities to guarantee control over the quality of the information.

AENOR reproduced the calculations and obtained the same results, and therefore considers that they are clearly and correctly represented in the spreadsheets provided. The formulae used comply with the monitoring plan and as reflected in the MR document, and the methodology and default values used are appropriate. Therefore, the net amount of GHG emission removals estimated ex post is considered accurate and realistic.

AENOR verified that the list of parameters to be monitored is complete and consistent with the information in the monitoring plan. AENOR found no inconsistencies between the information in the MR, the technical annexes, and the spreadsheets.

After a thorough and exhaustive review and reproduction of the calculations, AENOR considers that the parameters monitored and available in the validation are correct, credible, and consistent and that the estimates are consistent with the emission factors and activity data from the national inventories.

In Section 15.1.5.4 of the MR, the project holder indicates the procedure of Quality assurance and control in monitoring procedures to guarantee the quality of the information collected and its proper filing. The procedure was corroborated by the audit team in the visit field.

The information in the Monitoring Report complies with the PD, the calculations provided, the methodology applied and the tools indicated in Section 2 of this report. Therefore, AENOR considers that the results shown in the Monitoring Report are credible, consistent and accurate.

6.1.2.2 Environmental and social effects of the project activities

Following a review of the documents as well as the information and documentation gathered by the audit team during the visit, it was determined that the information presented in these sections is from official and reliable sources from recognized institutional and local government. As a result, AENOR believes that the information provided regarding environmental conditions is credible and adequate. Likewise, Sections 8 and 9 of the MR includes information on social and economic conditions in the project area, based on population and economic censuses, together with indices of living conditions.

AENOR reviewed the information contained in this section and considers that the information expressed in relation to environmental and social conditions is credible and sufficient, given that it comes from official sources. And on the other hand, the interviews with the staff of the project and compliance with the requirements established by the CORPORINOQUIA (Forest Management Plan) are in accordance with the positive impact on the environmental and social criteria in the project area.

6.1.2.3 Procedures for the management of GHG reductions or removals and related quality control for monitoring activities

AENOR reviewed the monitoring documentation, which is included in Section 15.1.5.3.6 of the Monitoring Report, as well as Annex Section 17 Monitoring Plan/12/, to verify the procedures for control and quality assurance. The monitoring plan encompasses the oversight of project implementation, the monitoring of GHG removals resulting from project activities, and the estimation of ex-post alterations attributable to the project. The PP presented the description of the monitoring plan, which incorporates quality control and quality assurance procedures: The data, parameters, and frequency are specified adequately. Likewise, quality assurance and control in monitoring procedures are in conformity to guarantee the quality of the information collected, processed, and developed. Main activities included in the protocol refer to:

- Reliability in field measurements

- Verification of input data and analysis

In addition, the PP compliance with the steps described in the PD as well as:

- Identification of the need
- Gathering information
- Review of information in the office.
- Information organization
- Physical and digital file, and
- Back up.

AENOR found that these procedures were in accordance to the procedures described in the validated monitoring plan. The information was also corroborated through interviews conducted during the field visit.

AENOR verified the protocol for taking and storing information and considered that the procedure is appropriate and consistent with the monitoring plan and the BCR Standard requirements.

6.1.2.4 Description of the methods defined for the periodic calculation of GHG reductions or removals, and leakage.

The audit team reproduced the calculations of selected samples to ensure the accuracy of the results. Where appropriate, references for analytical methods or default values were verified with the relevant source. The monitoring plan provides for monitoring of the data and parameters for project control and accounting of GHG removals. The process is according to the Validation and Verification Manual of the BCR Standard.

The PP complies with BCR001 requirement 16.3 (a), which states that a) Animals are moved to existing grazing land and the total number of animals on the grazing land to which they are moved does not exceed the carrying capacity of the grazing land. Given that the project of foresee the production of leaks due to displacement of activities, since it focuses on a model of land use change in areas dedicated to extensive livestock farming, with very low units of livestock per hectare[10]. Through interviews and the review of information, audit team was able to corroborate the above.

AENOR has determined that the rationale for defining 'no displacement' and 'no leakage' in project development is adequate and aligns with the actual conditions of the project area.

[10] Estimated average to be 0.5-1.5 head per hectare

6.1.2.5 Assignment of roles and responsibilities for monitoring and reporting the variables relevant to the calculation of reductions or removals

The PP has anticipated measures to ensure and control quality throughout the project's implementation, adhering to the requirements of Methodology BCR001. The "Annex 17 Monitoring Plan" documents confirm the audit team's compliance with the assurance in the development and management of the project. These documents enable the identification and implementation of the necessary protocols, procedures, guides, and formats, as well as the application of methodologies for the Quantification of GHG Emission Removals. In addition, the roles and responsibilities are evident in the established protocols at each stage of the project.

- Monitoring of forestry activities
- Protocol for taking and safeguarding information
- Trainings – quality
- Plot Protocol.

The knowledge of the staff associated with the project monitoring activities was considered satisfactory by the audit team. Consequently, AENOR has determined that the procedures established by the PP are adequate for defining responsibilities to ensure the control and quality of the results from the removals calculation.

6.1.2.6 Procedures related whit the assessment of the project contribution whit the Sustainable Development Goals (SDGs)

The project applied adequately the tool for evaluating contributions to the fulfilment of the Sustainable Development Goals of the GHG projects, and BCR SDGs tool v1.0 was evaluated by the audit team, likewise, the information verified by the field visit complemented the assessment. Following table, adapted based on MR, and the applied tool provide a summary of the SDGs identified by the PP, along with an evidence assessment to verify compliance:

Number of SDGs to contribute	**Indicator**	**Justification**	**Monitoring Period Results (2018-2019)**	**Contributing Activities**
SDG 8 – Decent work and economic growth	8.5	The project contributes to the objective in question because it hires personnel to carry out the project activities, contributing to the economic growth of the region.	Generation of 164 jobs	Contracting. Is identified in Section 9 of the MR. Evidences /9/ Hiring File.

Number of SDGs to contribute	Indicator	Justification	Monitoring Period Results (2018-2019)	Contributing Activities
SDG 12 – Responsible consumption and production	12.2	The development of the project as such contributes to the objective in question because it is framed in the strategies of responsible production and consumption, being a forest plantation. In addition, it should be noted that there was no project of this category in the area.	Execution of 1 project (the present) with the modality of sustainable consumption and production; realization of 18 trainings	Implementation and development of the project Is identified in Section 9 of the MR. Evidences /9-12/ Hiring and Training File.
SDG 13 – Climate action	13.1 -	The project contributes to the goal in question because its main objective is to replace greenhouse gases.	Execution of 1 project that contributes especially to the reduction of fires; removal of 31,758 tons CO_2 eq.	Implementation and development of the project / Removal de GEI Is identified in Sections 6 and 16 of the MR. Evidences /2-4-12/ GIS information, Ex post Calculators. Forestry Management Plan.
SDG 15 – Life on land	15.1 - 15.2	The project contributes to the objective in question because it carries out the reforestation and recovery of an area where the soil was previously degraded and had extensive livestock use	10% increase in the proportion of forest area for reforestation activities; 53.6% increase in the proportion of sustainably managed forest area; 80.67% of rehabilitated areas (in relation to the total project area)	Reforestation / Plantation management and control / Reforestation Is identified in Sections 6 and 16 of the MR. Evidences /2-4/ GIS information, Ex post Calculators.

Based on the evaluated evidence and on-site interviews, AENOR has determined that the project meets the selected Sustainable Development Goals (SDGs): 8, 12, 13, and 15, along with their respective indicators.

6.1.2.7 Procedures associated with the monitoring of co-benefits of the special category, as applicable.

Not applicable.

6.2 Quantification of GHG emission reductions and removals

The validation and verification team performed a review of all input data, parameters, formulae, calculations, conversions, resulting uncertainties and output data to ensure consistency with the criteria set out in Section 2 of this report, the calculation methodologies employed and the validated PD.

The steps taken to assess the consistency of the GHG emission reductions quantification, in accordance with the applicable requirements in the applied methodology and the VVM were applied according to the information provide in the MR, Section "16 Quantification of GHG emission reduction / removals", as follows:

• Identification of appropriate methods and equations according activity data and project type, tree carbon stocks, above-ground, and below-ground biomass, volume of trees.

• Verification of information provided in GIS.

• Verification of values and source of data when they are provided from secondary information.

• Verification of data units.

• Verification of complete and adequate implementation of methods and equations in spreadsheet.

The verification team reproduced the calculations of selected samples to ensure the accuracy of the results. Where appropriate, references for analytical methods or default values were verified with the relevant source. See table 9.

6.2.1 Methodology deviations (if applicable)

Not applicable.

