VERIFICATION REPORT

CO2BIO PROJECT

PCR-CO-635-141-001

Conformity Assessment Body |

VERIFICATION REPORT PROJECT ID	
Project Title	*CO2BIO*
Project ID	*PCR-CO-635-141-001*
Project holder	*FUNDACION CATARUBEN*
Project Type/Project activity	*AFOLU (Agriculture, Forestry, and Other Land Use)*
Grouped project	*Not Grouped project*
Version number and date of the Project Document to which this report applies	*Version 1.1* *(29/09/2024)*
Applied methodology	*Methodological Document AFOLU Sector / BCR0002 Quantification of GHG Emission Reductions from REDD+ Projects. Version 4.0. May 27, 2024*
Project location	*Country: Colombia,* *Orinoquía Region* *State: Arauca* *Municipality: Cravo Norte* *County: Casanare* *Municipality: Hato Corozal, Paz de Ariporo, Orocué, Pore, San Luis de Palenque, Trinidad y Yopal* *County: Vichada* *Municipality: Santa Rosalia*
Project starting date	*01/01/2015*
Quantification period of GHG emissions reductions/removals	From 01/01/2015 to 31/12/2054
Monitoring period	From 01/01/2021 to 31/12/2023

Total amount of GHG emission reductions/removals	*Total amount of GHG emissions reductions/removals: (2021-2023): 77.606 tCO2e* *Mean anual of GHG emissions reductions/removals:* *Year 2021:* 26.856 *Year 2022:* 27.285 *Year 2023:* 23.465 _____ *Total:* 77.606 *tCO2e*
Contribution to Sustainable Development Goals	*SDG 5: Gender Equality* *SDG 6: Clean Water and Sanitation* *SDG 13: Climate Action* *SDG 15: Life on Land*
Special category, related to co-benefits	*Orquídea*
Document date	*V1 12/12/2024*
Work carried out by	*Lead Auditor: Joaquin Emilio Montealegre* *Technical Expert: Wilson López* *Technical Reviewer: Julián Ávila B.* *Technical Expert Reviewer: Juan Camilo Arroyave*
Approved by	CAMILO ANDRES MONTAÑA SALAMANCA Firmado digitalmente por CAMILO ANDRES MONTAÑA SALAMANCA Fecha: 2024.12.12 10:32:31 -05'00' *Camilo Andrés Montaña Salamanca* *Fecha de emisión: 12/12/2024*

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1 Executive summary

The CO2Bio Project, whose owner is the Cataruben Foundation, is aligned with the mitigation of climate change through the reduction of CO_2 emissions, by developing activities that reduce the deforestation of natural forests in 42 privately owned properties located in the Counties of Arauca, Casanare and Vichada, in the Colombian Orinoquia.

CO2BIO is a project that contributes to the improvement of the social and economic environmental impacts caused by acute deforestation in the national territory and consists of 38,813.04 total hectares in the aforementioned 42 properties, whose accounting areas are distributed in 8,653.2 hectares of forest.

The CO2BIO project is an initiative within the AFOLU sector and is part of the REDD+ mechanism for Reducing Emissions from Deforestation and Forest Degradation, plus conservation and sustainable forest management. This project is supported through the strategy of earning profits through the sale of carbon certificates, effectively contributing to the preservation of forests and the prevention of land use change.

The project holder, the NGO Cataruben, provided sufficient evidence to establish that the start date of the CO2BIO project activities corresponds to January 1, 2015. The accreditation period is 40 years from January 1, 2015 to December 21, 2054.

It is important to note that this verification of the CO2BIO project is carried out under the BCR standard in Version 4.0 of May 27, 2024, in addition to the following methodologies and tools:

- *ISO 14064-3:2019 - Specification with guidance for validation and verification of greenhouse gas (GHG) declarations.*
- *ISO 14064-2:2019 - Specification with project-level guidance for quantification, monitoring and reporting of greenhouse gas (GHG) emission reduction and GHG removal enhancement activities.*
- *Methodology Document for the AFOLU Sector / BCR0002 Quantification of GHG Emission Reductions from REDD+ Projects, version 4.0, May 27, 2024.*
- *Tool to demonstrate compliance with REDD+ safeguards, version 1.1, January 26, 2023.*
- *Additionality and Baseline Tool, version 1.3, March 1, 2024.*
- *Sustainable Development Safeguards (SDG Tool), version 1.1, July 1, 2024.*
- *BCR Tool. sustainable development goals (SDGs). Version 1.0. June 27, 2023.*
- *Avoidance of Double Counting (ADC) Tool, Version 2.0 by February 7, 2024.*
- *Monitoring, Reporting and Verification (MRV) Tool, Version 1.0, February 13, 2023.*
- *Permanence and Risk Management Tool Version 1.1 dated March 19, 2024.*
- *Greenhouse Gas Project Validation and Verification Manual, Version 2.4 dated March 23, 2024.*

The audit team confirms that the verification analysis of the project's GHG reductions was conducted in an accurate, transparent and conservative manner, estimating a total of 77,606tCO2e in the verification period from January 1, 2021 to December 31, 2023. The assessment took into account the 38,813.04 total hectares of the project in the Counties of Arauca, Casanare and Vichada, in the Colombian Orinoquia.

The audit conducted by the VERSA EXPERTOS EN CERTIFICACIÓN S.A.S. team for the verification of the CO2BIO Project had as its main objective to evaluate whether the project activities maintain a significant effect on the reduction of greenhouse gas (GHG) emissions associated with the loss of natural ecosystems. The audit verified whether the project activities promote sustainable development and achieve compliance with the criteria defined for their implementation, in accordance with the applicable legal regulations, the methodologies used to calculate emission reductions and the effectiveness of the methods defined by the project owner, to ensure compliance with the principles governing the audit process.

2 Objective, Scope and Verification Criteria

Verification objectives

The main objective of the audit performed by the Versa audit team was to verify the compliance of the CO2BIO project with the procedures and criteria of the Biocarbon Standard Greenhouse Gas (GHG) program. Specifically, the verification was oriented to the following objectives:

1. *Evaluate with a level of assurance of 95% that the project design document and/or monitoring reports prepared by Versa Expertos en Certificación S.A.S comply with the guidelines of ISO 14064-2:2019, as well as with the regulations of the selected GHG program, the methodologies used and the legislation of the country where the project is developed.*
2. *Verify that the activities, methods and procedures, including monitoring, have been implemented in accordance with the project's PD.*
3. *Confirm that the material discrepancy underlying the baseline and estimated GHG removals reported for the monitoring period does not exceed 5%.*
4. *Validate and verify the project activities, Project Design Document (PDD), monitoring plan, GHG sources, sinks and/or reservoirs, GHG emission reductions quantification period, baseline scenario, legal management requirements, processes and information, as well as guidelines and methodological documents for the standard BCR.*

Audit criteria

The criteria applied and the detail of all aspects considered in the scope were based on the following:

- *The evaluation of the documented project information from 01/01/2021 to 12/31/2023.*
- *The information related to the PDD, (PROJECT DESIGN DOCUMENT PDD V3).*
- *Review of previous verifications performed on 10/21/2020 and 10/14/2021.*
- *The sampling plan and the respective audit plan specifically designed for the present verification.*
- *Execution of a field visit: Visit to properties in the Municipalities of Trinidad, San Luis de Palenque, August 22 to 25, 2024.*
- *Drafting process and resolution of findings, which took into account two rounds.*

VERSA's audit team carried out this verification under the ***BCR standard with the following methodologies and tools****:*

- *Documento Metodológico Sector AFOLU / BCR0002 Cuantificación de las Reducciones de Emisiones de GEI de Proyectos REDD+. Versión 4.0. 27 mayo de 2024.*
- *Herramienta para demostrar el compliance de salvaguardas REDD+ Versión 1.1, de fecha 26 de enero de 2023.*
- *Herramienta para la Línea Base y Adicionalidad Versión 1.3, de marzo 01 de 2024.*
- *Herramienta BCR. objetivos de desarrollo sostenible (SDG). Versión 1.0. junio 27, 2023.*
- *Herramienta para evitar la doble contabilidad (ADC), Version 2.0 de February 7, 2024*
- *Herramienta de Monitoreo, Reporte y Verificación (MRV) Versión 1.0 del 13 de febrero de 2023.*
- *Herramienta Permanence and Risk Management Versión 1.1 de fecha Marzo 19 de 2024.*

Colombian national regulations:

- *Resolution 1447 of 2018, from the Ministry of Environment and Sustainable Development, which regulates the System for monitoring, reporting and verification of mitigation actions at the national level.*
- *Resolution 831 of 2020, from the Ministry of Environment and Sustainable Development, modifies Resolution 1447 of 2018.*
- *Decree 446 of 2020, from the Ministry of Environment and Sustainable Development, related to the accreditation of greenhouse gas emissions reductions and removals verification agencies.*

Normas Internacionales ISO

- *ISO 14064-2:2019_ Specification with project-level guidance for quantification, monitoring and reporting of greenhouse gas (GHG) emission reduction and GHG removal enhancement activities.*
- *ISO 14064-3:2019 - Specification with guidance for validation and verification of greenhouse gas (GHG) declarations.*

Verification scope

The scope of the verification was to determine compliance with the applicable principles and criteria associated with the BCR0002: Quantification of GHG Emission Reductions from REDD+ Projects standard. Version 4.0. May 27, 2024, as follows:

- *Verification of GHG emission reductions reported for the monitoring period (01/01/2021 to 12/31/2023), taking into account project boundaries, GHG types, verification of co-benefits and verification of compliance with the BCR Standard, among others.*
- *Additionality demonstration*
- *Eligibility, error assessment and accuracy, among others.*

The verification of the CO2BIO Project was carried out by VERSA's audit team in accordance with the procedures and criteria of the Biocarbon Standard GHG program, as well as the legal standards applicable to the CO2BIO project, mentioned above.

Methodology and audit approach

The verification process conducted by VERSA's audit team was carried out independently and thoroughly documented, adhering to the criteria and objectives established by the audit team for the verification process, aligned with the requirements of the BIOCARBON STANDARD. The audit was conducted using an evidence-based approach based on documented and observed evidence in the area where the CP2BIO project is being developed. The verification was aimed at identifying, assessing and managing potential risks associated with the GHG emission reduction claim, thereby providing a clear and accurate opinion on the matter.

Verification planning

VERSA's audit team, together with the developer Cataruben Foundation and especially with the project managers in the region, planned this verification process of the CO2BIO project. This planning included:

- *Structured communication with the selected Managers and the technical team, ensuring the coordination of all relevant activities and the availability of the necessary resources.*

- *Conduct the field visit to the selected properties belonging to the project to verify the geographical boundaries, confirm information with the landowners in the field, corroborate the existence and quality of the information reported in the documentation submitted for this verification exercise.*

- *A detailed review of the supporting documentation and evidence, assessing both the level of security and the materiality of the information and ensuring that it meets the required transparency and quality.*

During this process, VERSA's audit team implemented a proactive communication system with the technical team of the Cataruben Foundation, owner of the CO2BIO project. This facilitated the resolution of queries and requests for clarification (CL) and the proposal of corrective actions (CAR) and future actions (FAR) when necessary, which contributed to strengthen compliance with the requirements and improve the implementation and quality of the project.

VERSA's ethical commitment and confidentiality

On the other hand, VERSA and its audit team reaffirm their commitment to keep confidential everything related and documentation provided by the owner of the CO2BIO project, the opinion and the results of this verification.

3 Verification Process

3.1 Level of Assurance and Materiality

VERSA's audit team confirmed that the CO2BIO project applies the methodology of the BCR standard, the objectives, scope, validation and verification criteria of the project and the guidelines of ISO 14064-3:2019. According to the above, two rounds of findings resolution were carried out, identifying an assurance level for the verification of the project higher than 95% and a material discrepancy of less than 5%, as well as a materiality threshold of less than 5%, previously agreed between the project owner Cataruben and Versa certifier by agreement VERSA-P-0266 .

The VERSA team conducted an independent and thoroughly documented verification, identifying that the CO2BIO project holder has consistent and transparent procedures to address and adjust omissions and / or errors in the declaration of greenhouse gases. This while considering that the mitigation actions proposed by the project were evaluated, confirming its authenticity, effectiveness, quantification, verifiability, transparency and sustained impact over time, aligning with the criteria established in the documentation submitted as evidence.

The verification process performed by the VERSA team was carried out in accordance with

the criteria and objectives established by the audit team for the verification process, as described in section 2, Objectives, Scope and Verification Criteria. This analysis was based on the risk assessment, following the guidelines specified in the ISO 14064-3-2019 standard, in paragraphs 5.1.3 to 5.1.7, as follows:

a) *Regarding control issues that undermine the verifier's confidence in the reported data: This audit found that there are no discrepancies in the information provided by the project owner, nor with the sources, sinks and carbon reservoirs. Emission factors and there is consistency with the variables used for the calculation of the monitoring report, which generates confidence of the audit team in the data reported by the owner of the Cataruben Foundation project.*
b) *Related to the deficient management of the documented information: some inconsistencies were identified in the information provided by the owner in terms of quality control of the information, for example regarding the data reported, such as the number of properties that make up the project. The above was the subject of a finding by this audit, which was corrected by the project owner.*
c) *Concerning possible difficulties in locating the requested information: It was easy to locate the information in the file folder called "Annexes". However, its rapid location could be improved with a brief guide for the document user.*
d) *There was evidence of compliance with regulations indirectly related to GHG emissions, removals or storage.*

VERSA's audit team for the verification process of the CO2BIO project defined the following criteria to evaluate the level of assurance (95%) and materiality (5%) of the project:

- *100% review of the documentary evidence submitted by the project owner, including GDB and satellite image processing.*
- *Face-to-face meeting at the facilities of the Cataruben Foundation in the city of El Yopal on August 21, 2024 and virtual meetings, first meeting, knowledge and presentation of the audit team and the project owner's team on August 16, 2024, September 3, 2024, meeting on verification findings. Documentary verification*
- *Semi-structured interviews with the owners of the properties visited during the fieldwork from August 22 to 25, 2024.*
- *Visits to points where activities were being carried out to contain deforestation and forest degradation, such as planting of moriche palm (Mauritia fleuxosa), construction of guard rails to prevent forest fires from the plains savannas, electric fences to prevent cattle from entering forested areas.*

3.2 Verification activities

3.2.1 Planification

The audit process began with the formalization of the VERSA-P-0266 process through the agreement signed between the parties on August 1, 2024. Subsequently, on August 14 of this year, the Versa audit team was selected, made up of professionals with the necessary skills to

carry out the verification audit. Likewise, the Cataruben Foundation was notified of the professionals appointed for the CO2BIO project audit. Through a virtual meeting, the audit plan and the audit team were presented.

The verification plan was based on the ISO 17029:2019 and ISO 14064-3:2019 standards and included the following steps to perform the verification:

a) Preliminary activities:

- *Definition of the type of service: Verification.*
- *Establishment of objectives, criteria and scope.*
- *Determination of assurance level (95%) and materiality (5%).*

b) Selection of the verification team.

c) Planning of the verification process, which included:

- *Conducting strategic analysis and risk assessment.*
- *Developing an evidence collection and sampling plan.*
- *Creation of a specific verification plan.*

d) Socialization of the audit plan with the client (Cataruben as project owner).

e) Execution of verification activities, according to the audit plan.

f) Collection of documentary and on-site evidence according to the established sampling plan.

g) Issuance of the final verification report, together with the corresponding opinion.

This process was carried out in accordance with VERSA Procedures, which regulates GHG verification services. In this sense, four stages were carried out:

1. *Preliminary activities and determination of the Audit Plan: In August 2024, the audit team conducted a risk identification, control and assessment, with the objective of evaluating potential sources of errors, omissions or distortions in the GHG project activities. The main inputs for this assessment were the Monitoring Report (MR), the baseline spreadsheets and the monitoring plan records annexed to the MR.*

2. *Document review and site visit: Based on the risk assessment, it was considered necessary to corroborate on site, spatial boundaries of the project, property and carbon rights, safeguards, project implementation status and data management. The evidence collection plan included documentary review, cross-checking of secondary information and site visits, interviews and tours.*

3. *Development of the audit plan: In accordance with the criteria, scope, objectives and assurance level, the plan was developed following the sampling plan. This included a*

detailed schedule of on-site audit activities, which were carried out from August 21 to 24, 2024. The evaluation allowed for an organized review of qualitative and quantitative evidence..

4. ***Opinion:*** *During the documentary review and field visit stages, the likelihood that the project implementation will achieve the GHG reductions projected and declared by the proponents was evaluated. This allowed an independent opinion to be issued on the verification of the emission reductions generated by the implementation of the project.*

Strategic Analysis

a) Sector information:

The CO2Bio Project belongs to the AFOLU sector (Agriculture, Forestry and Other Land Use), which includes activities to reduce GHG emissions through REDD+ activities (Reducing Emissions from Deforestation, Degradation and forest conservation, sustainable management or enhancement of forest carbon stocks). The AFOLU sector has been targeting measures with greater mitigation potential such as reducing the conversion of natural ecosystems, increasing carbon reduction from livestock and agriculture, ecosystem restoration, afforestation and reforestation, and improving forest management. The CO2BIO project is clearly aligned with and motivates these practices as a contribution to climate change adaptability and efficient management of greenhouse gases.

b) Project nature

Co2BIO is an independent project of the AFOLU sector, with RDD+ activities, located in the Colombian Orinoquia, which is an initiative that brings together 42 farms. Given the need to implement joint climate action activities for the reduction of GHG and the conservation of the landscape composed of savannas, seasonal grasslands, with gallery forests, bushes (small isolated groups of trees) and marshes with palms and moriche (especially moriche palm).

c) GHG program regulatory requirements

In order to provide an objective and independent opinion, the audit conducted by the VERSA team, whose purpose was the verification of the Project, evaluated the compliance of the activities associated with the reduction of greenhouse gas (GHG) emissions associated with forest degradation and deforestation. This was done taking into account the criteria defined for the project, the applicable legal norms, the methodologies used to calculate emission reductions, the tools and the effectiveness of the methods defined by the project proponent, as evidenced in section 2, "Objectives, Scope and Verification Criteria". Additionally, the contributions to the fulfillment of the Sustainable Development Goals (SDGs) and co-benefits to which the CO2BIO project applies were evaluated.

d) Materiality threshold

After the evaluation of the documentary information of the project and verified with information collected during the field work carried out by the audit team, two rounds of resolution of findings were carried out. It identified a level of assurance of the verification of the Project higher than 95% and a material discrepancy of less than 5%, previously agreed between the owner of the Cataruben project and Versa certifier through agreement VERSA-P-0266. The above is in compliance with the numerals 5.1.3 Level of assurance in the case of verification and 5.1.7 Materiality thresholds, of the ISO 14064-3:2019 standard.

e) Accuracy and completeness of GHG reporting

The Project Design Documents (PDD) and monitoring reports were reviewed and compared, confirming that the project activity and methodology BCR0002 correspond to activities and methodologies applicable under the conditions of the BCR program for the AFOLU sector.

f) Scope of the GHG declaration and its limits

The mapping information related to the project boundaries met the BCR criteria. This information was cross-checked with official maps and data collected during the site visit. Cartographic adjustments requested during validation and verification did not constitute material errors.

g) Data limits

The CO2BIO project is being developed on 42 privately owned properties in the Municipality of Cravo Norte, County of Arauca, Municipalities of Hato Corozal, Paz de Ariporo, Orocué, Pore, San Luis de Palenque, Trinidad and Yopal, in the County of Casanare and Municipality of Santa Rosalía, in the County of Vichada, Colombian Orinoco Region.

The following is a list of the properties and the names of their owners

County	Municipality	Property	Longitude	Latitude
CASANARE	SAN LUIS DE PALENQUE	ALTAMIRA	071° 49' 8.26" W	05° 14' 5.94" N
CASANARE	YOPAL	AQUÍ ME QUEDO	072° 10' 56.09" W	05° 07' 29.67" N
CASANARE	TRINIDAD	ARIZONA	070° 50' 37.43" W	05° 14' 17.47" N

County	Municipality	Property	Longitude	Latitude
CASANARE	SAN LUIS DE PALENQUE	BUENAVISTA	071° 39' 59.82" W	05° 15' 16.17" N
CASANARE	OROCUE	BUENAVISTA II	071° 16' 41.85" W	04° 54' 7.6" N
CASANARE	OROCUÉ	CAIMAN II	071° 13' 52.56" W	04° 52' 45.42" N
CASANARE	OROCUÉ	EL CAIMAN 1	071° 13' 51.6" W	04° 54' 59.54" N
CASANARE	TRINIDAD	EL CAMPIN	070° 38' 29.58" W	05° 26' 37.74" N
CASANARE	TRINIDAD	EL CLAVO	071° 01' 5.92" W	05° 20' 37.48" N
VICHADA	SANTA ROSALÍA	EL DERA	070° 33' 43.51" W	04° 51' 19.59" N
CASANARE	TRINIDAD	EL PROGRESO	070° 53' 39.37" W	05° 11' 5.46" N
ARAUCA	CRAVO NORTE	FI EL VALLE	069° 44' 53.73" W	06° 28' 39.28" N
ARAUCA	CRAVO NORTE	FI LA CALZADA	069° 49' 21.92" W	06° 26' 39.56" N
ARAUCA	CRAVO NORTE	FI LA GUAJIRA	069° 48' 9.71" W	06° 27' 47.15" N
ARAUCA	CRAVO NORTE	FI LOS TOROS	069° 48' 54.41" W	06° 30' 4.82" N
CASANARE	TRINIDAD	FI PADROTE	070° 49' 47.23" W	05° 13' 5.02" N
CASANARE	YOPAL	FINCA EL COCO II	072° 10' 55.23" W	05° 07' 45.89" N
CASANARE	PAZ DE ARIPORO	FINCA LA MACARENA	071° 40' 29.15" W	05° 49' 4.45" N
CASANARE	YOPAL	FINCA PALMARITO	072° 10' 38.85" W	05° 08' 11.42" N
CASANARE	TRINIDAD	FLOR AMARILLO	070° 51' 37.81" W	05° 13' 29.43" N
CASANARE	OROCUE	LA CHARANGA l	071° 14' 29.6" W	04° 55' 16.16" N
CASANARE	OROCUE	LA CHARANGA lI	071° 14' 38.59" W	04° 53' 1.14" N
CASANARE	SAN LUIS DE PALENQUE	LA PRIMAVERA	071° 47' 24.76" W	05° 17' 30.5" N
CASANARE	TRINIDAD	LA REGADERA	070° 50' 55.59" W	05° 18' 45.41" N
CASANARE	TRINIDAD	LA SONRISA	070° 51' 51.94" W	05° 22' 34.26" N
CASANARE	PAZ DE ARIPORO	LAS ISLAS	071° 24' 22.35" W	05° 44' 27.63" N
CASANARE	TRINIDAD	LIMONAL	070° 53' 17.56" W	05° 22' 47.59" N
CASANARE	OROCUE	LOS SARRAPIOS	071° 15' 29.56" W	04° 54' 37.66" N
CASANARE	SAN LUIS DE PALENQUE	LT MONTANA	071° 46' 42.41" W	05° 12' 47.89" N

County	Municipality	Property	Longitude	Latitude
CASANARE	SAN LUIS DE PALENQUE	MATA DE PALMA	071° 46' 15.96" W	05° 15' 42.2" N
CASANARE	TRINIDAD	PADROTE DOS	070° 50' 13.17" W	05° 12' 42.71" N
CASANARE	TRINIDAD	PADROTE UNO	070° 49' 53.23" W	05° 11' 54.05" N
CASANARE	TRINIDAD	PALMERA	070° 48' 49.35" W	05° 21' 1.4" N
CASANARE	TRINIDAD	SAN ANDRES	070° 49' 47.99" W	05° 18' 53.07" N
CASANARE	TRINIDAD	SAN CRISTOBAL	070° 48' 57.48" W	05° 19' 20.28" N
VICHADA	SANTA ROSALÍA	SHAMBALA	070° 16' 38.8" W	04° 50' 8.7" N
CASANARE	NUNCHÍA	TABLONCITO	072° 11' 57.36" W	05° 37' 4.74" N
VICHADA	SANTA ROSALÍA	TRIKUTI	070° 15' 34.62" W	04° 50' 21.51" N
CASANARE	TAMARA	VERSALLES	072° 05' 4.12" W	05° 50' 21.11" N
CASANARE	HATO COROZAL	VILLA AURORA	071° 46' 25.88" W	06° 02' 12.73" N
CASANARE	TRINIDAD	VILLA RICA LT 13	070° 44' 23.97" W	05° 17' 3.63" N
CASANARE	TRINIDAD	VILLA RICA LT 7	070° 47' 50.09" W	05° 15' 1.14" N

Source: Fundación Cataruben – CO2BIO project

The audit team verified the relevant cartographic information available in the specific geospatial databases for each component, located in the Gdb_Project_Area path.

The audit reviewed the folder called "6.2.2. Acatama Analysis" which shows how the forest model was generated using this plugin associated to the GIS tool. The information contained in this folder includes a project called "AcATaMa" and together with it there is a document called "GOG-26. Instructivo AcATaMa.docx" which explains the procedure to obtain: 'AcATaMa is used with the objective of verifying the percentage of precision and accuracy of the land cover delimitation process by means of the Corine Land Cover Colombia (CLC) methodology. This allows describing, characterizing, classifying and comparing land cover characteristics, interpreted from the use of medium resolution satellite images (Landsat), for the construction of land cover maps at different scales'.

h) SRF emissions (source, sink and reservoir) and their contribution to the global GHG reporting

*The audit team found that the non-deforestation of **8,868.34 hectares** contractually linked to the CO2BIO project is a significant achievement that demonstrates a solid commitment to reducing emissions and conserving natural ecosystems. By protecting these vast territories from deforestation, the project directly contributes to climate change mitigation by preventing the release of large amounts of carbon stored in forest*

biomass. The positive impact on Sustainable Development Goals (SDGs) 6 (Clean Water and Sanitation) and 15 (Life on Land) is another highlight of the project's alignment with international commitments, including the Paris Agreement. The conservation of forests and savannas contributes to the protection of biodiversity, the preservation of ecosystem services and the assurance of a sustainable water supply, key aspects for sustainable development and resilience to climate change.

The plant biomass contained in forest ecosystems (Orinoco Biome) is estimated from the sum of aboveground biomass (BA) and belowground biomass (BS).

i) Changes in amounts of GHG emissions, removals and sinks since the previous reporting period.

VERIFICATION STATEMENT	***DATE OF ISSUANCE REPORT***	***tCO2e/year***
GHG reductions during the monitoring period for deforestation and degradation	*14/10/2021*	*61.802*
Number of emission reductions or removals achieved by the project in this monitoring period. Total GHG reductions or removals in this monitoring period.	*8/09/2024*	*77.606*

j) Adequacy of quantification and reporting methods, and any changes made.