6.2.2 Baseline or reference scenario

AENOR reproduced the calculations and considers that no significant material discrepancies were found that could affect the results, and therefore considers that they are clearly and correctly represented in the spreadsheets provided. The formulae used comply with the monitoring plan and as reflected in the PD document, and the methodology and default values used are appropriate. Therefore, the ex-ante estimated net GHG emission removal amount is considered accurate and realistic.

AENOR verified that the list of parameters used in the ex-ante estimation is complete and consistent and therefore considers this list validated.

AENOR found no inconsistencies between the information in the PD, the MR, the technical annexes, and the spreadsheets.

After a thorough and exhaustive review and reproduction of the calculations, AENOR considers that the parameters available in the validation are correct, credible, and consistent and that the estimates are consistent with the emission factors and activity data from the national inventories. The quantification complies with that expressed in the PD, the calculations provided, and the methodology applied. Therefore, AENOR considers that the ex-ante estimation results shown in the PD are credible, consistent, and accurate.

6.2.3 Mitigation results

According to the assessment conducted and described in Section 6.1.1 of this report, the PP established the eligible area for this verification, the P. caribea plantation. The field plots, therefore, the stratification, were classified considering their amount of carbon sequestration, calculated based on the amount of biomass found. For that, by the current verification, the PP presented two strata: low and regular. The audit team identified these strata through the GIS file /2-3/.

Strata	AREA (ha)
Low	902.47
Regular	419.27
Total	**1,321.7**

The difference in area is that the eligible area within the project is 1,645.85 eligible hectares, however, it was estimated that by 2019, all areas of the commercial stand model should have been established. Now, as a conservative approach in remote sensing analysis, only the areas that demonstrate advanced development or are in replanting processes due to mortality were taken into consideration. This is also because the analysis of satellite images itself excludes the areas within the plots that exhibit mortality.

The stratification and its areas were used to develop a sample size distribution according to the UNFCCC for CDM reforestation project. The audit team visited the plots and verified the sample plots for re-measurement. It found no significant differences. Regarding the results, the PP included the plots that are representative of the eligible area for this verification (low and regular strata). The audit team verified this information through the GIS information provided by the project holder and took checkpoints during the on-site visit made in 2019.

AENOR reproduced the ex-post calculations /4.2.2/ and cross-checked that the data, parameters, and equations used were consistent with the parameters described in the PD and the MR. The audit team also checked for any errors that would affect the results of the abatement results.

Therefore, the ex-post estimated net GHG emission removal amount is considered accurate. The spreadsheet contains the default data and parameters, which allows recalculation and following the equations developed by the project holder, the information is clear as there spreadsheet as in the MR.

AENOR considers that the holder project has complied with the procedures established in the BCR 001 methodology V.4. regarding the baseline emissions, project emissions and leakage (corresponding to zero) and the requirements of the BCR Standard v.3.3. to calculate the ex-post results.

6.2.3.1 GHG emissions reduction/removal in the baseline scenario

The audit team verified that the parameters and data used to the baseline scenario were taking into account in accordance with the BCR 0001 Methodology. The data, parameters and equations were assessment and described in Section 5.5. of this report.

6.2.3.2 GHG emissions reduction/removal in the project scenario

To estimate the GHG emissions removal, the Project Holder developed each step according to the BCR 0001 Methodology.

First, the project holder established the project-developed area and separated the project area through the strata (see paragraphs 6.2.3 of this report). For this verification, the project considered the *P. caribea* plantations. The PP took the steps to establish the eligibility area according to the process described in Section 3.7.1 of the PD.

The PP estimates of accumulated carbon per hectare, using equations available in the literature, and following the default values and procedures established by the IPCC (2003, 2006). Audit team verified the values in the spreadsheet provided by the project holder in Annex Section 3 - Quantification of GHG emissions reduction in file Ex-post quantification /4.2.2/.

The carbon content in the underground component was estimated following the methodological recommendations of the IPCC 2003, which determines different factors to be applied according to the biomass contents per hectare and for each species, according to the IPCC Good Practice Guidelines (2003) specifically factors to make use of for root biomasses in coniferous plantations. The project utilized established equations from reliable sources to calculate the estimated accumulation of carbon per hectare:

$$RJ = \frac{e^{(-1.085+0.8836*\ln b)}}{b}$$

IPCC. 2003. Annex 4. Section 4.2. Examples of allometric equations for estimating the biomass of above-ground and below-ground trees

Where:

RJ: Root-shoot biomass relationship for species j; dimensionless

b: Aboveground biomass per hectare (en t d.m. ha-1),

j: 1, 2, 3, … specie

The carbon content in the underground component was estimated following the methodological recommendations of the IPCC 2003, which determines different factors to be applied according to the biomass contents per hectare and for each species. In this case, Pinnus caribea.

AENOR considers that the information is correct and adequate, given that, the values are conservatives and complies with the BCR 001 Methodology.

For the estimation of Soil Oganic Carbon, the project holder applied "Tool for estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities", for that, the PP provided the excel file COS ARWG30_SOC_Tool_Multizones_FID.xlsx" /4.2.2.6/ as part of the calculations included in the ex-post results, likewise, in sheet "SOC" of the spreadsheet "Ex-post 2018 - 2019_v3", the PP included the equations and source of data[11]. This information was confirmed by the audit team, and it was considered that there was no inconsistent information. The equation used is according to IPCC, 2003:

$$\Delta SOC = \frac{44}{12} \sum A_i * dSOC_{t,i} * 1year$$

Project Holder estimated other sinks: Shrub, litter, and dead wood. To estimate the shrub, the project holder applied default factors determined by the methodological tools, which was identified in the validated information and the default value (0.5) provided in the file calculation /4.2.2.1/.

About the litter and dead wood, the project holder applied the tool "Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities"; the methodological tool recommends to litter a general factor, it suggests applying other values when these are based on analyses carried out specific to the project space under similar conditions. For leaf litter, the factor of **10%** was assumed, which is the result of the

[11] The soil disturbance percentage is not considered, given that the soil was decompacted by mechanization with an agricultural chisel with a width of 0.30 cm. This process does not turn the soil, avoiding potential CO2 emissions as would happen with the disc plow; the decompatation is done to facilitate dimpling, soil aeration, improve water infiltration, and avoid loss due to fertilizer runoff.. The planting holes have a diameter of 0.3 m, with distances between them of 3.1 m. In total, 1040 holes are dug per hectare, each with an area of 0.070 m2, which is equivalent to an alteration of 73.51 m2, that is, 074% of the hectare. Making this alteration non-significant.

average values identified in other studies for the species of Pinus sp. in the tropical region. The default value to dead wood is an expansion factor of 6%, which relates the dead wood above the ground to the above-ground carbon in each stratum according to the tool mentioned.

Table 10. General Balance

Stratum	AREA (ha)	tCO2 Above+belowground biomass (tCO2)	Shrubs CSHRUBS (tCO2)	Dead wood CDW (tCO2)	Leaf litter CLI (tCO2)	SOC (tCO2)
Low	902.47	4,504	7,646	200	333	9,631
Regular	419.27	12,412		551	919	
Total	**1,321.7**	**16,916**	**7,646**	**751**	**1,252**	**9,631**

The above values were confirmed in the file calculation /4.2.2.1/ and were applied adequately.

Table 11. GHG Removals during monitoring period (2018-2019)

Year	*Baseline emissions (tCO_2e)*	*Project removals (tCO_2e)*	*Leakage emissions (tCO_2e)*	*Net GHG emission removals (tCO_2e)*
2018	0	11.043	0	11.043
2018	0	18.465	0	18.465
Total	**0**	**29.508**	**0**	**29.508**

Source: Ex-post 2018 - 2019_v3.xlsx /4.2.2.1/

In accordance with the parameters evaluated, AENOR confirms that for the monitoring period from 01-01-2018 to 31-12-2019 the following removals are present for the Alianza Fiduciaria S.A. Forest Carbon Project.

6.3 Sustainable development safeguards (SDSs)

According TO the *Sustainable Development Safeguards SDSs tool V1.0*, the Project holder developed the sections 7, 8 and 9 of the MR, which included the risk management, environmental and social aspects respectively. Therefore, the project holder has complied with these requirements considering the following:

- Section 8 of the MR analyzed the environmental aspects which could verified through the Annex Section 8 - Environmental Aspects, /8/ where there is information about the care of natural resources, in addition the holder project presented to CORPORINOQUIA the Environmental Management Plan, which identified the biodiversity species in the project area, likewise identified the procedure to care the threatened species. The project holder has monitored the

natural corridors and considered this information to apply under the Environmental Management Plan.

- Section 9 of the MR includes the social aspects, and determinates the effects over the community in the project area, and the PP indicates that the main social benefits are the generation of direct and indirect employment, the modernization of the workforce, the development of productive and social infrastructure that can be used for other projects, the local demonstration of how reforestation activities contribute economically to development. Annex Section 9 - Socioeconomic Aspects /9/ provided the project employment information.

- Section 7 indicates the risk and mitigation measures to prevent any risk social, environmental and others. Annex Section 7 - Risk management /7/ provided the supported information.

The Project Holder conducted the evaluation of environmental and social impacts according to Sustainable Development Safeguards SDSs tool V1.0. including its Annex A. The details are outlined in Sections 8 and 9 of the PD. In summary, based on the compliance tool, the audit team has taken into account the following points:

- According to the assessment of the national legislation and compliment of the regional regulations, the PP demonstrated that the project activities do not violate local, state/provincial, national, or international regulations or obligations. This was confirmed through the assessment of compliance with applicable legislation in Section 5.7 of this report.

- As previously stated, the project proponent (PP) has developed periodic reports to assess environmental impacts. Additionally, this environmental analysis is supplemented in accordance with Annex A of the applied tool. In Section 8 of the PD, the PP did not identify any probable effects on biodiversity and ecosystems within the boundaries project.

  Therefore, the project does not cause negative effects on land use, water, biodiversity, ecosystems, or climate change.

- About the significant socioeconomic effects of project activities within the project boundary, the PP has been the analysis to corroborate zero negative effects, considering that the significance mainly economic is positive to the influence area. Likewise, according to the tool applied, the project does not cause negative effects on labor and working conditions, gender equality, or empowerment of women. Therefore, the project does not cause negative effects on land use, water, biodiversity, ecosystems, or climate change, land acquisition, restrictions on land use, displacement, and involuntary resettlement, Indigenous Peoples and Cultural Heritage, community health and safety, corruption, economic impact, governance, and compliance.

Interviews with workers and staff confirmed the project's positive social impact, and documentary evidence /9/ shows that the project trained personnel and boosted employment in the area compared to other local activities such as livestock farming.

AENOR considers that project activities do not cause any net-harm to the environment and communities, instead, the project holder demonstrated the benefits socioeconomic and environmental in the project area. Similary, the project holder appropriately addressed the applicability of the **"Sustainable Development Safeguards SDSs tool V1.0."**

6.4 Sustainable Development Goals (SDGs)

The project applied the BCR SDGs tool v1.0 /11/ and demonstrated compliance with the targets set for this monitoring report. The SGD´s identified were:

- SDG 8 – Decent work and economic growth. Indicator 8.5: By 2030, achieve full and productive employment and decent work for all women and men, including young people and people with disabilities, as well as equal pay for work of equal value. Through the information related to contracts /9/ and interviews with the employer, the audit team verified compliance with this goal.
- SDG 12 – Responsible consumption and production. Indicator 12.2: By 2030, achieve sustainable management and efficient use of natural resources: Through the information related to the trainings /9/, Monitoring Activities /12/ and interviews with the employer, the audit team verified compliance with this goal.
- SDG 13 – Climate action: Indicator 13.1: Strengthen resilience and adaptive capacity to climate-related risks and natural disasters in all countries. The PP contributed to the SGD 13, through the GHG removals, and these are demonstrated with the results of the quantifications during the monitoring period /1-2-4.2.2-12/.
- SDG 15 – Life on land: Indicator 15.1: By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and the services they provide, in particular forests, wetlands, mountains and arid areas, in line with the obligations under international agreements. Indicator 15.2: By 2020, promote sustainable management of all types of forests, end deforestation, restore degraded forests and increase afforestation and reforestation globally. The project area has developed with the reforestation, which this was evidenced during the on-site visit, and cross-check the GIS file/2/ and Ex-post calculator /4.2.2/.

The identified Sustainable Development Goals (SDGs) align with the BCR tool and are according to the project activities according to the applied methodology (BCR 0001 Methodology).

6.5 Climate change adaptation

The holder project considered the strategic line under National Climate Change Policies, this it demonstrated through the assumption that the project objectives to promote climate change management that contributes to advancing a path of climate-resilient and low-carbon development (IDEAM, 2018), this being a project framed in strategies for the reduction of GHG emissions.

The project improves conditions for the conservation of biodiversity and its ecosystem services, and its activities generate sustainable and low carbon productive landscapes, considering that it is a commercial plantation developed in a non-forest area, the above is argued and supported by Section 6 of the MR.

The project has implemented activities that generate sustainable and low-carbon productive landscapes through actions that assist in the efficient use of soil, including land use consistent with land vocation and agroecological conditions that increase competitiveness by reducing vulnerability to climate change, as the project activities description evidence.

Criteria	Justification	Documentary Assessment
a) consider one or more of the strategic lines proposed in the National Climate Change Policies and/or focuses aspects outlined in the regulations of the country where the project is implemented.	The project is in line with the with the National Climate Change Policy, whose objective is to promote climate change management that contributes to advancing a path of climate-resilient and low-carbon development, this being a project framed in strategies for the reduction of GHG emissions.	According to National Climate Change the goal to [12], "The forestry and agricultural sectors address both the causes of climate change due to the emissions they generate and the impacts of climate change."
b) Improve conditions for the conservation of biodiversity and its ecosystem services, in the areas of influence, outside the project	The project improves conditions for the conservation of biodiversity and its ecosystem services, and its activities generate sustainable and low-carbon productive landscapes, taking into account that it is a	The PP must present to the Regional Environmental Authority (CORPORINOQUIA) periodic monitoring of biodiversity in compliance with the biodiversity component in the

[12] https://www.minambiente.gov.co/documento-entidad/politica-nacional-de-cambio-climatico/

Criteria	Justification	Documentary Assessment
boundaries; i.e., natural cover on environmentally key areas, biological corridors, water management in watersheds, among others;	commercial plantation developed in a non-forest area.	areas of influence of the project. The project holder has monitored the natural corridors and considered this information to apply under the Environmental Management Plan/8/.
c) Implement activities that generate sustainable and low-carbon productive landscapes;	The project integrated actions that assist in the efficient use of soil, including, land use consistent with land vocation and agroecological conditions that increases competitiveness by reducing vulnerability to climate change, as the project activities description evidence (see section 2.3 of the PD).	Section 2.3 of the PD is consistent with the criteria, and the process of the eligibility /2/ is aligned to land vocation and agroecological conditions.
d) Propose restoration processes in areas of specific environmental importance	The project proposes areas with restoration processes in areas of special environmental importance, taking into account that part of the areas of the properties where the project is developed correspond to protection areas because they are riparian forests (see annex Section 1 - Project type and elegibility\Elegibility).	
e) Design and implement adaptation strategies based on an ecosystem approach		
AFOLU Projects		
a) agricultural, forestry, and fisheries production systems better adapted to high temperatures, droughts, or floods, to improve competitiveness, income, and food security, especially in vulnerable areas;	The project develops forest production systems more adapted to high temperatures, droughts or floods, to improve competitiveness, income and food security, especially in vulnerable areas, taking into account that it is developed in an area where the main activity is extensive livestock farming, which favors the risk of drought and soil degradation due to erosion.	According the Environmental Plan and Forestry Management, the PP has demonstrated actions that are considered aligned to criteria. /3.2-8-12/.

Criteria	Justification	Documentary Assessment
b) integrated actions that assist in the efficient use of soil, including, i.e., the conservation of existing natural cover, land use consistent with land vocation and agroecological conditions, family farming, and agricultural technology transfer that increases competitiveness by reducing vulnerability to climate change;	The project develops comprehensive actions that help the efficient use of land, since the conservation of the natural riparian forest covers existing on the properties where the project is developed is contemplated.	
c) Reduction of GHG emissions from agricultural activities, compared to the non-project scenario	The project generates a reduction in GHG emissions from agricultural activities, compared to the scenario without the project, taking into account that the baseline scenario corresponds to extensive livestock farming.	The baseline was assessed in the PD, and the assessment is described in Sections 5.5.4; 5.5.5, and 5.5.6 of this report.
d) Actions casually related to climate change adaptation measures, such as use and management of seeds resistant to temperature change, water management through rainwater harvesting, recycling, drainage, and irrigation, reforestation of watersheds to prevent erosion, soil, management with practices that reduce compaction, and	The project develops actions directly related to adaptation measures to climate change, taking into account that a forest plantation is established on two properties that have riparian forests associated with bodies of water, so the development of the project contributes to their conservation.	The project holder has monitored the natural corridors and considered this information to apply under the Environmental Management Plan/8/. According the Environmental Plan and Forestry Management, the PP has demonstrated actions that are considered aligned to criteria. /3.2-8-12/.