However, it is noted that some inconsistencies were identified in the information provided by the owner in terms of quality control of the information. For example, in terms of the data reported, such as the number of properties that make up the Project, quality assurance of the information and the ease of locating the information in the file folder called "Annexes".

k) Sources of GHG information

The verification process identified that the sources of information associated with the activity data, emission factors, carbon pools and emission sources included were relevant to the development of the baseline and project scenarios, following the guidelines of the BCR standard.

l) Information systems and their controls for data management

The audit team verified the folder "Acatama Analysis" which shows how the forest model was generated through the use of this plugin associated to the GIS tool. The information contained in this folder includes a project called "AcATaMa" and together with it there is a document called "GOG-26. Instructivo AcATaMa.docx" which explains the procedure to obtain: 'AcATaMa is used with the objective of verifying the percentage of precision and accuracy of the land cover delimitation process by means of the Corine Land Cover Colombia (CLC) methodology. This

allows describing, characterizing, classifying and comparing land cover characteristics, interpreted from the use of medium resolution satellite images (Landsat), for the construction of land cover maps at different scales'.

m) Management of data reporting and responsible party support processes

The audit team is able to state that it had the full support and availability of the technical team of the Cataruben Foundation, owner of the CO2BIO project, for the supply, explanation and presentation of the information related to the project.

n) Availability of evidence for GHG reporting and declaration by the operator.

The audit team established that the information is handled in a transparent and easily accessible manner, which was evidenced in the field and with the owners belonging to the CO2BIO project through the continuous use of the means of communication established for the project. Cataruben has integrated the Regional Beneficiary Service Center (See: Folder Annexes / 2. Compliance with REDD+ Safeguards / 2.2. Safeguard B / 2.2.1. Communication Channels / 2.2.1.1. This center is led by the Attention area, composed of a group of multidisciplinary professionals called "Gestores Prediales", who provide personalized face-to-face attention and remote communication through phone calls, text messages, WhatsApp (See: Folder Annexes / 2. Compliance with REDD+ Safeguards / 2.2. Safeguard B / 2.2.1. Communication Channels / 2.2.1.4. Social Networks / 2.2.1.4.4. WhatsApp Correspondence) and E-mail (See: Folder Annexes / 2. Compliance with REDD+ Safeguards / 2.2.)

o) Results of previous verifications

Below, the audit team presents a summary of the history since the first verification, previous verification reports and evidence from the current GHG verification process:

Declaration No.	Year	tCO2e	Total tCO2e	origin
Verification Statement 1	2015	52.826	258.970	Deforestation
	2016	52.306		
	2017	51.790		
	2018	51.278		
	2019	50.770		
Verification Statement 2	2015	7.593	61.802	The years 2015 -2019 for degradation and 2020 for deforestation and degradation were verified.
	2016	7.528		
	2017	7.464		
	2018	7.400		
	2019	7.337		
	2020	24.482		
	2021	26.856		

Declaration No.	Year	tCO2e	Total tCO2e	origin
Verification Statement 3 (current process)	2022	27.285	77.606	Degradation and deforestation
	2023	23.465		

The audit team verified the monitoring plan described in the RM, ensuring that the monitoring activities were carried out as planned and that the data collected were representative and accurate. Field records and periodic monitoring reports were reviewed to confirm the consistency and accuracy of the reported emissions data.

p) Sensitivity or uncertainty analysis results (see ISO 14067)

The assessment of accuracy, uncertainty and error associated with geographic information sources, emission factors and other quantification parameters met the BCR criteria. No material discrepancies were observed.

Verification of uncertainty associated with emission reduction estimates included analysis of measurement error margins and application of conservative approaches to ensure that reported reductions were not overestimated. The assumptions and emission factors used were reviewed and compared to the national reference level.

For the REDD+ component, the project holder used forest and non-forest maps by comparing the classification results with a reference dataset, including in situ observations and high resolution imagery and the use of ACaTaMa (a GIS add-on developed specifically for this purpose by IDEAM)/. The accuracy results achieved were above 95%.

q) Allocation approach

The audit team verified that the process of assigning responsibilities for the monitoring and reporting of relevant variables for the calculation of emission reductions or removals within the CO2BIO project is the full responsibility of the Catarubén Foundation, led by a large technical team. This responsibility is also supported by a close collaboration with the environmental managers, in turn owners of the properties that are part of the project, with a collaborative approach relationship oriented to active reporting and monitoring with a high degree of accuracy, shared responsibility and differentiated accuracy of the data.

The audit team verified through document review, interviews and site visit that roles and responsibilities are clearly defined for monitoring and reporting of relevant variables. The CO2BIO project owner has a complete operational structure that allows for effective monitoring and reporting of the relevant variables for the calculation of emission reductions. Key roles include the Project Director, the Spatial Analysis Unit, the Emissions Quantification Unit, the Project Activities Implementation Unit, the Governance Unit, the SDG Safeguards and Co-benefits Unit and the Biodiversity Area. Each unit has qualified and competent staff with specific responsibilities for each area. It was also verified that the sources of information

are reliable and that adequate processes are in place for the consolidation of reports and information.

r) GHG Type

The CO2BIO project is aimed at reducing carbon dioxide (CO2) emissions.

s) Monitoring methodology (direct measurement of GHGs, calculation of GHGs)

Emission calculations include detailed formulas, methods and parameters established in Section 11 of the BCR and Section 13 of BCR 0002. Emission factors were obtained from official sources or relevant scientific studies in the region. The activity data provided allowed us to assess compliance with the criteria established in each BCR methodology applied.

3.2.2 Sampling

Sampling plan

The audit team planned to review 100% of the documentary evidence submitted by the project owner, ensuring its alignment with the criteria defined for the verification activities. In addition, the environmental integrity of the proposed measures to mitigate climate change, control deforestation and reduce greenhouse gas emissions from land use changes in the CO2BIO project area was evaluated.

The audit team appointed by VERSA focused on verification activities and relied on the evidence provided by the project holder. In order to understand fully the activities and processes described in the CO2BIO project's CO2BIO Monitoring and Verification Report (RMV) document in terms of Greenhouse Gas Emissions (GHG), the assessment of compliance with the Social and Environmental Safeguards and the Colombian legal context

Level of assurance

VERSA's audit team for the verification process of the CO2BIO project, defined the following criteria to assess the level of assurance (95%) and materiality (5%) of the project:

- *100% review of the documentary evidence submitted by the project owner, including GDB and satellite image processing.*
- *Face-to-face meeting at the facilities of the Cataruben Foundation in the city of El Yopal on August 21, 2024 and virtual meetings, first meeting, knowledge and presentation of the audit team and the project owner's team on August 16, 2024, September 3, 2024, meeting on verification findings. Documentary verification*
- *Semi-structured interviews with property owners visited during the field work from*

August 22 to 25, 2024.

- *Visits to points where activities were being carried out to contain deforestation and forest degradation, such as planting of moriche palm (Mauritia fleuxosa), construction of guard rails to prevent forest fires coming from the plains sheets, electric fences to prevent cattle from entering the forest areas.*

In the following table, an explanation of the methods developed for the collection of evidence carried out by the audit team in the verification process of the CO2BIO project is presented. These methods are in line with the standards established by ISO 14064-2:2019, ISO 14065:2013.

Evidence sampling plan for CO2BIO project.

Parameter or requirement	*Evidence*	*Sampling plan*
Verification of ex-ante and ex-post calculations of the monitoring period	*Confirmation and recalculation*	*A review was made of the sources, sinks and carbon reservoirs; emission factors, variables used for the calculation of activity data; error; relevant factors associated with the monitoring report, in order to ensure consistency and a conservative approach in the GHG inventory of the respective monitoring.* *The verification of this information was carried out taking into account the Excel tables submitted by the developer, in which all the mathematical formulas and assumptions used were verified. During the verification, 100% of the documented information provided by the project developer was reviewed. The type of sampling was non-statistical.*
Verification of non-permanence and reversion risks	*Confirmation and recalculation*	*The audit team reviewed all documented information. Additionally, it was verified in the semi-structured interviews conducted with the owners of the properties visited during the field work.* *The verification included a review of 100% of the documented information provided by the project owner.*
Verification of activities to reduce deforestation and forest degradation	*Verification of field activities and cross-checking with interviews*	*In the territory, based on the documentary review, visits were made to points where activities were being carried out to contain deforestation and forest degradation.*
Identification of training and strengthening activities.	*Verification of field activities and cross-checking with interviews*	*During the field visit, based on the documentary review, capacity building activities were identified and contrasted with interviews.* *Interviews were conducted with landowners who are part of the CO2BIO project.*

Parameter or requirement	Evidence	Sampling plan
Potential conflicts, overcoming barriers, challenges and benefits reported by the project	Verification of field activities and cross-checking with interviews	Field visits were conducted taking into account the documented information of the project regarding the reporting of the SDGs, and other activities that the team in the territory considered important. In this sense, it was sought that the community in the territory had an understanding of the processes carried out by the owner of the CO2BIO project to overcome barriers and avoid conflicts. Type of sampling, this was a non-statistical type.
Project communication, meetings, PQR system.	Verification of field activities and cross-checking with interviews	Interviews were conducted with stakeholders and groups of people in order to demonstrate the knowledge regarding the PQR system. The transparency of the CO2BIO project progress information was verified, easy to understand and access for the community, in this sense the methods used were verified, such as the design of an application App with data regarding the sale of carbon with direct access to the owners that are part of the CO2BIO project.
BCR program specific tools.	Review of documented information and confirmation	The documented project information was verified in order to identify how the program tools were used. Type of sampling was non-statistical, with interviews with the owners during the field verification.

Verification Scope

The scope of the verification was to determine compliance with the applicable principles and criteria associated with the BCR0002: Quantification of GHG Emission Reductions from REDD+ Projects standard. Version 4.0. May 27, 2024, such as:

- *Verification of GHG emission reductions reported for the monitoring period (01/01/2021 to 12/31/2023), taking into account project boundaries, GHG types, verification of co-benefits and verification of compliance with the BCR Standard, among others.*
- *Demonstration of additionality*
- *Eligibility, assessment of error and accuracy, among others.*

Verification criteria

The criteria applied and the detail of all aspects considered in the scope were based on the following:

- *The evaluation of the documented project information from 01/01/2021 to*

12/31/2023.

- *The information related to the PDD, (PROJECT DESIGN DOCUMENT PDD V3).*
- *Review of previous verifications performed on 10/21/2020 and 10/14/2021.*
- *The sampling plan and the respective audit plan specifically designed for the present verification.*
- *Execution of a field visit: Visit to properties in the Municipalities of Trinidad, San Luis de Palenque, August 22 to 25, 2024.*
- *Drafting process and resolution of findings, which took into account two rounds.*

Methodologies to determine representative samples
VERSA's audit team performed this verification under the BCR standard with the following methodologies and tools:

- *Methodological Document AFOLU Sector / BCR0002 Quantification of GHG Emission Reductions from REDD+ Projects. Version 4.0. May 27, 2024.*
- *Tool to demonstrate compliance with REDD+ safeguards Version 1.1, dated January 26, 2023.*
- *Baseline and Additionality Tool Version 1.3, dated March 01, 2024.*
- *BCR Tool. Sustainable Development Goals (SDGs). Version 1.0. June 27, 2023.*
- *Avoidance of Double Counting (ADC) Tool, Version 2.0 by February 7, 2024.*
- *Monitoring, Reporting and Verification (MRV) Tool Version 1.0 of February 13, 2023.*
- *Permanence and Risk Management Tool Version 1.1 dated March 19, 2024.*

The risks of possible errors, omissions or misinterpretations: *the risk assessment, following the guidelines specified in ISO 14064-3-2019, in the numerals from 5.1.3 to 5.1.7, as follows:*

a) *Regarding control issues that undermine the verifier's confidence in the reported data: This audit revealed that there are no discrepancies in the information provided by the project owner, nor with the sources, sinks and carbon reservoirs. Emission factors and there is consistency with the variables used for the calculation of the monitoring report, which generates confidence of the audit team in the data reported by the owner of the Cataruben Foundation project.*
b) *Regarding the deficient management of the documented information: some inconsistencies were identified in the information provided by the owner in terms of quality control of the information, for example regarding the data reported, such as the number of properties that make up the project. The above was the subject of a finding by this audit, which was corrected by the project owner.*
c) *Regarding possible difficulties in locating the requested information: It was easy to locate the information in the file folder called "Annexes". However, its rapid location could be improved with a brief guide for the document user.*
d) *There was evidence of compliance with regulations indirectly related to GHG emissions, removals or storage.*

3.2.3 Execution

3.2.3.1 On site inspection

Project characteristics: The CO2BIO project is located in the Colombian Orinoquia, specifically in the counties of Casanare, Arauca and Vichada.

Methodology applied: This corresponds to the application according to the Methodological Document Sector AFOLU / BCR0002 Quantification of GHG Emission Reductions of REDD+ Projects. Version 4.0. 27 May 2024.
Sector Scope: The Project is eligible under the scope of the BCR Standard and complies with the GHG, Carbon Dioxide (CO2), quantifiable GHG emission reductions and/or removals, generated by the implementation of GHG removal activities and/or REDD+ activities (AFOLU Sector).
As indicated above, the field visit took place from August 21 to 25, 2024. The purpose of this visit was to verify the functioning of the project implementation, mainly the development of activities and their consistency with the PDD and the project's RM.