Criteria	Justification	Documentary Assessment
techniques to reduce fertilizer use.		

The project has demonstrated compliance with the requirements described in Section 10.8 of the BCR Standard; the evidence was assessed during the review documentary (according above table) and supported by the interviews conducted on-site.

6.6 Co-benefits (if applicable)

Not applicable.

6.7 REDD+ safeguards (if applicable)

Not applicable, it is not a REDD+ project.

6.8 Double counting avoidance

AENOR verified the database developed by the project manager and confirmed that it allows tracking of forestry areas and activities, as well as reductions that are allocated and/or traded in a way that ensures that there is no double counting of removals or overestimation of removals by the project's mitigation actions. According to the "Avoiding Double Counting (ADC) tool".

According with Section 8.1 of the Avoiding Double Counting (ADC)" v2.0 tool, AENOR considers following items:

- Ex-post credits issuance: The project requests both validation and initial verification simultaneously. Consequently, a Certification and Accreditation Body (CAB) has been hired by the project to develop the audit procedure and to draft the validation and verification report and statement.
- Conditions and procedures for GHG projects migration to BIOCARBON: The project is not seeking certification, nor has it been or is it registered under any other standard, therefore, the conditions mentioned in section 8.1.2 of the BCR ADC Tool are not applicable.
- Preliminary assessment for GHG project's migration: The project is not seeking certification, nor is it registered under any other standard. Additionally, the contracted Certification Assessment Body (CAB) is developing a risk assessment to determine the GHG project's compatibility with the Biocarbon Program requirements.
- Double-check in GHG registries systems: The audit team conducted a search for other initiatives in the project area on standard platforms including the BioCarbon

Standard, Verra, CERCARBONO, Plan Vivo Foundation, Gold Standard, and Climate Action Reserve. And confirmed the information indicated by the PP; that the project is bordered to the south by the BCR project with the ID BCR-CO-261-14-001, and initiatives registered under the BioCarbon Standard, such as PCR-CO-630-142-001, are situated within 20 km of the project to the northwest.

- Host Country Authorization for CORSIA eligible VCC: The PP had included the Host Country Authorization of the project:

AENOR found no evidence of double counting or that the project has or will participate in another GHG program or that the GHG emission reductions or removals generated by the project are included in an emissions trading program or any other mechanism that includes GHG emissions trading.

6.9 Stakeholders' Consultation

Alianza Fiduciaria S.A. is solely responsible for the Vichada Forest Carbon Project Alianza Fiduciaria S.A., and during the initial audit process the professionals in charge were interviewed, who have full knowledge of the activities, objectives and general development of the project.

6.9.1 *Public Consultation*

The project was in public consultation period during 24/02/2022/ - 26/03/2022 and did not receive any comment during its public consultation.

7 Internal quality control

To give a fair level of assurance of conformance against the specified audit criteria and materiality thresholds within the audit scope, the evaluation was carried out. A positive evaluation statement fairly guarantees that the project's GHG claims are accurate and fairly represent the GHG data and information, based on the audit findings.

Following the completion of the assessment process by the validation team, all documentation undergoes an internal quality control through a technical review before submission to BCR. The technical reviewer is a qualified member of AENOR, independent from the team that carried out the validation of the project activity. The technical reviewer or the team appointed for the technical review are qualified in the technical area(s) and sectoral scope(s) of the project activity.

As part of the validation and verification process, AENOR plans the field visit in the project area to assess its implementation status, the quality of field data collection techniques, compliance with the monitoring plan, the views of stakeholders, and the management of the forest plantation. The validation and verification process is carried out through a combination of initial meetings, desk assessments, and on-site inspections, and interviews

are conducted with the community and other stakeholders (local government, local environmental entities, and other institutions present in the production area).

AENOR carries out a meticulous review of the spreadsheets to verify the correct application of the methodology (formulas, equations, and spreadsheets) and checks that the necessary data for the calculation of GHG removals is provided properly. Based on the evaluation carried out, AENOR confirms with a reasonable level of safety that the emission reductions and removals claimed are free from errors, omissions, or material inaccuracies and generates the necessary findings for the proposer so that it responds adequately and meets the requirements of the standard and the methodology to give them corresponding closure.

8 Validation and verification opinion

AENOR has validated and verified that the Carbono Forestal Vichada Alianza Fiduciaria S.A. project complies with the BioCarbon Registry Standard v3.3. The project has been implemented in accordance with the Project Description. The findings of this report show that the project, as described in the project documentation, is in line with all applicable criteria for validation and verification.

The validation and verification consisted of the following three phases: i) desk review of the project design, monitoring plan and ex-ante and ex-post estimation of GHG reductions; ii) on-site audit and stakeholder interviews; iii) resolution of outstanding issues and the issuance of the final validation and verification report and opinion. In the course of the validation and verification process, clarifying and corrective actions were raised; all have been successfully closed as shown in the report annexed to this report.

The review of the PD and MR documentation and additional documents related to the ex-ante estimation and monitoring methodology; and the subsequent background research, follow-up interviews and review of the parties' comments have provided AENOR with sufficient evidence to validate compliance with the established criteria.

The validation conclusions can be summarized as follows:

The ex-ante analysis of the project's GHG reductions has been carried out in an accurate, transparent and conservative manner, estimating total net GHG removals of 834,425 tCO_2e and an annual average of 20,861 tCO_2e, which with the discounts for non-permanence risk results in 801,277 tCO_2e for a GHG emission removal quantification period of 40 years, from 01-January-2018 to 31-December-2057.

The verification assessment covered the monitoring period from 01, January 2018 to 31, December 2019 and verified that calculated emission removals were achieved during the monitoring period with a reasonable level of assurance.

AENOR can issue a positive verification opinion for verified GHG emission removals of 30,654 tCO2e for the monitoring period (01-01-2018 to 31-12-2019), a 20% reserve of 6,131 tCO2e, for a total of 24,523 verifiable marketable verified removals. AENOR has verified a reasonable level of assurance that these removals reductions have been achieved.

AENOR considers that the project manager carries out the monitoring and reporting of its GHG mitigation actions in accordance with the requirements of the BCR standard and the results of the quantification of emission reductions are verifiable in the framework of the ISO 14064-3:2020.

9 *Validation statement*

The scope of the validation audit of the GHG mitigation project is to validate the project activities, its monitoring plan, its GHG Greenhouse Gas sources, sinks and/or reservoirs, its period of quantification of GHG emission reductions by removal activities, its baseline scenario, its legal and information requirements management processes, maximum mitigation potential and the BioCarbon Registry guidelines and methodological documents.

The scope of the project validation audit of the Proyecto de Carbono Forestal Vichada Alianza Fiduciaria S.A. was to to carry out an independent assessment of the project in order to determine:

- That the project complies with all the requirements of the BioCarbon Registry Standard Version 3.3. March 1st, 2024.
- That the PD (Project Description) and supporting information comply with the requirements of ISO 14064-2:2019 and the Colombian Legal Framework.
- That the project complies with the rules and criteria of the Colombian carbon market.
- That the project, its activities, methods and procedures, described in the PD document and its corresponding annexes, including the monitoring plan, comply with the criteria established in this report;
- That the activities, methods, and procedures, including monitoring procedures, have been implemented in accordance with the PD; and follow the national regulations that apply to climate change mitigation initiatives.

In addition, the following documents were used as reference during the audit process:

- Good practice guide for land use, land use change and forestry. IPCC, 2003
- Good Practice Guidance for Land Use, Land Use Change and Forestry. IPCC, 2006

- AFOLU non-permanence risk tool. V.04
- Estimation of NON-CO_2 GHG emissions resulting from burning of biomass attributable to an A/R CDM project activity.
- ISO 14064:2019
    - Part 2: Specification with guidance, at project level for the quantification, monitoring and reporting of emission reductions or enhancements in greenhouse gas removals.
    - Part 3: Specification with guidance for the verification and validation of greenhouse gas declarations (2019)
- ISO 14065:2013 (EN) Greenhouse gases - Requirements for bodies performing validation and verification of greenhouse gases, for use in accreditation or other forms of recognition.

The following criteria were used to evaluate this project:

- Methodological Document. AFOLU Sector. Bcr0001 Quantification of GHG Removals. Afforestation, Reforestation. and Revegetation. Version 4.0. February 9, 2024.
- BCR Standard from differentiated responsibility to common responsibility. Version 3.3. March 1st, 2024.
- Validation and Verification Manual Greenhouse Gas Projects. V2.3. January 2024.
- Permanence and Risk Management. BCR Tool. V1.1. March 19, 2024.
- Avoiding double counting v2.0. February 7, 2024
- Monitoring, Reporting and Verification Tool. v 1. February 13, 2023.
- Biocarbon Guidelines. Baseline and Additionality BCR projects generate verified carbon credits (VCC) that represent emissions reductions, avoidance, or removals that are additional. Version 1.3. March 1, 2024.
- Sustainable Development Safeguards (SDSs) Version 1.0. April 5, 2024
- Tool. Sustainable Development Goals (SDG). Version 1.0. June 2023.

The ex-ante analysis of the project's GHG reductions has been carried out in an accurate, transparent, and conservative manner, estimating total net GHG removals of 834,425 tCO_2e and an annual average of 20,861 tCO_2e, for a GHG emission removal quantification period of 40 years, from 01-January-2018 to 31-December-2057.

The audit was conducted to provide a reasonable level of assurance in accordance with the criteria defined within the scope. The nature and extent of the validation activities have been designed to provide a high, but not absolute level of assurance on the data and information supporting this statement, which are by their nature historical. The level of assurance used in the audit was not less than 95% and the maximum material discrepancy in the data accepted was ±5%.

10 Verification statement

The scope of the project verification audit of the Proyecto de Carbono Forestal Vichada Alianza Fiduciaria S.A. was to verify GHG emissions removals, implementation of activities, and their reported impact for the monitoring periods from January 1, 2018, to December 31, 2019.

The objective of the verification audit was to carry out an independent assessment of the project in order to determine:

- That the project complies with the rules and criteria of the Colombian carbon market.
- That the project, its activities, methods and procedures and results, described in the MR and its corresponding annexes, including the monitoring plan activities, comply with the criteria established in this report.
- Verify compliance in the implementation of mitigation project activities, including those associated with the methodology selected for the project.
- Assess and verify compliance with the principles of the monitoring, verification and reporting system necessary to comply with current legislation.

The following criteria were used to evaluate this project:

- Methodological Document. AFOLU Sector. Bcr0001 Quantification of GHG Removals. Afforestation, Reforestation. and Revegetation. Version 4.0. February 9, 2024.
- BCR Standard from differentiated responsibility to common responsibility. Version 3.3. March 1st, 2024.
- Validation and Verification Manual Greenhouse Gas Projects. V2.3. January 2024.
- Permanence and Risk Management. BCR Tool. V1.1. March 19, 2024.
- Avoiding double counting v2.0. February 7, 2024
- Monitoring, Reporting and Verification Tool. v 1. February 13, 2023.
- Sustainable Development Safeguards (SDSs) Version 1.0. April 5, 2024
- Tool. Sustainable Development Goals (SDG). Version 1.0. June 2023.

The verification activities have been specifically designed to provide a high level of assurance in the data projected and information that supports this statement, although not absolute assurance. The level of assurance used in the audit was not less than 95 per cent and the maximum material discrepancy of the accepted data was 5 per cent. The audit was performed to provide a reasonable level of assurance in accordance with the criteria defined within the scope.

AENOR can issue a positive verification opinion for verified GHG emission removals of 29,508 tCO2e for the monitoring period (01-01-2018 to 31-12-2019). AENOR has verified a reasonable level of assurance that these removals reductions have been achieved.

The project has demonstrated the contribution to SGD´s, specifically 8, 12, 13 and 15.

The nature and extent of the verification activities have been shaped to provide a high, but not absolute level of assurance in the data and information supporting this statement, which are by nature historical. The level of assurance used in the audit was not less than 95 per cent and the maximum material discrepancy of the accepted data was 5 per cent.

AENOR considers that the project manager performs the monitoring and reporting of its GHG mitigation actions according to the results of the quantification of emission reductions are verifiable under ISO 14064-3:2020. The declaration that the GHG statement verification was conducted in accordance with ISO 14064-3:2020.

Madrid, a 23 de agosto de 2024.

Team Leader Name

Claudia Polindara

11 Annexes

Annex 1. Competence of team members and technical reviewers

- Claudia Polindara. Lead Auditor

Claudia Polindara is a Forestry Engineer from the Universidad Distrital Francisco José de Caldas, specialist in Environmental Law and master's in environmental law and management from the Universidad del Rosario. She has 13 years of experience in Environmental and Forestry Management, and in the last 4 years she has been working as an auditor of projects for climate change mitigation activities under different carbon standards, such as: CERCARBONO, BioCarbon Registry, VCS and CCB, CDM, among others.

- Daniel Bermejo. Auditor

Daniel Bermejo is a Forest Engineer with a MSc in Sustainable Finance. He began his career in private consulting, specializing in climate risk analysis and TCFD risks, forestry development, agriculture and forestry banking standards, environmental footprint projects and others. Since 2022 he participates as an auditor in several AFOLU projects in different carbon schemes, such as VCS, CCB, GS, FCPF, Cercarbono and BCR. Daniel has a professional Certificate Program in Sustainable & Inclusive Landscapes from Wageningen University, understanding topics regarding Landscape Leadership, Governance, Finance and Climate Action. He has participated in several ISO lead auditor courses. He is an expert in Climate, Community and Biodiversity aspects and has worked in LATAM, North America, Africa, and Europe countries. He speaks Spanish, English and French fluently.

- Joao Barata. Auditor in training

Joao Pedro Barata is an Auditor in training from the forestry school of the technical university of Madrid. He is a native Portuguese and Spanish speaker with a high English level who has worked in several projects from different standards such as VCS, CCB, GS and others. He has received trainings and participated in projects working with GIS and currently, he works at the Climate Change Unit in AENOR and is seeking to become a validator/verifier under the ISO-14000 family requirements.

- Javier Cócera. Technical Reviewer

Javier Cócera holds a degree in Forestry Engineering from the Technical University of Madrid. He has a master's degree in forestry engineering from the Polytechnic University of Madrid with a stay at the University of Freiburg in Breisgau. Javier has 3 years of experience, which has always been linked to forest management and sustainability. He has worked in forestry consultancy companies, carrying out forest and forest resource

management projects, as well as forest inventories and the application of GIS and LiDAR systems.

Finding ID		***Type of finding***	***Clarification***	***Date*** 06/12/2022

Section No. General BCR Standard

General, gap analysis of the relevant changes to new standard

Description of finding

Identify by gap analysis the relevant changes detected in the current document against the initially validated (unrecorded) report, taking into account the adjustment of the standard and tools required for compliance with it.

Project holder response **23**/03/2023

A table is developed at the end of the report (Historical) where the most relevant changes between NTC 6208 to BRC V3.0 are detailed.

NTC 6208	**BCR V.2.0.**	**impact of change**
Estimates based on the principles of the Clean Development Mechanism for AFOLU A/R.	Adjustment to the recommendations of document BCR0001. V 3.0 Methodological Document of Sector AFOLU.	Carbon balances are affecte because discounts defined by BC V2.0 are made when the equatio used come from literature.
Carbon factors provided by the Standard. It had a carbon content factor of 0.66 as a result of literature reports for the same species under similar environmental conditions.	The carbon factor is adjusted to the data recommended by the national forest inventory, which is 0.50.	Reduction in ex-ante and ex-po carbon estimates.
Uses of IPCC default values for above-ground biomass - root biomass ratio.	Use of the above-ground biomass - roots equation set out in the methodology document.	Reduction in ex-ante and ex-po carbon estimates.

Contributions to the development objectives described in general terms and how during the reporting period some of these indicators were promoted.	Application of the SDG tool, developed by the BCR. The tool is developed with the indicators considered relevant for the project.	A new report is generated from the implementation of the SDG tool of BCR. This shows the results in percentage terms of the project's own contribution, but they are not contrasted with the country's indicators.

Documentation provided by the project holder
na
CAB assessment 10/04/2023
The proponent performs a proper gap analysis, and changes are reflected in the report, calculations, and annexes.