With the owner of the Cataruben foundation project, an intense day was held in which the project was presented in detail to the Audit and there was the opportunity to ask questions and obtain explanations about the CO2BIO project. This was held on August 21, 2024 at the offices of the Cataruben Foundation in the Municipality of El Yopal, Casanare County. The agenda is shown below:

CO2BIO project audit schedule:

Wednesday, August 21st, 2024				
Documentary audit in office				
TIME (COL)	**ACTIVITY**	**PERSONNEL**	**DETAIL**	**DURACION**
8:00 a.m - 8:30 a.m	Bienvenida Reunión de apertura auditoria	Equipo Auditor Versa Equipo Operativa Cataruben	Sala de juntas Confianza, Fundación Cataruben, Yopal	30 Min
8:30 a.m - 9:15 a.m	Propiedad del Carbono	Adriana Galán Karen Nieto Lisbeth Menjure Barrera		45 Min
9:15 a.m - 10:00 a.m	Implementación Activities REDD+	Sara Rodríguez Lisbeth Menjure Barrera		45 Min
10:00 a.m - 10:45 a.m	Compliance de Salvaguardas	Benilda Granados Lisbeth Menjure Barrera		45 Min
10:45 a.m - 11:15 a.m	Biodiversidad	Daniela Porras Flórez Lisbeth Menjure Barrera		30 Min
11:15 a.m - 11:45 a.m	Agua (SDG)	Paola Andrea Acevedo Flechas Lisbeth Menjure Barrera		30 min
12:00 p.m - 1:30 p.m	**Lunch**			1.5 Horas
1:30 p.m - 2:30 p.m	SIG (GDB, áreas elegibles, límites de proyecto, fugas, región de referencia)	Jhoan Martínez Lisbeth Menjure Barrera Sandra Duarte Ch	Sala de juntas Confianza, Fundación Cataruben, Yopal	60 Min
2:30 p.m - 3:30 p.m	Cuantificación (Cálculos, factores de emisión)	Laura Sanabria Lisbeth Menjure Barrera Sandra Duarte Ch		60 Min
3:30 p.m - 4:30 p.m	Beneficios económicos	Laura Estefanía Rojas Lisbeth Menjure Barrera		30 Min

Wednesday, August 21st, 2024				
Documentary audit in office				
4:30 p.m - 5:00 p.m	Conclusiones y cierre auditoria	Equipo Auditor Versa Equipo Operativa Cataruben		30 min

Meeting with the project holder's team. Cataruben Foundation offices in the Municipality of El Yopal, Casanare County. August 21, 2024

It was evident that the CO2BIO project is coherent with respect to the activities it carries out, taking into account the territorial context of the owner, for the reduction of deforestation and forest degradation. Clear relationships are maintained regarding the treatment of information, the PQR system and the general knowledge of the local community in this regard. Also, a governance system is in a continuous process of strengthening in order to maintain the integrity of the forests.

Verification audit of the CO2BIO project, in the field:

Thursday, August 22, 2024				
Field audit				
5:00 a.m - 7:30 a.m	Desplazamiento al Property La Primavera (RNSC El Boral), vereda San Rafael de Guanapalo, Municipality de San Luis de Palenque	Equipo Auditor Versa Lisbeth Menjure Barrera Sandra Duarte Ch	Salida desde Yopal	2.5 Horas
6:30 a.m - 7:00 a.m	**Breakfast**			30 Min
8:00 a.m - 1:00 p.m	Llegada al property Recorrido por las áreas del proyecto Entrevistas a Gestores del ecosistema	Equipo Auditor Versa Gestores del ecosistema Lisbeth Menjure Barrera Sandra Duarte Ch		5 Horas
1:00 p.m - 2:00 p.m	**Lunch**			1 hora
2:00 p.m - 2:30 p.m	Desplazamiento al Property Hato Montana, vereda Pirichigua, Municipality de San Luis de Palenque	Equipo Auditor Versa Lisbeth Menjure Barrera Sandra Duarte Ch		30 Min
2:30 p.m - 6:00 p.m	Llegada al property Recorrido por las áreas del proyecto Entrevistas a Gestores del ecosistema	Equipo Auditor Versa Gestores del ecosistema Lisbeth Menjure Barrera Sandra Duarte Ch		3.5 Horas
7:00 p.m - 7:40 p.m	**Dinner**			40 min
	Rest - Lodging in Montana			
Friday, August 23, 2024				
6:00 a.m - 7:00 a.m	**Breakfast**			45 min

Thursday, August 22, 2024				
Field audit				
7:00 a.m - 7:30 a.m	Desplazamiento al Property Hato Mata de Palma vereda Pirichigua, Municipality de San Luis de Palenque	Equipo Auditor Versa Lisbeth Menjure Barrera Sandra Duarte Ch	Desplazamiento desde el Hato Montana	30 Min
8:00 p.m. - 12:00 p.m	Recorrido por las áreas del proyecto Entrevistas a Gestores del ecosistema	Equipo Auditor Versa Gestores del ecosistema Lisbeth Menjure Barrera Sandra Duarte Ch		4 Horas
12:00 p.m - 1:00 p.m	**Lunch**			1 Hora
1:30 p.m. - 4:30 p.m	Desplazamiento al Property Hato Altamira, vereda Pirichigua, Municipality de San Luis de Palenque	Equipo Auditor Versa Gestores del ecosistema Lisbeth Menjure Barrera Sandra Duarte Ch	Desplazamiento desde el Hato Mata de palma	3 Horas
4:30 p.m. - 5:30 p.m	Desplazamiento al Municipality de Trinidad	Equipo Auditor Versa Lisbeth Menjure Barrera Sandra Duarte Ch		1 Hora
7:00 p.m - 8:00 p.m	**Dinner**			1 Hora
	Rest - Lodging in Trinidad			
Saturday, August 24, 2024				
4:00 a.m - 8:00 a.m	Desplazamiento al Property Flor Amarillo, vereda El Loro, Municipality de Trinidad	Equipo Auditor Versa Lisbeth Menjure Barrera Sandra Duarte Ch	Salida desde el área urbana del Municipality de Trinidad	4 Horas
6:30 a.m - 7:00 a.m	**Breakfast**			30 Min
8:00 p.m - 10:00 p.m	Llegada al property Recorrido por las áreas del proyecto Entrevistas a Gestores del ecosistema	Equipo Auditor Versa Gestores del ecosistema Lisbeth Menjure Barrera Sandra Duarte Ch		2 Horas
10:00 p.m - 12:00 p.m	Desplazamiento al Property Arizona, vereda Santa Maria del Loro, Municipality de Trinidad. Llegada al property Recorrido por las áreas del proyecto Entrevistas a Gestores del ecosistema	Equipo Auditor Versa Gestores del ecosistema Lisbeth Menjure Barrera Sandra Duarte Ch	Desplazamiento desde el property Flor Amarillo	2 Horas
12:00 a.m - 1:00 p.m	**Lunch**			1 Hora
1:00 p.m - 1:40 p.m	Desplazamiento al Property San Andres, vereda Altagracia, Municipality de Trinidad	Equipo Auditor Versa Lisbeth Menjure Barrera Sandra Duarte Ch	Desplazamiento desde el property Flor Amarillo	40 Min
2:00 p.m - 5:00 p.m	Llegada al property Recorrido por las áreas del proyecto Entrevistas a Gestores del ecosistema	Equipo Auditor Versa Gestores del ecosistema Lisbeth Menjure Barrera Sandra Duarte Ch		3 Horas
5:00 p.m - 5:40 p.m	Desplazamiento al Property Flor Amarillo, vereda El Loro, Municipality de Trinidad	Equipo Auditor Versa Lisbeth Menjure Barrera Sandra Duarte Ch	Hospedaje en el property Flor Amarillo	40 Min
7:00 p.m - 8:00 p.m	**Dinner**			
	Rest - Lodging at the property Flor Amarilo			
Sunday, August 25, 2024				
4:00 a.m - 1:00 p.m	Desplazamiento a Yopal, Casanare	Equipo Auditor Versa Lisbeth Menjure Barrera Sandra Duarte Ch	Desplazamiento desde el property Flor Amarillo	9 Horas
6:00 a.m - 7:00 a.m	**Breakfast**			1 Hora
12:00pm - 1:00pm	**Lunch**			1 Hora
1:00 a.m - 1:20 p.m	Desplazamiento al Aeropuerto en Yopal, Casanare	Equipo Auditor Versa Lisbeth Menjure Barrera Sandra Duarte Ch		20 min

3.2.3.2 Interviews

Based on the information provided, the audit plan was prepared, for which the audit team approved the detailed plan agreed prior to the field visit with the owner of the CO2BIO project.

The field phase took place from August 21 to 25, 2024, during which time properties were visited and the owners were interviewed, who in turn are the beneficiaries of the CO2BIO project (the details of the aspects consulted and the results of the interviews are described in greater depth in section 4.4 On-site visit).

Name and Last name	Property	Date of interview	Municipality	County
Carlos Gerardo Zambrano	Hato Montana	22-08-2024	San Luis de Palenque	Casanare
Hugo Tovar	La primavera	22-08-2024	San Luis de Palenque	Casanare
Juan Carlos Zambrano	Mata de palma	23-08-2024	San Luis de Palenque	Casanare
German Rodriguez	Altamira	23-08-2024	San Luis de Palenque	Casanare
Fredy Arenas Castro	Flor Amarillo	24-08-2024	Trinidad	Casanare
Alberto Arenas Riyear -	Arizona	24-08-2024	Trinidad	Casanare
Eduar Parada Vargas	San Andres	24-08-2024	Trinidad	Casanare
Alexander Arenas Oropeza Sulmira Oropeza	(Padrote, Padrote 1, 2, 3)	24-08-2024	Trinidad	Casanare
Luis A Arenas Garcia	Villarrica lote 7	24-08-2024	Trinidad	Casanare
Martha Rocio Parada Vargas	La regadera	24-08-2024	Trinidad	Casanare
Luis Eduardo Arenas	El campin	24-08-2024	Trinidad	Casanare
Linda Sanches	El progreso y lote 7	24-08-2024	Trinidad	Casanare

Semi-structured interviews were conducted in person in the field, with some questions aimed at perceiving the level of ownership of the CO2BIO project as a REDD+ initiative and the internalization of leaks and safeguards, as follows:

Semi-structured interview

General
1. Perspective about the Developer.
2. Knowledge of the carbon market (what is a carbon credit, climate change, etc).
3. What benefits the project has brought to the community. Have you benefited.
4. What do they know about REDD+.
5. Have you participated in the project activities.
6. How has the communication with the developer been. What communication channels are used.

Safeguards:
1. Knows the channels to generate a PQR.
2. Knows the percentages of benefit distribution.
3. Knows the results of the last monitoring report. How much was sold. How much money was left over.
4. Know how much money was spent on project activities.
5. There have been community forums to make decisions about what the money should be spent on and on what Activities.
6. How this money is reaching them.
7. How do you think the project supports the "Conservation of Forests and their biodiversity".
8. Communities: Has the prior consultation process been carried out or has anyone from the Ministry of the Interior been here?
9. Communities: Do you believe that the project is aligned with your customs and life plan?

SDG Context
1. What is the presence of the State in this area? What state entities are present. And what services does the State bring to these areas.
2. How are the health posts.
3. How education is being managed in the area.

Visit to Hato Montana

Meeting with the owners of the properties San Andres and el campin

Meeting with owners of the Flor Amarillo Herd

With the owner of the Cataruben foundation project, an intense day was held in which the project was presented to the Audit detail and in which there was the opportunity to ask questions and get explanations about the CO2BIO project. This was held on August 21, 2024 at the offices of the Cataruben Foundation in the Municipality of El Yopal, Casanare County, (DOCUMENT: PRESENTATION_CO2BIO_V3_AUDIT_CO2BIO_V3). The attendance list is included below.

Cataruben

FC-GHF-08. Registro de Asistencia
16/02/2024. V03

Fecha:	21/agosto/2024	Hora Inicio:	8:00am	Hora Fin:	4:00pm
Lugar:	Fundación Cataruben	Responsable:		Lisbeth Menjure	
Tema:	Auditoria documental proyecto CO2Bio P1 - Verificación 3				
Objetivo:	Revisión por parte equipo auditor de VERSA sobre reporte de monitoreo de la verificación 3				

#	Nombres y Apellidos	Cédula	Cargo	Proceso	Firma
1	Lisbeth Menjure Barrera	1.118.552.148	Líder de iniciativa	Proyectos	
2	Sandra Duarte Chaparro	1.118.547.172	Superlíder de Carbono	Proyectos	
9	Jhoan Martinez	1.116.664.973	Superlíder Geoespacial	Geoespacial	
7	Daniel Eduardo Ospina	1.118.555.191	Superlíder de Agua	Proyectos	
3	Adriana Galán	1.118.547.356	Líder de Gobernanza	Proyectos	
4	Karen Nieto	1.118.552.289	Líder de control Operativo	Mejora Continua	
5	Sara Rodriguez	1.234.788.691	Líder implementación	Proyectos	
6	Juan Sebastian Garcia	1.049.645.499	Líder de monitoreo	Proyectos	
8	Paola Andrea Acevedo	1.057.597.387	Líder de monitoreo Agua	Agua	
10	Laura Sanabria	1.118.570.818	Líder Cuantificación	Proyectos	
11	Laura Estefania Rojas	1.052.405.849	Gestor de beneficios económicos	Monetización	
12	Emilio Montealegre	79.379.605	Auditor Líder	VERSA	
13	Wilson Lopez	98.553.406	Experto técnico	VERSA	
14					

3.2.3.3 Results

In the assessment and verification report completed on 10/14/2021 it is stated that: "All findings of the audit team during the verification process have been closed".