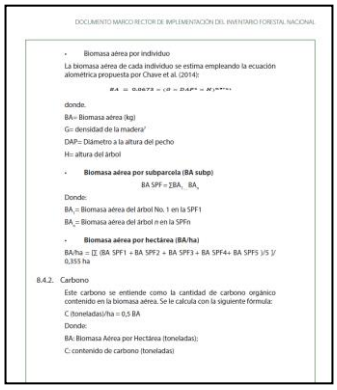
Finding ID		***Type of finding***	***Clarification***	***Date*** 06/12/2022
Section No. 12.1 BCR Standard v3.2.				
12.1. Land ownership				
Description of finding				
Information on the Certificates of Tradition and Freedom was obtained in 2019. It is suggested to include updated certificates in the annexes.				
Project holder response **23**/03/2023				
Certificates of tradition and freedom are updated and annexed as support.				
Documentation provided by the project holder				
Certificates of tradition and freedom. Dec 2022				

CAB assessment 10/04/2023
The information was updated. CL Closed

Finding ID		***Type of finding***	***Clarification***	***Date*** 06/12/2022
Section No. 15.4 of BCR 001 Methodology				
Net anthropogenic GHG Removals by sink				
Description of finding				
The calculation sheet Carbon Balances 2015-2019_V01_OCT_04_2022_FID presents errors in the formulae, so it is not possible to corroborate the data and results of the ex post calculations.				
Project holder response **23**/03/2023				
Each sheet of Excel is reviewed and errors are not identified in the formulas as mentioned. *The same file is updated as Balances_carbon 2015-2019_V02_Mar_2023_FID*				
Documentation provided by the project holder				
Sheet Excel Balances_carbono_2015-2019_V02_Mar_2023_FID				
CAB assessment 10/04/2023				
The parameters and equations are in accordance with the methodology, tools, and what is described in the PD and RM. *CL Closed.*				

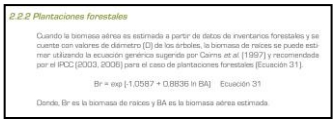
Finding ID		***Type of finding***	***Clarification***	***Date*** 06/12/2022
Section No. Annex F. Analisis_Espaciales of the PD 4				
PD. Annex F. Analisis_Espaciales				
Description of finding				
The eligible area information presented in Annex F. Analisis_Espaciales is inconsistent with what is described in the Monitoring Recommendation, nor with the worksheets in Annexes E. Ex-ante and G. Carbon Balances. Please clarify the cartographic data submitted by the project proponent.				
Project holder response **23**/03/2023				
The remote sensor analysis database was adjusted. The areas that were within the GIS files did not have the discounts of areas that must be reserved by law, specifically Resolution 1130 of 2011, which dictates discounts of certain areas of removal for conservation, especially for wetland and river areas. GIS files are updated, with due discounts. This did not affect ex ante carbon balances and ex post estimates, as the only thing that did not present consistency was the GIS files. *On the other hand, expost estimates were only those areas that showed a degree of development or existence. In the ex post GIS analysis, the areas that present mortality or do not have a good development are discounted. Thus, of the 1686.8 ha eligible, for current verification only 1352.1 ha are reported, in both strata (low and regular).*				
Documentation provided by the project holder				
Updated GIS file, SHP of eligible areas with discounts by law. Updated map of eligible areas. *The project report is updated.*				
CAB assessment 10/04/2023				
The information was updated. CL Closed				

Finding ID		**Type of finding**	**Clarification**	**Date** 06/12/2022
Section No. 17 BCR Standard 5				
Section 17. SDG´s				
Description of finding				
The project makes the Description of the contributions to the Sustainable Development Goals, but there is no evidence of the applicability of the BioCarbon Registry Sustainable Development Goals Assessment Tool which is available at https://biocarbonregistry.com/es_es/ods/, and is part of the requirements set out in Section 17 of Standard BCR 2.0.				
Project holder response 23/03/2023				
The tool is implemented in the suggested indicators and for which data are specific to the information requested by the tool. The development objectives are carried out according to those recommended by the tool. Since the tool takes literally as indicators as they were built for countries, specific elements for project levels are not easy to understand and only those that have support and are assumed at the project level are processed, but not at the country level. Leave the contributions in descriptive form in the report, and add the results delivered by the implementation of the tool (see section)				
Documentation provided by the project holder				
na				
CAB assessment 10/04/2023				
The project properly implemented the GDS tool of the BCR program. CL Closed				

Finding ID		***Type of finding***	***Clarification***	***Date*** 06/12/2022
Section No. 14 of BCR Methodology 6				
Section 14. Uncertainty Management				
Description of finding				
The project is not clear in the PD regarding compliance with the uncertainty requirement established in Section 14 of the AFOLU Methodological Document. Quantification of GHG Emission Reduction. Removal Activities. - BCR0001 V3.0.				
Project holder response **23**/03/2023				
As referred to in the methodological document, uncertainty discounts were applied as follows: ***For carbon content in biomass and ratio Aerial biomass - underground.*** ✓ *The Carbon Content factor present in aerial biomass corresponds to that recommended by the national forest inventory. See page 83.*  DOCUMENTO MARCO RECTOR DE IMPLEMENTACIÓN DEL INVENTARIO FORESTAL NACIONAL • Biomasa aérea por individuo La biomasa aérea de cada individuo se estima empleando la ecuación alométrica propuesta por Chave et al. (2014): donde, BA= Biomasa aérea (kg) G= densidad de la madera' DAP= Diámetro a la altura del pecho H= altura del árbol • **Biomasa aérea por subparcela (BA subp)** Donde: BA1= Biomasa aérea del árbol No. 1 en la SPF1 BAn= Biomasa aérea del árbol n en la SPFn • **Biomasa aérea por hectárea (BA/ha)** 8.4.2. Carbono Este carbono se entiende como la cantidad de carbono orgánico contenido en la biomasa aérea. Se le calcula con la siguiente fórmula: C (toneladas)/ha = 0,5 BA Donde: BA: Biomasa Aérea por Hectárea (toneladas); C: contenido de carbono (toneladas) *Olarte Villanueva, C. P., Merchán López, O. F., Linares Prieto, R., Quintero Cardozo, F., León Cruz, R., Rodríguez León, A., Montealegre J. O. (2021). Marco rector para la implementación del Inventario Forestal Nacional. Bogotá: Instituto de Hidrología, Meteorología y Estudios Ambientales (Ideam). 226 pp.* ✓ *The ratio of aerial biomass - roots was taken from the equation recommended by Yepes, et al (2011) see page 88.*				

Yepes A.P., Navarrete D.A., Duque A.J., Phillips J.F., Cabrera K.R., Álvarez, E., García, M.C., Ordoñez, M.F. 2011. Protocolo para la estimación nacional y subnacional de biomasa - carbono en Colombia. Instituto de Hidrología, Meteorología, y Estudios Ambientales-IDEAM-. Bogotá D.C., Colombia. 162 p.

http://www.ideam.gov.co/documents/13257/13548/Protocolo+para+la+estimaci%C3%B3n+nacional+y+subnacional_1.pdf/11c9d26b-5a03-4d13-957e-0bcc1af8f108


2.2.2 Plantaciones forestales

Cuando la biomasa aérea es estimada a partir de datos de inventarios forestales y se cuente con valores de diámetro (D) de los árboles, la biomasa de raíces se puede estimar utilizando la ecuación genérica sugerida por Cairns et al. (1997) y recomendada por el IPCC (2003, 2006) para el caso de plantaciones forestales (Ecuación 31).

Br = exp [-1.0587 + 0.8836 ln BA] Ecuación 31

Donde, Br es la biomasa de raíces y BA es la biomasa aérea estimada.

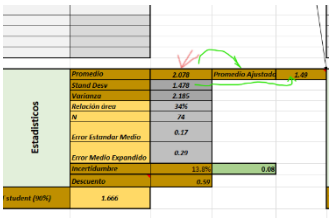
According to the BCR when the factors, parameters, etc., used in carbon balances, come from information for the construction of the national GHG inventory, it will not be necessary to apply discount percentages. As evidenced all the information of the parameters are those recommended for the national inventory.

Now, the equation used for estimating carbon present in aerial biomass applied the equation for pines in the tropical belt as recommended by the IPCC 2003.

BA=0,887+((10486*DAP^2,84))/(DAP^2,84)+376907))

Consistent with the BCR, making use of equations or IPCC data, the discount factor should be 40% of the standard deviation.

As seen in the 2015-2019 Carbon Balance tool, the discount is applied and the average biomass value is adjusted for the final estimates. (see annotations in the tool.



Accordingly, due uncertainty discounts are applied to project estimates.

Documentation provided by the project holder

na

CAB assessment 10/04/2023

The project properly implemented the ODS tool of the BCR program.

CL Closed

Finding ID		***Type of finding***	***Clarification***	***Date 16/01/2024***
Section No. 3.3.2 of PD; 11 BCR 001 Methodology 7				
Section 11. Identification of the baseline scenario and additionality				
Description of finding				
Holder must explain the following information corresponding to Section 3.3.2 of the PD: *Step 1: Identification of alternative land-use scenarios:* *- According to Methodology BCR001, the steps corresponding to Section 11 are the adaptation of the mentioned tool by the holder, therefore, it is important clarify if the holder use the total methodology or applies parts of the AR-ACM0003.* *- As to characterization and general information on possible land uses: Clarify the baseline, taking into account that before 2017, there were plantations (since 2015), and the holder mentions activities as extensive non-technified cattle ranching.*				
Project holder response **24**/01/2024				
- *Section 3.3.2 of the PD has been updated to clarify that the project applies the BCR0001 methodology to determine baseline scenario.* - *Sections 3.3.2 and 3.4.2 of the PD have been updated to clarify that the trees planted in the period 2015 - 2017 are part of the project, it is therefore assumed that they would not have been installed without the project and hence are not taken into account for the baseline scenario analysis.*				
Documentation provided by the project holder				
na				
CAB assessment 05/02/2024				
The justification is clear and enough. *CL Closed.*				

Finding ID		***Type of finding***	***Clarification***	***Date 16/01/2024***
Section No. 9 of BCR 001 Methodology				
Section 9. Eligible areas for GHG projects in the AFOLU Sector				
Description of finding				
Eligibility area: *The Holder presented the eligibility analysis; however, PP does not explain why the analysis included 2013, but did not include the analysis of the ten years prior to the start date.* *Likewise, the holder explains that statistics don´t use all the plots and indicates that the holder didn't ´use all the strata for the calculations, so it is important to present the shapefile of the plots and the eligibility area in the annexes, to understand how it selected the "new eligibility area" and the strata.*				
***Project holder response* 24**/01/2024				
The eligibility analysis presented covers the year 2013 to demonstrate compliance with the BCR0001 v3.0 methodology applicability conditions. It is important to clarify that an analysis of the 10 years prior to the start date has not been considered, as the methodology establishes in several sections the 5 years prior to the start of the project as the scope of analysis. *Besides, the shapefile of the plots and the eligibility area were attached as the CAB required.* *BCR0001 v3.0, section 5, literal a: "The areas in the project boundary shall not correspond to the forest category (according to the national definition adopted by the country in which the project activity is proposed), nor natural vegetation different to a forest, at the beginning of project activities and not five years before the project start date".* *Section 7, 'Eligible areas': "Areas that meet the absence of forest or natural cover other than a forest, on the reference dates established by the BCR STANDARD.* *Geographical limits of the Project's area are not in the forest category, or natural cover other than the forest, neither at the beginning nor five years before the project starts […]* *If the eligibility analysis is included in the project boundary's total since the validation, the holder of the GHG project shall demonstrate the eligibility five years before and at the start date of the project activities […]"* *Section 9: "For activities other than restoration, recovery and rehabilitation, the holder of the GHG project shall demonstrate that the areas at the geographical boundaries of the*				

Project do not correspond to the category of forest, nor to natural vegetation cover other than wood at the start of project activities, nor five years before the project start date. *This demonstration shall be by multi-temporal land cover analysis (on scales 1: 10,000 or higher) for the project start date and five years ago, (counting from the project start date), according to the land use and/or land cover classifications that apply for the country in which the project activities are proposed […]"*
Documentation provided by the project holder
- *Shapefiles/Elegible.shapefile** - *Shapefiles/No_elegible.shapefile** - *Shapefiles/Estratos.shapefile** - *Shapefiles/Parcelas.shapefile** ** It is understood that the shapefile format does not exist, however it is used to represent the 8 files associated with vector GIS files (.cpg, .dbf, .prj, .sbn, .sbx, .shp, xml, .shx).*
CAB assessment 05/02/2024
The justification is clear and enough, and the GIS file has assessment correctly. *CL Closed.*

[1]

Finding ID		***Type of finding***	***Corrective***	***Date 16/01/2024***
Section No. *PD 3.2.3.1 / Section 10.4 of BCR Standard V.3.2.*				
Section 14.4 Start date.				
Description of finding				
Section PD 3.2.3.1 / Section 10.4 of BCR Standard V.3.2. *The holder explains that "the project start date is January 1, 2018, in which the contract was signed for technical assistance in the maintenance work of the project." and adds that "Therefore, the start date of the project in 2018 is defined within the 5 years prior to the start of validation." Finally, the holder clarifies that the removals (ex-ante and ex-post) are considered starting in 2018.* *However, according to Section 10.4 of the BCR standard, the PP does not comply with the definition of start date; therefore, it is imperative that the program clarify if there is an exception to the rule*				

for this project (considering the above process not resolved as the validation and verification in 2019). Failure to do so would prevent the CAB from accepting the project start date evidence.
***Project holder response* 24/01/2024**
The project start date is in compliance with section 10.4 of the BCR Standard v3.2 taking into account that the contract with the CAB has been signed on 2022-08-09, as it could be seen in the attached file 'AENOR - Oferta 2022.pdf'. *Section 10.4 of BCR Standard V.3.2: "[…] Project owners can only certify and register, with the BCR STANDARD, projects whose start date is defined within the five (5)[footer 9] years prior to the start of validation[footer 13]."* *Footer 9: " This applies for the registered projects in BCR, for projects migrating from other standards, the rules of the standard in which they originate apply"* *Footer 10: "Validation begins once a commercial agreement has been signed with the CAB"*
Documentation provided by the project holder
AENOR - Oferta 2022.pdf
***CAB assessment* 05/02/2024**
The information is clear, the documentation provided is no applicable, but the argues have clarified the finding. *CAR Closed.*

2

Finding ID		***Type of finding***	***Corrective***	***Date 16/01/2024***
Section No. 15.1 BCR0001 Methodology				
Baseline net GHG Removals by sinks				
Description of finding				
Section 15.1 BCR0001 Methodology				

Explain how to apply Section 15.1, literal c) of the BCR0001 Methodology, taking into account that the plantation is from 2015 and the start activities of the project begin in 2018.
***Project holder response* 24**/01/2024
The project meets section 15.1, literal c) of the BCR0001 Methodology since the project start date of January 1, 2018 is established with the objective to comply with section 10.4 of the BCR standard regarding to the definition of the start date within 5 years prior to the start of validation. Although the quantification corresponds to the trees that were entirely planted in 2015, 2016 and 2017, only the removals from 2018 are claimed. *This means that, for quantification, purposes the project complies with section 15 of the methodology and does not include any removals prior to the established start date. Specifically for section 15.1 of the methodology.* *It is clarified that there were no trees prior to the establishment of the plantations because the cover corresponded to unmanaged pastures and areas that were continuously burned as described in section 3.7.3 of the PD.* *In addition, the modified start date does not affect the quantification (considering the principles of section 7 of the standard), since it is a particular case in which the project claims removals starting in 2018 and loses removals from previous years, so in order to comply with the standard it was necessary to modify the start date regardless of the establishment of the plantations.*
Documentation provided by the project holder
CAB assessment 05/02/2024
The justification is clear and enough. *CAR Closed.*

No.	Document Title / Version	Organization	Document provider (if applicable)
/1/	CLEAN_BioCarbon_Alianza_PD V3 BioCarbon_Alianza_MR V3	Alianza Fiduciaria SA - Fideicomiso	PP
/2/	Section 1 - Project type and eligibility	Alianza Fiduciaria SA - Fideicomiso	PP
/2.1/	- Outputs (maps) - Satellite images - Análisis de elegibilidad Alianza	Alianza Fiduciaria SA - Fideicomiso	PP
/3/	Section 2 - General description of the project	Alianza Fiduciaria SA - Fideicomiso	PP
/3.1/	Location: - Andalucia.kml - Galicia.kml	Alianza Fiduciaria SA - Fideicomiso	PP
/3.2/	Project activities	Alianza Fiduciaria SA - Fideicomiso	PP
/3.2.1/	- Activities 2018 - Forest Establishment and Management Plans - Forest Records	Alianza Fiduciaria SA - Fideicomiso	PP
/4/	Section 3 - Quantification of GHG emissions reduction	Alianza Fiduciaria SA - Fideicomiso	PP
/4.1/	Additionality /4.1.1/. Financial Data /4.1.2/. Vocation and land use /4.1.3/. SIPRA - Forest suitability /4.1.4/. SIPRA - Suitability for livestock /4.1.5/. SIPRA- Agricultural frontier	Alianza Fiduciaria SA - Fideicomiso	PP
/4.2/	Quantifications /4.2.1/ Ex ante /4.2.1.1/ COSARWG30_SOC_Tool_Multizones_FID /4.2.1.2/ Exante-Alianza-FID V3 /4.2.1.2/ IPCC_GPG__Default_values /4.2.2/ Ex post /4.2.2.1/ Analisis Ex-post /4.2.2.2/ Datos de campo /4.2.2.3/ DFli_Hojarasca /4.2.2.4/ Estadísticos /4.2.2.5/ Monitoring activities /4.2.2.6/ COSARWG30_SOC_Tool_Multizones_FID_Expost	Alianza Fiduciaria SA - Fideicomiso	PP