The Versa Audit team in the exercise of this verification initially found a total of ten (10) findings, which had a treatment of response and correction by the developer of the Cataruben Foundation project, during a process that took place in two (2) rounds. This was done as follows:

<u>Clarification Request (CL)</u>

After two rounds of findings resolution, seven (7) clarification actions were identified, which were oriented to the following:

- *Lack of appropriation of knowledge by landowners regarding the scope of REDD+ projects. (Finding No. 1)*
- *Landowners are not clear about the moment in which possible leakage occurs by omission or ignorance (Finding No. 2).*

- *GIS lacks a layer of areas dedicated to environmental compensation under another environmental regulation scheme and documentary quality control. (Finding No. 5)*
- *In the introduction of the document "SECOND MONITORING DOCUMENT OF THE PROJECT" it is indicated that there are 44 private properties ("The work area comprises 42,406 hectares distributed in 44 private rural properties, located in the departments of Casanare, Arauca, and Vichada,...). The documentation submitted to this audit shows documentation for 42 private properties (Finding No. 6).*
- *Part of the documentation in the file called "annexes" does not correspond to the format or does not have the necessary elements in relation to its change control. For example version number, maps without coordinate systems, grid without symbols such as indicating "north" and other minimum elements for the presentation of cartographic information; images not described or related to or in the text and formats that are not homogeneous in the documents. This is contrary to the quality principles of ISO 14064-2 (Finding No. 7).*
- *The documentation lacks relevant primary information such as: attendance lists to verify the relevance of workshop spaces, training and others, which poses a risk by not being in accordance with the principle of auditing with an evidence-based approach (Finding No. 9).*
- *Follow-up on safeguards: does not show differentiated information in reference to compliance with safeguards b and c decision 1/COP.16 paragraph 19 and safeguard 2 BCR Tool to demonstrate compliance with REDD+ safeguards. (Finding No. 10).*

<u>Corrective Actions Request (CAR)</u>

The versa team drafted three (3) corrective action type findings or CARs, which were related to the following:

- *Permanence of the REDD+ project. "disputes related to land tenure, conflicts between project stakeholders". (Finding No. 3).*
- *Possible conflicts due to the proximity or contiguity of the project properties with indigenous reserves and RUNAP areas (areas protected by Colombian legislation) (Finding No. 4).*
- *Coherence with respect to indicators selected for the SDGs. (Finding No. 8).*

<u>Forwarding action request (FAR)</u>
One (1) FAR was derived regarding: The lack of a strategy to reduce the risk of legal action against future conflicts with communities neighboring the CO2BIO project: The owner updated the REDD+ Geodatabase See Folder: Annexes / 6. Geospatial / 6.2 Geodatabase /6.2.1 REDD+ Geodatabase, incorporating two new feature classes called "Evidence no overlapping Indigenous Reserves" and "Evidence no overlapping RUNAP" within the feature dataset "Access_restricted". These shapefiles are intended to validate that the CO2BIO project has no overlaps or conflicts related to boundaries or claims of Legalized Indigenous Reserves or Protected Areas (Corresponds to finding No. 4).

Annex 2 includes the issue raised, the response(s) provided by the project owner, and the final conclusions and any resulting changes to the project documents.

3.3 Verification team

The following table presents VERSA's audit team for the verification audit process of the CO2BIO project:

VERSA audit team

Position/Role	*Name*	*Activities developed by professional*	*Participation type*		
			Documentary review	*Field work*	*Report*
Lead Auditor	*Joaquin Emilio Montealegre Villanueva*	*Document review* *-Preparation of the audit plan* *-Conduct the field audit in accordance with the regulations.* *-Perform findings corresponding to the audit.* *Preparation of technical report according to Biocarbon standard.*	X	X	X
Technical expert	*Wilson López*	*Forester in charge of document review, land cover analysis and field work that consisted of verifying the areas with vegetation cover.*		X	
Expert Technical Reviewer	*Juan Camilo Arroyave*	*Final technical report reviewer, quality assurance*			*X*
Technical Reviewer	*Julián Camilo Ávila B.*	*Technical reviewer scheduling of the verification audit and review of the final report and assurance of compliance with the BCR standard.*			*X*
Endorser	*Camilo Andrés Montaña Salamanca*	*Endorser of documentation, reports and contractual formats of VERSA's verification audit process.*	*X*	X	*X*

Annex 1 shows how the team meets the necessary requirements to carry out the verification, providing a detailed account of the documentation supporting the competencies of the verification team, as established in the BCR Verification Manual. In addition to the above, the audit team is adequately qualified in accordance with the VERSA qualification scheme.

VERSA strictly complies with numeral 8.2.4 Compliance with the BCR Anticorruption Policy, indicated in the "GHG PROJECT VERIFICATION MANUAL" of the BCR STANDARD, Version 2. 4 of March 23, 2024, according to the above VERSA certifies that there is no conflict that limits the provision of verification services and expressly undertakes, both during the term of the contract and after its termination, not to disclose, transmit or disclose to third parties any information of the Company, to which it has access as a result of the performance of its work activity, or to use such information in their own interest or third parties. It also undertakes to comply with all provisions of the Code of Ethics of BCR, on which the conduct

of the auditors in decision-making and in the development of the verification process is forged, as well as all anti-corruption rules, antitrust, prevention of money laundering and terrorist financing, and other criminal laws or other applicable laws, guidelines and regulations. VERSA also expressly undertakes to avoid any relationship with persons and / or entities that may be aimed at money laundering or terrorist financing, as well as to develop its activity in accordance with all laws and regulations on money laundering and terrorist financing in force in Colombia.

4 Verification Results

4.1.1 Methodological deviations

It was confirmed that the CO2BIO project has not presented any methodological deviations.

4.1.2 Changes after project registration

The changes made to this monitoring period are due to adjustments made to the Project Activities Monitoring Plan, related to the consolidation of Activities that shared similarities, therefore the name of the Activity, indicators, and targets for the project accreditation period (40 years) were adjusted. Likewise, adjustments were made to the Safeguards Monitoring Plan in accordance with the update of the Tool to demonstrate compliance with REDD+ safeguards Version 1. 1, dated January 26, 2023 and the Sustainable Development Safeguards SDSs Tool Version 1.0, dated April 2024.

Likewise, the new updates are adopted: Monitoring Report to BCR Standard Version 3.3, the implementation of the Baseline and Additionality Tool Version 1.2, September 27, 2023, Tool to Demonstrate Compliance with REDD+ Safeguards Version 1. 1, January 26, 2023, Sustainable Development Safeguards SDSs Tool Version 1.0, April 2024, Sustainable Development Goals (SDGs) Tool Version 1.0, June 27, 2023, Tool for Avoiding Double Accounting, Version 1. March 09, 2023, Tool for Monitoring, Reporting and Verification. V 1. February 13, 2023 and Tool Permanence Risk Management Version 1.1 March 19, 2024.

Additionally, during this monitoring period, the voluntary withdrawal of 2 properties was formalized, leaving a total of 42 private properties involving 38,813.04 total hectares and 8,653.2 hectares of forest.

List of deviations applied to this monitoring period.

Component	**Description of deviations**
Project activities monitoring plan	*The project activity monitoring plan, in its initially validated version 1, stipulates 25 activities grouped into 10 components.*

	During the current verification period, it was identified that several of these activities shared similarities in objects, methods and expected results. For this reason, a consolidation of activities was carried out, reducing the total number and adjusting the names of activities, indicators and targets to be reported during the project accreditation period (840 years), as detailed in version 2 of the project activity monitoring plan, Version 2. *The consolidation of activities was performed under a thorough and meticulous review, ensuring that the combined activities maintained coherence and achieved synergies that not only simplify monitoring, but also enhance the effectiveness of the implemented actions. This deviation is considered ideal for the following reasons:* *Operational Efficiency: Consolidation reduces redundancy of efforts, allowing an efficient management of human and financial resources.* *Clarity and Focus: By grouping similar activities together, monitoring and evaluation of the components is facilitated, providing a clearer and more focused view of progress and results.* *Improved Information Management: Reducing activities allows for better data collection and analysis.*

Source: *Fundación Cataruben, 2024.*

4.1.3 Other GHG programs

During the documentary review it was confirmed that the Project Holder has mechanisms in place to review standards and programs to avoid double counting, according to the following:

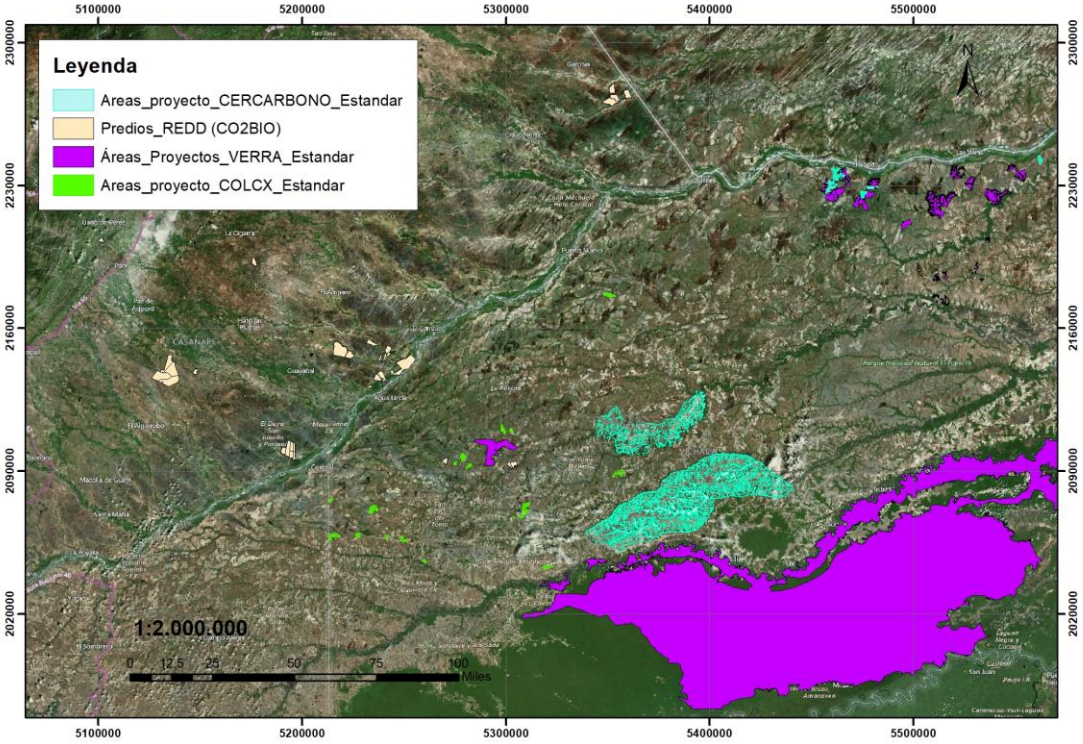
The REDD+ Geodatabase folder Annexes / 6. Geospatial / 6.2 Geodatabase /6.2.1 REDD+ Geodatabase, incorporates two feature classes called "Evidence no overlap Indigenous Reserves" and "Evidence no overlap RUNAP" within the feature dataset "Restricted_access". These shapefiles aim to validate that the CO2BIO project does not present overlaps or conflicts related to boundaries or claims of Legalized Indigenous Reserves or Protected Areas.

The analysis of the shapefile results identified that the CO2BIO project does not overlap with other greenhouse gas (GHG) projects or programs.

The evaluation also considered possible alignments with Law 2 of 1959, the absence of overlaps with protected areas (SINAP). As a result of evaluating all possible overlapping scenarios in

the project area, the audit team found that there are no incompatible overlaps with other programs or in the CO2BIO project area.

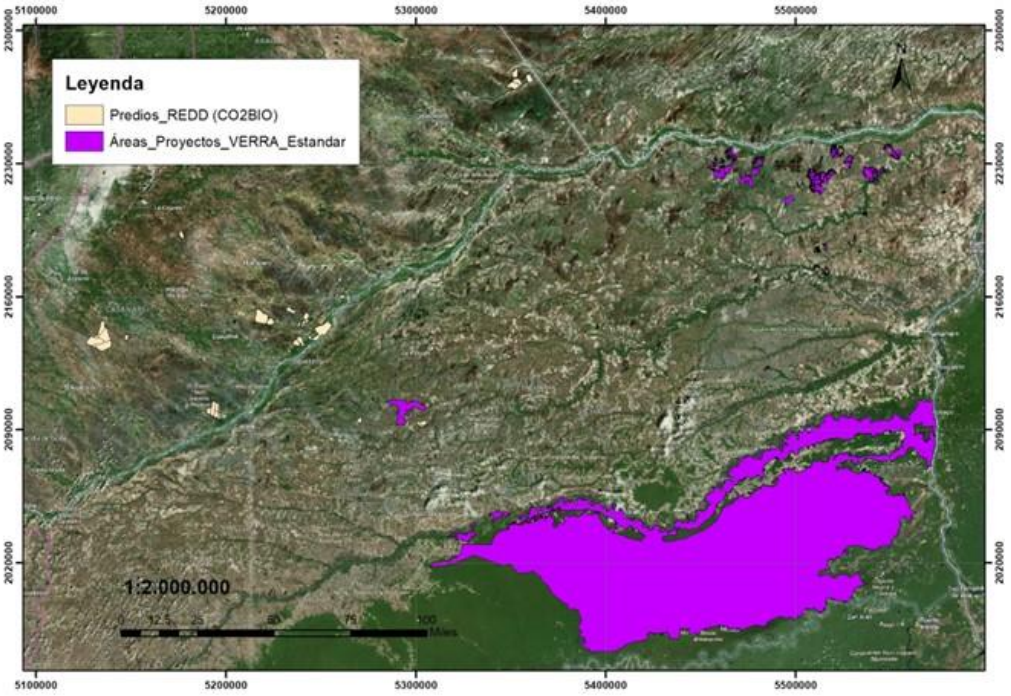
Figure of Location of the CO2BIO project areas compared to other standards.



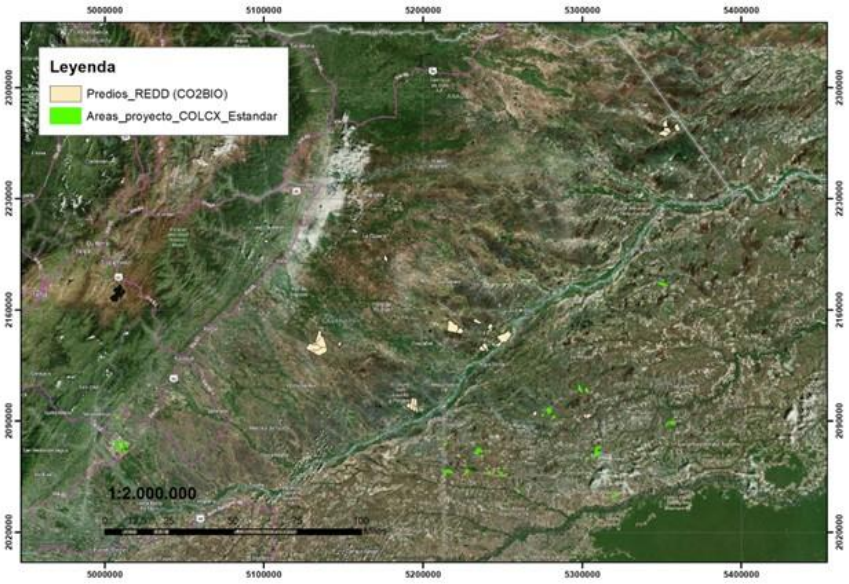
Source: Bing satellite images vs Cataruben CO2BIO monitoring report

It is verified that the CO2BIO project does not appear registered in other standards such as: (VERRA, Gold Standard, ColCX, UN CDM, CERCARBONO, Plan Vivo, Carbon Action Reserve), as shown below with the standards with presence in the Orinoquia sector:

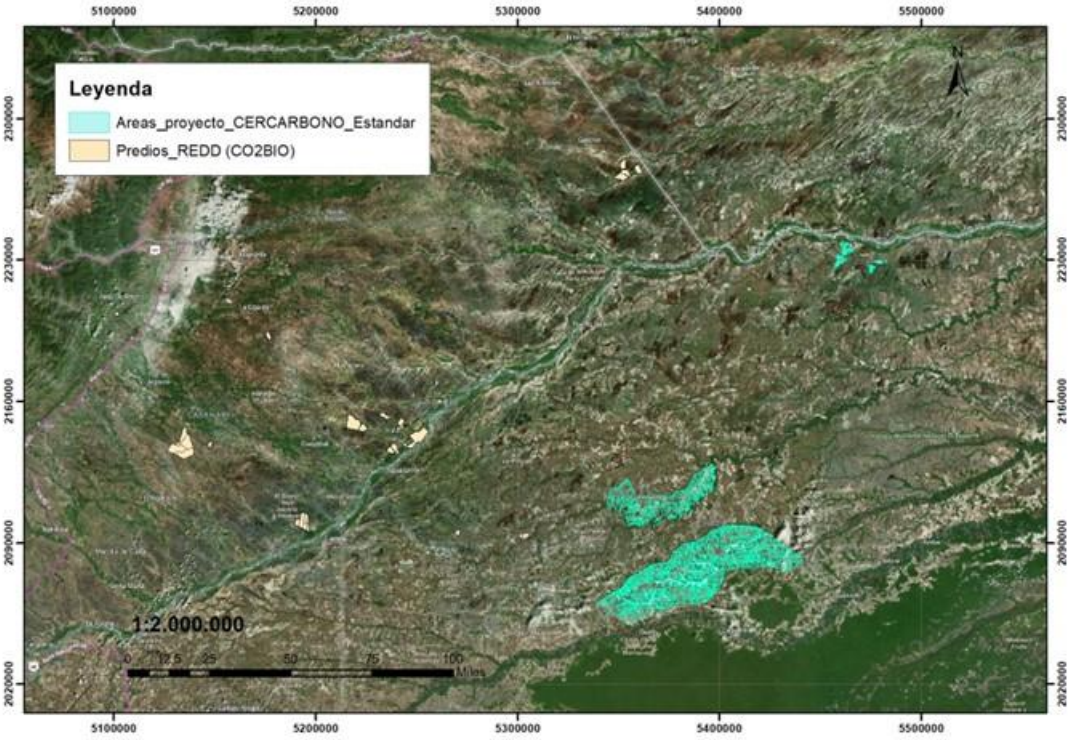
VERRA:



ColCX:



CERCARBONO:



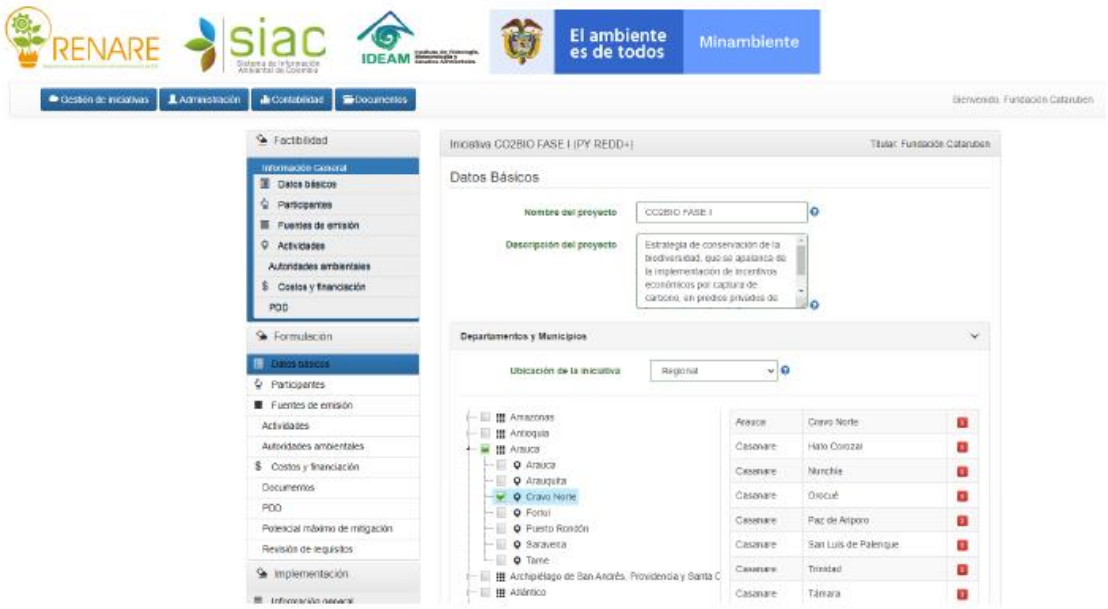
According to what was evidenced by this audit, it can be concluded that:

(a) The project only belongs to the Biocarbon Standard registry.
(b) The reductions or removals generated by the project are only part of the BIOCARBON Standard.
(c) The CO2BIO project complies with the requirements established in the national legal framework, as well as with the rules and procedures established by BIOCARBON.
(d) The CO2BIO project already participates in the framework of the BCR Program.

In conclusion, it is possible to affirm that the areas of the CO2BIO project, i.e. the 42 linked properties, do not present overlaps, and the project complies and is consistent with the criteria established in paragraph 1.2 of this document, with the requirements of the BCR Standard, Version 4.0. May 27, 2024.

Registration of the CO2BIO project in RENARE

The CO2BIO project is registered in MINAMBIENTE's RENARE platform, as shown below:



4.1.4 Grouped projects (if applicable)

The CO2BIO project is not grouped and does not recognize possible areas to include or add post verification, as reported by the project owner Cataruben Foundation in paragraph 13 of

the monitoring report dated 06/28/2024. Likewise, the CO2BIO project does not comply with the provisions of the BCR standard in its numeral 20.1, Activities in the AFOLU sector for grouped projects version 3.4 of June 28, 2024.

5 Verification Conclusion

The audit team evaluated compliance with the planned methods for the cross documentary review, and reviewed compliance with the applicable requirements according to the BCR standard, the documented project information from 01/01/2021 to 12/31/2023. As well as information related to the PDD, previous verifications, the procedures and criteria of the Biocarbon Standard GHG program and the legal norms applicable to the CO2BIO project. The baseline conditions, quality control and assurance, risk management, follow-up and monitoring reporting were also reviewed. To confirm the above, field visits, semi-structured interviews, meetings with the CO2BIO project owner's team and visits to specific sites for the application of the project activities described in section 5.1.1 were carried out.

It is therefore concluded that:

(a) Project activities are under execution, as reported in the monitoring report for the period years 2021 - 2023. The CO2BIO project establishes a start date of January 1, 2015.
(b) The methodological document AFOLU sector BCR0002 Quantification of GHG Emission Reductions from REDD+ projects is based on the AFOLU sector BCR0002 Quantification of GHG Emission Reductions from REDD+ projects. Version 4.0. May 27, 2024.
(c) During the field visit by this audit, there was evidence of progress in the implementation of electric fences, drinking fountains, signage and delimitation of conservation areas. In addition, the strengthening of economies around beekeeping, meliponiculture, tourism, turmeric, and livestock under sustainability guidelines was evidenced.
(d) The document Risk analysis and management shows the adaptation management through the implementation of mitigation actions with the risks initially rated as high and medium according to the BCR Tool Permanence Risk Management Version 1.1 March 19, 2024.

In order to report the verification findings, a documentary review of the project information (listed in Annex 3) was carried out, which was additionally contrasted with field evidence, such as semi-structured interviews for the properties selected for this audit, field visits and photographs.

5.1 Implementation of the project and monitoring plan

5.1.1 Execution of Project Activity

The audit team compared the information of the PDD (PROJECT DESIGN DOCUMENT PDD V3) validated by the OVV with the information provided by the owner of the CO2BIO project for this verification, finding that:

PDD v3 Information	***CO2Bio MONITORING REPORT - Version 1.1 (09/21/2024)***
The work area comprises 42,406 hectares distributed in 44 private rural properties.	*The work area comprises 38,813.04 hectares distributed in 42 private rural properties.*

Notwithstanding the above, during the review of the information on the project boundaries, it became evident that during the 2021-2023 period, a request was made to remove the project areas from the property called La Mapora, which reduces the areas to be verified by 40.8 hectares, which is duly documented.

For the current verification of the period 2021 - 2023, the CO2BIO project owner requests the approval of changes, taking into account the following deviation: The project Activities monitoring plan, in its initially validated version 1, stipulated 25 Activities grouped into 10 components. During the current verification period, it was identified that several of these Activities shared similarities in objectives, methods and expected results. For this reason, a consolidation of these Activities was carried out, reducing the total number and adjusting the names of the Activities, indicators and targets to be reported during the project accreditation period (40 years), as detailed in version 2 of the Project Activities Monitoring Plan, Version 2. The consolidation of Activities was carried out under an exhaustive and meticulous review, ensuring that the combined Activities maintained coherence and achieved synergies that not only simplify monitoring, but also enhance the effectiveness of the actions implemented.

Regarding the compliance of the execution of the consolidated Activities in version 2 of the project's RM with the initially validated Activities, it can be concluded:

1. *The project activities are in execution, according to what is reported in the monitoring report for the period years 2021 - 2023. The CO2BIO project establishes a start date of January 1, 2015.*
2. *The methodological document AFOLU sector BCR0002 Quantification of GHG Emission Reductions of REDD+ projects is based on the AFOLU sector BCR0002. Version 4.0. May 27, 2024.*
3. *During the field visit by this audit, there was evidence of progress in the implementation of electric fences, drinking fountains, signage and delimitation of conservation areas. In addition, the strengthening of economies around beekeeping,*

meliponiculture, tourism, turmeric, and livestock under sustainability guidelines was evidenced.

4. *The Risk Analysis and Management document shows the adaptation management through the implementation of mitigation actions with the risks initially rated as high and medium according to the BCR Tool Permanence Risk Management Version 1.1 March 19, 2024.*

The Activities that make up the CO2BIO project started on January 1, 2015 and are as follows:

Activity 1: Capacity building for men and women involved in the project, in the following components: technical-environmental, social and administrative-financial, in order to strengthen decision making in favor of the project's objectives.
Indicator: Number of people trained per year.
Progress of monitoring period (2021-2023): 4,651 people.
Total progress: 6,800 people

Activity 2: Promote sustainable forest management through the implementation of sustainable production practices and conservation actions in the properties, in line with the Environmental Management Plan and Predial Implementation Plan.
Indicator: Properties that implement sustainable production practices (SPP), actions and ecosystem conservation strategies.
Progress monitoring period (2021-2023): 66%.
Total progress: 96%.

Activity 3: Strengthening forest governance to promote the conservation and sustainable use of forests.
Indicator: Progress of the governance roundtable.
Progress monitoring period (2021-2023): 25%.