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	/4.2.2.7/ Ex-post 2018 – 2019 V02.1 /4.2.2.8/ Sustentos del aporte de la biomasa de hojarasca a los contenidos totales en sistemas boscosos en Pinus sp /4.2.2.9/ Tamaño de muestra		
/4.3/	Start date: Project_start_date.pdf CONTRATO ASISTENCIA TECNICA AM.pdf 20180118-FPFV-254 20180118-FPFV-256 AENOR - Oferta 2022	Alianza Fiduciaria SA - Fideicomiso	PP
/5/	Section 4 - Legislation	Alianza Fiduciaria SA - Fideicomiso	PP
/6/	Section 5 - Carbon ownership and rights	Alianza Fiduciaria SA - Fideicomiso	PP
/7/	Section 7 - Risk management.	Alianza Fiduciaria SA - Fideicomiso	PP
7.1	External Risk	Alianza Fiduciaria SA - Fideicomiso	PP
7.2	Internal Risk	Alianza Fiduciaria SA - Fideicomiso	PP
7.3	Natural Risk	Alianza Fiduciaria SA - Fideicomiso	PP
/8/	Section 8 - Environmental Aspects	Alianza Fiduciaria SA - Fideicomiso	PP
/9/	Section 9 - Socioeconomic aspects	Alianza Fiduciaria SA - Fideicomiso	PP
/10/	Section 10 -Consultation with stakeholders	Alianza Fiduciaria SA - Fideicomiso	PP
/11/	Section 11 - SDGs	Alianza Fiduciaria SA - Fideicomiso	PP
/12/	Section 17 - Monitoring plan	Alianza Fiduciaria SA - Fideicomiso	PP
/13/	Supplementary bibliography	Alianza Fiduciaria SA - Fideicomiso	PP
/13.1/	1) Amezquita_etal_2013.pdf	Centro Internacional de Agricultura Tropical (CIAT)	https://core.ac.uk/download/pdf/132664986.pdf
	2) 11410_plan-ambiental-pda-vichadacorporinoquia-20172019	Corporinoquia	PP
	3) Zanne, et_al. 2009. Global wood density database.	https://opendata.eol.org/dataset/global-wood-density-database/resource/d1	Open Data in the Web

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		e2b018-a7ce-444b-ac8a-ac43b2355cc9	
	4) Woods of Colombia	WWF-Colombia - Programa Subregional Amazonas Norte & Chocó Darién 2013	https://wwflac.awsassets.panda.org/downloads/maderas_de_colombia_15_version_aprobada.pdf ISBN Digital: 978-958-8353-54-8
	5) Zonificación para Plantaciones Forestales con Fines Comerciales Escala 1:100.000.	UPRA, 2015	https://repository.agrosavia.co/handle/20.500.12324/12715
	6) Formulación y evaluación integral de proyectos productivos agroforestales para impulsar el desarrollo sostenible de la orinoquia alta colombiana para el beneficio del mundo: informe final proyecto.	CORPOICA	https://repository.agrosavia.co/handle/20.500.12324/12015
	7) Contribución al estudio de la Geografía de los Suelos de Colombia.	Sociedad Geográfica de Colombia. Boletín 85-86 de 1965	https://sogeocol.edu.co/Home_B/boletin-no-85-86-volumen-xxiii-de-1965/
	8) Propiedades físicas de lo Propiedades físicas de los suelos de los Llanos Orientales y sus requerimientos de labranza	Amézquita, 1999.	https://repository.agrosavia.co/bitstream/handle/20.500.12324/15962/Ver_documento_15962.pdf?sequence=1&isAllowed=y
	9) Regeneración natural de Pinus caribaea var. caribaea mediante talas rasas en fajas alternas.	H Benítez López - 2003	http://hdl.handle.net/10045/3291
	10) Cuantificación del carbono almacenado en tres fincas en tres estados de desarrollo del bosque de Pino (Pinus oocarpa, L.) Dipilto, Nueva Segovia, Nicaragua	Calderón Reyes, Delio Ariel & Solís Urbina, Dalila Esmeralda (2012)	https://repositorio.una.edu.ni/id/eprint/1158
	11) Plan Regional Integral de Cambio Climático para la Orinoquía - Vichada, Resumen Ejecutivo. CIAT publicación No. 461	CIAT, Cormacarena, Corporinoquia, ECOPETROL. 2018. Plan Regional Integral de Cambio Climático para la Orinoquía -	https://isbn.cloud/9789586942027/plan-regional-integral-de-cambio-climatico-para-la-orinoquia-vichada-resumen-ejecutivo/

No.	Document Title / Version	Organization	Document provider (if applicable)
		Vichada, Resumen Ejecutivo. CIAT publicación No. 461	ISBN Digital: 978-958-694-202-7
	12) Aportes técnicos del Sistema de Monitoreo de Bosques y Carbono a la propuesta de preparación de Colombia para REDD+: datos de actividad y factores de emisión. Instituto de Hidrología, Meteorología, y Estudios Ambientales (IDEAM). Bogotá D.C., Colombia	Phillips, J.F., Duque, A.J., Scott, C., Peña, M.A., Franco, C.A., Galindo, G., Cabrera, E., Álvarez, E. & Cárdenas, D. 2014.	ISBN: 978-958-8067-67-4
	13) Alternativas para aumentar la productividad en el sistema de explotación bovina extensiva de cría en el municipio de la Primavera, departamento del Vichada.	Trillos, 2010	https://repository.javeriana.edu.co/bitstream/handle/10554/1091/TrillosGualterosDaniel%202010.pdf?sequence=1
	14)		
	15)		
/13.2/	Sources Data – Parameters – Methodology		
	1) Directrices del IPCC de 2006 para los inventarios nacionales de gases de efecto invernadero Volumen 4. Agricultura, silvicultura y otros usos de la tierra. AFOLU.	IPCC,2006	https://www.ipcc-nggip.iges.or.jp/public/2006gl/spanish/vol4.html
	2) Report. 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.	IPCC,2019	https://www.ipcc.ch/report/2019-refinement-to-the-2006-ipcc-guidelines-for-national-greenhouse-gas-inventories/
	3) Establecimiento de factores de emission para plantaciones forestales de Colombia y en particular de la región Orinoquia	Proyecto Biocarbono, 2023	https://biocarbono.org/wp-content/uploads/2023/07/Establecimiento-de-factores-de-emisio%CC%81n-para-plantaciones-forestales-de-Colombia-y-en-particular-de-la-regio%CC%81n-Orinoquia.pdf

No.	Document Title / Version	Organization	Document provider (if applicable)
	4) Dry Matter Production and Nutrient Distribution in a Pinus caribaea Stand Planted in a Subhumid Tropical Savanna Site	Kadeba O and Aduayi. 1986	https://www.jstor.org/stable/3565472
	5) Above- and belowground organic matter storage and production in a tropical pine plantation and a paired broadleaf secondary forest.	Cuevas, E., Brown, S. & Lugo, 1991	https://doi.org/10.1007/BF00010914
	6) Structural biomass and by compartments of Pinus patula regeneration in clearcutting sites.	Rodríguez-Ortiz et al 2019. Madera y bosques, vol. 25, núm. 1, e2511713, 2019 Instituto de Ecología A.C.	10.21829/myb.2019.2511713
	7) Determination of total carbon in mixed pine forests (Pinus patula Schl. et cham.)	ACOSTA-MIRELES, M.; CARRILLO-ANZURES, F. y DIAZ LAVARIEGA, M.. Determinación del carbono total en bosques mixtos de Pinus patula Schl. et cham. Terra Latinoam [online]. 2009, vol.27, n.2. Terra Latinoam vol.27 no.2 Chapingo abr./jun. 2009.	https://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0187-57792009000200003#:~:text=En%20este%20trabajo%20se%20utiliz%C3%B3%20la%20metodolog%C3%ADa%20que,que%20el%20mayor%20componente%20fuera%20el%20Pinus%20patula.
/14/	Reporte val-ver Vichada Alianza_Fiduciaria v1 29oct	Alianza Fiduciaria SA - Fideicomiso	PP
/15/	SIG DATA -Shapefiles	Alianza Fiduciaria SA - Fideicomiso	PP /Finding CL8/
/16/	Reporte val-ver Vichada Alianza_Fiduciaria v1 29oct	AENOR	PP
/17/	AENOR - Oferta 2022.pdf	AENOR	PP /Finding CAR1/

Abbreviations	***Full texts***
AFOLU	*Agriculture, forestry, and Other Land Use*
AR	*Afforestation Reforestation*
AR-ACM	*Afforestation/Reforestation Large-scale CDM Consolidated Methodology*
BCR	*BioCarbon Registry*
CDM	*Clean Development Mechanism*
GHG	*Greenhouse Gases*
IPCC	*Intergovernmental Panel on Climate Change*
PD-MR	*Project Description and Monitoring Report*
SDG´s	*Sustainable Development Goals*