Activity 4: Continuous monitoring of changes in forest area as a proportion of total area in project areas.
Indicator: Rate of forest cover change
Progress monitoring period (2021-2023): 7.5%.
Progress: 22.5%

Activity 5: Identify and map areas of regeneration gain or loss
Indicator: Forest Gain
Progress monitoring period (2021-2023): 7.5%.
Progress: 22.5%

Activity 6: Monitor environmental threats (fire) in the project area and/or possible management alerts.
Indicator: Thermal anomalies/vegetation cover fire monitoring
Progress monitoring period (2021-2023): 8.5%.

Progress: 11.43%

Activity 7: Conduct monitoring of biodiversity variables or indicators in coverages with the use of remote sensors for the project area and its surroundings.
Indicator: Participatory biodiversity monitoring to identify fauna in the project area.
Progress monitoring period (2021-2023): 12.5%.
Progress: 25%

Activity 8: Develop a Household Water Use Efficiency and Saving Plan (PUEAA) linked to the initiative.
Indicator: Change in water use efficiency over time.
Progress: 25%

5.1.2 Implementation of the monitoring plan and monitoring report

The process used to assess the implementation of the MP verified the compliance and adjustments of the Monitoring Report to BCR Standard Version 3.3, the implementation of the Baseline and Additionality Tool Version 1.2, dated September 27, 2023, Tool to Demonstrate Compliance with REDD+ Safeguards Version 1. 1, January 26, 2023, Sustainable Development Safeguards SDSs Tool Version 1.0, April 2024, Sustainable Development Goals (SDGs) Tool Version 1.0, June 27, 2023, Tool for Avoiding Double Accounting, Version 1. March 09, 2023, Tool for Monitoring, Reporting and Verification. February 13, 2023 and Tool Permanence Risk Management Version 1.1 March 19, 2024.

The audit team verified the information based on the documentary review, corroborated during field visits and interviews with the owners of the properties or so-called environmental managers, according to the designed sampling and the technical team of the Catarubén Foundation.

In the review of the information on the project boundaries, it was found that during the period 2021-2023, a request was made to disassociate the project areas from the property called La Mapora, which reduces the areas to be verified by 40.8 hectares, which was duly documented.

Regarding the monitoring and verification of the project activities, the following table illustrates the way in which they were verified and the credibility that was considered in this verification process:

CO2BIO Project activity	Verified progress monitoring period (2021-2023)	Verification audit commentary	Evidence
Activity 1: Capacity building for men and women involved in the project, in the following components: technical-environmental, social and administrative-financial, in order to strengthen decision making in favor of the project's objectives.	*4.651 participants*	*Training: Introduction, female leadership, invisible figures in unequal processes?*	*Report contains description and list of training attendees.*
Activity 2: Promote sustainable forest management through the implementation of sustainable production practices and conservation actions in the properties, in line with the Environmental Management Plan and Predial Implementation Plan.	*66%*	*Progress was verified in:* *- The updating of socio-productive and environmental data of 39 properties was achieved.* *- 42 property implementation plans were updated.* *- 42 properties were reached with follow-up on the implementation of sustainable production practices.*	*Report and photographic annex and direct observation during the field visit.*
Activity 3: Strengthening forest governance to promote the conservation and sustainable use of forests.	*25%*	*As evidenced in the field visit:* *Regional Attention Centers for Beneficiaries.* *Attention to PQRS*	*Report: Governance Strategy: Social Appropriation of Local Conservation* *Document: FC-GPN-23 Operational Regulations of the Governance Roundtable*
Activity 4: Continuous monitoring of changes in forest area as a proportion of total area in project areas.	*7,5%*	*Documentation of the analysis using the eligible forest (2005-2015) of the CO2BIO project areas and the annual forest area in each project area to determine the forest gain over the course of project implementation from 2015-2023 respectively.*	*Report: forest area as a proportion of total forest area*
Activity 5: Identify and map areas of regeneration gain or loss	*7,5*	*Reference document constructed from data on the area covered by natural forest for the year 2023 obtained from the processing and analysis of satellite images, in this study the Google Earth Engine (GEE) platform was used.*	*Excel report CO2BIO forest gain.*
Activity 6: Monitor environmental threats (fire) in the project area and/or possible management warnings	*11,43%*	*Monitoring of the total areas (project areas) of the CO2BIO initiative, paying special attention to the areas of the REDD+ woody component. The above is articulated with the AFOLU Sector Methodological Document, Quantification of GHG Emission Reductions, REDD+ Projects, BCR0002, item 7. GHG sources > Table 2. Emission sources and selected GHGs.*	*Thermal anomalies result report*

CO2BIO Project activity	Verified progress monitoring period (2021-2023)	Verification audit commentary	Evidence
Activity 7: Conduct monitoring of biodiversity variables or indicators in land cover with the use of remote sensing for the project area and its surroundings.	*12,5%*	*Monitoring through secondary data reporting and remote sensor monitoring in the properties to identify the species present in the project area with the participation of ecosystem managers.*	*Biodiversity Monitoring Plan Report*
Activity 8: Develop a Plan for Efficient Use and Saving of Water in Households (PUEAA) linked to the initiative.	*15%*	*For the development of the Activity, initially a Predial Characterization (water component) will be carried out, which will allow to diagnose the key points where Cataruben can intervene for the improvement of the resource; with the above, the plans will be made (PUEAA-Design Stage). Once these relevant points have been identified, training and knowledge transfer for better water use will be implemented. Finally, the plans will be followed up in order to implement improvement activities regarding the use and management of the resource.*	*Progress report on the implementation of the Water Efficiency and Saving Plans. Efficient Water Use and Saving Plans (PUEAA) according to the General Diagnosis of the use and management of water resources by household.*

This audit reviewed the monitoring plan, the methodology applied, the quantification of GHG reductions or removals and the legislation applicable to the CO2BIO project.

The field visit and document review focused on quality assurance and process control and the correct quantification of mitigation results; evaluation of data management, quality assurance and the management system for handling PQRS and reporting GHG emission reductions or removals. The implementation status presented below corresponds to the period 01/01/2021 to 12/31/2023, with a CO2BIO project quantification period of 40 years with a start date of January 01, 2015 and an end date of December 31, 2054.

The project has previously had the following verifications:

This Audit verified the monitoring, measurement and reporting of the project Activities and emission reduction has been performed during the project quantification period i.e. from 01/01/2021 to 31/12/2023.

Below is the historical record of the verification process for the CO2BIO project:

Declaration No.	***Year***	***tCO2e***	***Total tCO2e***	***origin***
Verification Statement 1	*2015*	*52.826*	*258.970*	*Deforestation only*

	2016	52.306		
	2017	51.790		
	2018	51.278		
	2019	50.770		
Verification Statement 2	2015	7.593	61.802	The years 2015 -2019 for degradation and 2020 for deforestation and degradation were verified.
	2016	7.528		
	2017	7.464		
	2018	7.400		
	2019	7.337		
	2020	24.482		
Verification Declaration 3 (current process)	2021	26.856	77.606	Degradation and deforestation
	2022	27.285		
	2023	23.465		

5.1.2.1 Data and Parameters

5.1.2.1.1 Data and parameters determined in the registry and not monitored during the monitoring period, including default values and factors

For the monitoring period, there was no significant increase in GHG emissions in the area of leakage due to deforestation and forest degradation; therefore, to avoid overestimations at the time of applying the equation, the values recorded as negative were taken as zero (0) in the final calculations.

Thus, during the third monitoring period of the project, a reduction of 77,606 tCO2e was recorded, of which 71.54% is attributed to avoided deforestation and the remaining 28.46% to avoided forest degradation.

Year	***Estimated net GHG reductions*** *(tCO2e)*	***Net GHG reduction observed*** *(tCO2e)*	***Difference***
2021	18.612	26.856	44,30%
2022	18.734	27.285	45,65%
2023	15.530	23.465	51,09%

Total	***52.876***	***77.606***	***46,77%***

Source: documento MR de Cataruben

Comparison of actual emission reductions with project document estimates.

The actual net emission reductions recorded during the 2021-2023 monitoring period showed differences compared to the ex-ante estimate, presenting a variation of approximately 46.7%, higher than initially projected.

These differences are mainly due to the decrease in deforestation and degradation events both in the leakage area and in the project area, being significantly lower than those projected in the baseline scenario. Thus, GHG emissions in the project scenario were lower, which has a direct impact on the project's total emissions reduction.

5.1.2.1.2 Monitored data and parameters

The audit team corroborated by cross-checking data, checking mathematical operations and analyzing records that the information is transparent and that the spreadsheets and tools designed to store and fill in monitoring data are free of errors and are useful for generating the information that the public and stakeholders in the CO2BIO project should know. The following are highlighted for this audit:

- *SDG Tool (See: Annexes Folder / 3. SDG / SDG Tool)*
- *REDD+ Safeguards Monitoring Plan (See: Annexes Folder / 2. REDD+ Safeguards Compliance / REDD+ Safeguards Monitoring Plan).*
- *QGIS add-on called AcATaMa (Accuracy Assessment of Thematic Maps) (See Instructions), a tool designed to assess the accuracy of land use/land cover classification.*

The audit team confirms that the verification analysis of the project's GHG reductions was conducted in an accurate, transparent and conservative manner, estimating a total of 77,606tCO2e in the verification period from January 1, 2021 to December 31, 2023. The assessment took into account the total 38,813.04 hectares of the project in the Counties of Arauca, Casanare and Vichada, in the Colombian Orinoquia. These emission reductions achieved by the CO2BIO project are relevant and have a positive impact on the expected emission reductions.

VERSA's audit team verified that the material discrepancy underlying the baseline and estimated GHG removals reported for the monitoring period does not exceed 5%. The above indicates for this audit that it is reliable, credible and integrated.

This audit verified the project's documented information on monitoring activities, which are listed in the following tables. In addition, it verified compliance with the requirements of the

Monitoring, Reporting and Verification (MRV) tool. The project mentions the following Activities in the MRV, and the report of these Activities translated into indicators is presented below:

Activity ID	*I1*
Indicator ID	*I.1*
Activity name	*Capacity building for men and women involved in the project, in the following components: technical-environmental, social and administrative-financial, in order to strengthen decision making in favor of the project's objectives.*
Indicator name	*Number of impacted people per year*
Methodology for measuring and recording data	*Documentary analysis of the records generated during the Activity (attendance records, field logs, photographic records and/or memories) to document the results and impact in a training report according to the monitoring frequency.*
Data source	*Trained people register*
Reference values	*4651*

Activity ID	*I2*
Indicator ID	*I.2*
Activity name	*Promote sustainable forest management through the implementation of sustainable productive practices and conservation actions in the properties, in line with the Environmental Management Plan and the Predial Implementation Plan.*
Indicator name	*Properties implementing sustainable production practices (SPP), ecosystem conservation actions and strategies*
Methodology for measuring and recording data	*The methodology in its initial phase is based on the characterization of the properties linked to the project, which represents 15%. Stage two is oriented to the elaboration of property implementation plans, which represents 15%, this instrument corresponds to a detailed report by property where the diagnosis and actions to be carried out in each property regarding the implementation of sustainable productive practices in natural savannas will be related. Finally, 70% corresponds to the execution and follow-up of the implementation of the Activities established in this document. The analysis of these actions will be carried out by means of the information collected through the follow-up surveys on the implementation of sustainable productive practices, soil management and conservation. Audiovisual record support.*
Data source	*Property characterizations and implementation plans*
Reference values	*6,2%*

Activity ID	*S1*
Indicator ID	*S1*
Activity name	*Promote sustainable forest management through the implementation of sustainable productive practices and conservation actions in the properties, in line with the Environmental Management Plan and the Predial Implementation Plan.*
Indicator name	*Strengthening forest governance to promote the conservation and sustainable use of forests*

Methodology for measuring and recording data	*The governance model is built in two phases: 1-Design, with a weight of 25% in the indicator (development of the governance strategy and operating regulations). 2-Implementation, with a weight of 75% in the indicator, divided into 15 reports from the governance committee during the life of the project.*
Data source	*Design of governance model, implementation of governance strategy and reporting.*
Reference values	*25%*

Activity ID	*G1*
Indicator ID	*G.1*
Activity name	*Continuous monitoring of changes in forest area as a proportion of total area in project areas.*
Indicator name	*Coverage rate of change*
Methodology for measuring and recording data	*This Activity is carried out annually and is included in a technical report. The methodology used is the same as the IDEAM's National Indicator of the same name.*
Data source	*Reports, areas - percentages of changes in coverage*
Reference values	*22,50& with progress 7,5%*

Activity ID	*G2*
Indicator ID	*G.2*
Activity name	*Identifying and mapping areas of regeneration gain or loss*
Indicator name	*Forest Gain*
Methodology for measuring and recording data	*In the linked project areas the forest is counted and then cross-referenced with the project areas to see the increase or decrease of regenerated forest versus eligible forest*
Data source	*Reports, forest gain areas*
Reference values	*22,50& with progress 7,5%*

Activity ID	*G3*
Indicator ID	*G.3*
Activity name	*Monitor environmental threats (fire) in the project area and/or possible management alerts.*
Indicator name	*Thermal anomalies/land cover fire monitoring*
Methodology for measuring and recording data	*During the dry season (December to April), daily monitoring of the presence of thermal anomalies that could pose a risk to the project is carried out.*
Data source	*Reports*
Reference values	*11,430& with progress 8,5%*

Activity ID	*B1*
Indicator ID	*B.1*
Activity name	*Monitor biodiversity variables or indicators in land cover with the use of remote sensing for the project area and its surroundings.*
Indicator name	*Participatory biodiversity monitoring for identification of fauna in the project area*

Methodology for measuring and recording data	*Through secondary data reporting and remote sensing monitoring in the properties, identify the species present in the project area with the participation of ecosystem managers.*
Data source	*Species monitoring reports*
Reference values	*25% with progress 12,5%*

Activity ID	*A1*
Indicator ID	*A.1*
Activity name	*Develop a Plan for Efficient Use and Saving of Water in Households (PUEAA) linked to the initiative.*
Indicator name	*Change in water use efficiency over time.*
Methodology for measuring and recording data	*For the development of the Activity, initially a Predial Characterization (water component) will be carried out, which will allow to diagnose the key points where Cataruben can intervene for the improvement of the resource; with the above, the plans will be made (PUEAA-Design Stage). Once these relevant points have been identified, training and knowledge transfer for better water use will be implemented. Finally, the plans will be followed up in order to implement improvement activities regarding the use and management of the resource.*
Data source	*Percentage of efficient water use plans implemented*
Reference values	*25% with progress 15%*

5.1.2.2 Environmental and social effects of project activities

According to the information presented by the head of the CO2BIO project, what was directly observed during the visit to the area of the selected properties is that:

a) *The criteria established in paragraph 14 of BCR Standard Version 3.3, as well as in the Sustainable Development Safeguards Tool (SDSs Tool) Version 1.0 dated April 10, 2024, have been met.*
b) *Given that the Activities are oriented towards environmental protection and greenhouse gas (GHG) reduction, it is determined that the project is considered favorable for the Orinoquia's environmental surroundings.*
c) *The evaluation of the sub-elements Land Use, Water, Biodiversity and Climate Change in the environmental evaluation matrix indicates that the project's Activities do not represent any negative impact in the project's area of influence.*
d) *Likewise, the evaluation of the sub-elements: "Human Rights", "Corruption", "Economic Impact" and "Forest Governance" shows that the project's Activities do not represent negative impacts within the project's area of influence,*
e) *The Activities of the CO2BIO project are aimed at generating social and economic benefits with respect to climate change mitigation actions, in order to reduce and remove greenhouse gases (GHG) within the areas established and linked to the project.*

Moriche palama planting, property San Andres and owners of the property EL Campin

Release of Terekay turtle species. During the audit visit to the San Andres property.

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

During the visit to Cataruben's facilities in the city of Yopal on August 21, 2024, the audit team reviewed and validated the information according to the evidence showing strength in document management and control and developed and implemented quality control and assurance procedures. This evidence included:

- *Newsletters: e.g:*

- *Reports: Matrix and excel data bases.*

- *Videos and recordings:*

- *Attendance records*

CO2Bio - REGISTROS ASISTENCIA INTERCAMBIO DE SABERES

Fecha: 20 de mayo 20222 - Productos no maderables del bosque - 5nto intercambio de saberes

Fecha	Nombre completo del asistente	Número de documento de identidad	Género	Nombre del predio	Correo electrónico	Tipo de participante
1	Iván Darío Cortés Núñez	86046814	Masculino	Algarrobo	ivankortes@hotmail.com	Propietario
2	German roberto Rodriguez zambrano	10169434	Masculino	Altamira	geroza25@gmail.com	Propietario
3	Clemente Delgado Abril	17325978	Masculino	Canaguay	cdelgadoabril@yahoo.es	Propietario
4	Luisa fernanda arenas parada	1007854348	Femenino	El campin	Areparalufer@gmail.com	Propietario
5	ILDA BECERRA	37827823	Femenino	El Dera, Trikuti, Shambala	ildajaib@gmail.com	Propietario
6	Uriel Córdoba Perdomo	9655490	Masculino	El Rubi	urielcordoba511@gmail.com	Propietario
7	Gabriel Libardo Varon Montealegre	7364912	Masculino	El Salvador	Libarro25@gamil.com	Propietario
8	JUTH FREDY ARENAS CASTRO	86047520	Masculino	Flor Amarillo	fredyarcas@gmail.com	Propietario
9	Martha Cecilia Rincon Silva	23790281	Femenino	Hacienda San Andres Caño Chiquito	catira2@yahoo.com	Propietario
10	ELIANA CARREÑO	51858770	Femenino	HATO BARLEY	elianacarrenoc@gmail.com	Propietario
11	Juan Carlos Vargas Zambrano	80408273	Masculino	Hato Mata de Palma - San Luis de Palenque, Finca Los Sarrapucs - Casanare	invarzasas@gmqil.com	Propietario
12	Julio Andres fernandez	1118545958	Masculino	Cantaclaro y La Dicha	Embajadorllanero@gmail.com	Propietario
13	FIDEL DARIO SOLÓRZANO PÉREZ	17549584	Masculino	La Estación	fidas1733@hotmail.com	Administrador/Encargado del Predio
14	Germán Gustavo Gaitán Gómez	79472522	Masculino	La Gaitana uno/dos	germangaitangomez@gmail.com	Propietario
15	Elias Benavides	7360944	Masculino	La Ilusion	harveybenavidesruiz@gmail.com	Propietario
16	german tovar zambrano	80410251	Masculino	la palmita	germantovarz@hotmail.com	Propietario
17	Marian Catalina Lopez	52803443	Femenino	La vigia	Mclp.81@gmail.com	Propietario
18	Lisette Dalel	51929443	Femenino	Mesetas de Versalles	lisettedalel@gmail.com	Propietario
19	Carlos Zambrano	80412669	Masculino	Montana	carlosgezambrano@gmail.com	Propietario
20	Alexandre Arenas Oropeza	86047760	Masculino	Padrote1 Bocas de pauto	alexarenosa@gmail.com	Propietario
21	German chaparro.	19070081	Masculino	Paratebueno	Germanchaparro32156@gmail.com	Propietario
22	Ivonne Castro B	41587259	Femenino	Planeta rica	Castroivo2204@hotmail.com	Propietario
23	Pedro M Arreaza	19083208	Masculino	RNSC EL MADROÑO	arreazap.pa@gmail.com	Administrador/Encargado del Predio
24	Alberto Hoyos Mejia	10281690	Masculino	San Felix	ganaderiasunidas@gmail.com	Propietario
25	Joaquin Rivera Garcia	9655878	Masculino	San Pablo	Joaquinrg03@gmail.com	Participante
26	Sonia Rivera Garcia	23790704	Femenino	San pablo	soniarg66@hotmail.es	Propietario
27	Marta Cristina Anzola Nuñez	51575756	Femenino	Siare no 2	mcanzola@gmail.com	Propietario
28	Gustavo Adolfo Rueda Garcia	19249984	Masculino	Toraiba	Gurutoraiba@gmail.com	Propietario
		28				

- *GDB and cartography: In the Geospatial folder is the GDB called "REDD CO2BIO V3.gdb" which contains the following elements: several Feature class and within these one of the layers called "Properties_REDD". There is consigned: the vector information of 42 properties including the area of each of the 42 properties, layers related to the identification of forests called "Forest_AP_Monitoring_Verification2", in them you can get the area of forest containing each property of this layer. The layer "Categories_Runap" is also included in the Feature called "Restricted Access" in which the crossing of these areas with the area of the properties is evident. Inside the folder called "6.2.1. REDD+ Geodatabase" is the file "Diccionario Datos cartográficos GDB REDD CO2BIO V3.xlsx", which contains the information associated with the GDB and in which the layers included in the Geodatabase are described through metadata.*

	GEODATABASE DATA MODEL FOR FOREST MONITORING MAPPING PRESENTATION (2020-2023) - CO2BIO PROJECT VERIFICATION 3		
GEODATABASE	***DATASET***	***FEATURE CLASS***	***GEOMETRÍA***
REDD CO2BIO V3.gdb	***Acceso_Restringido***	*Categorías_Runap*	*Polygon*
		Consejos_Comunitarios_Comunidades_Negras	*Polygon*
		Resguardos_I ndígenas_Legalizados	*Polygon*
		Zonas_Reservas_Campesinas	*Polygon*
	Area_de_Fugas	*Area_Fugas*	*Polygon*
		Bosque_AF_Monitoreo_Verificacion2	*Polygon*
		Bosque_AF_Monitoreo_Verificacion3	*Polygon*
		Fragmentación_AF_Verificacion2	*Polygon*
		Fragmentación_AF_Verificacion3	*Polygon*
	Area_de_Proyecto	*Properties_REDD*	*Polygon*
		Bosque_AP_Monitoreo_Verificacion2	*Polygon*
		Bosque_AP_Monitoreo_Verificacion3	*Polygon*
		Fragmentación_AP_Verificacion2	*Polygon*
		Fragmentación_AP_Verificacion3	*Polygon*
	Observaciones_Insitu	*Points_Control_AcATaMa*	*Point*
		Points_REDD_ODK	*Point*
	Proyectos_Carbono	*Areas_proyecto_BCR_Estandar*	*Polygon*
		Areas_proyecto_CERCARBONO_Estandar	*Polygon*

	GEODATABASE DATA MODEL FOR FOREST MONITORING MAPPING PRESENTATION (2020-2023) - CO2BIO PROJECT VERIFICATION 3		
		Areas_proyecto_COLCX_Estandar	*Polygon*
		Areas_proyecto_VERRA_Estandar	*Polygon*
	Zonas_Compensaciones	*Compensaciones_Areproyecto*	*Polygon*
		Cormacarena_Properties_PSA	*Polygon*
		Cormacarena_Properties_Zonas_Intervenidas_PSA	*Polygon*
		Ecopetrol_GDB_PM_APIAY_Compensacion	*Polygon*
		Ecopetrol_APE_CP09_Inversion1PorCiento_PG_OtrasCompensaciones	*Polygon*
		Ecopetrol_CP50_SDG02_Inversion1PorCiento_PG	*Polygon*
		Ecopetrol_GDB_PM_APIAY_Compensacion	*Polygon*
		Ecopetrol_MP_1P_Cubarral_SDG02_CompensacionBiodiversidad	*Polygon*
		Ecopetrol_MP_1P_SDG11_CompensacionBiodiversidad	*Polygon*
		Ecopetrol_PM_Cubarral_Compensaciones	*Polygon*
		Ecopetrol_VEX_1PC_Inversion1PorCientoPG	*Polygon*
		Ecopetrol_VEX_CA_Inversion1PorCiento_PG	*Polygon*
		Ecopetrol_VEX_CA_Inversion1PorCiento_PG_otrasCompensaciones	*Polygon*
	Modelo_Bosque_2023	-	*Ráster*

- *Guides and instructions: for example, the instructions for the Geographic Information System GIS (FC-GOG-26. Instructive AcATaMa).*
- *App CQTX platform, which aims to visualize the step-by-step process of the properties from their application, legal and technical evaluation, contractual linkage, implementation of Activities and statements regarding the delivery of economic benefits. As stated by the owners belonging to the O2BI_P1 project, it is a friendly technology so that the owners linked to the project can have information regarding the project in real time.*

With the above, it has demonstrated that its controls are relevant, appropriate, sufficient and consistent, fully aligned with the criteria established by the BCR v3.1 standard.

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

The quantification of reference emissions was performed according to the guidelines of the BCR 0002 methodology. The document contains a general description of the formulas and

values used (see section 5.2.1 below).

During the third monitoring period of the project, a reduction of 77,606 tCO2e was recorded, of which 71.54% is attributed to avoided deforestation and the remaining 28.46% to avoided forest degradation.

Emissions from deforestation were calculated based on the historical change in forest area recorded in the reference region. With respect to the emission factors, the BCR0002 methodology establishes that the validated values can be applied in the estimation of monitored emissions. Therefore, the same values were used for this monitoring period.

The methodology for the periodic calculation of GHG reductions or removals included the matrix of annual historical deforestation in the reference region; projected deforestation in the scenario with REDD+ Project, historical deforestation in the leakage area without Project and with Project, carbon emission factor in the total biomass and emission reductions from deforestation. Based on the review of these Excel reports, the audit team concludes that consistency was identified in the project information regarding the use of primary and secondary information.

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

The following is the distribution of people currently assigned to the project owner with roles and responsibilities associated with the control and monitoring of the CO2BIO project:

Name	***Role***
Edwin Hincapie	*Project Manager*
Sandra Duarte Chaparro	*Super carbon leader*
Lisbeth Menjure Barrera	*Initiative leader*
Johan Martinez	*Geospatial superleader*
Juan Felipe Cicuamia	*Geospatial leader*
Adriana Galan	*Governance leader*
Sara Rodriguez	*Implementation leader*
Juan Sebastian Garcia	*Monitoring Leader*
Daniel Ospina	*Super wáter leader*

Name	Role
Paola Acevedo	Monitoring – water leader
Laura Sanabria	Quantification leader
Laura Estefania Rojas	Economic benefits leader
Karen Nieto	Operational control leader

It was verified that the information was complete, relevant and coherent, and that the follow-up report describes the way in which these calculations can be replicated. In this regard, the team verified that all calculations were made in an adequate manner in order to maintain consistency. The audit team corroborated by cross-checking data, checking mathematical operations and analyzing records that the information is transparent and that the spreadsheets and tools designed to store and fill out monitoring data are free of errors and are useful for generating the information that the public and stakeholders in the CO2BIO project should know. The following are highlighted for this audit:

- *SDG Tool (See: Annexes Folder / 3. SDG / SDG Tool)*
- *REDD+ Safeguards Monitoring Plan (See: Annexes Folder / 2. REDD+ Safeguards Compliance / REDD+ Safeguards Monitoring Plan).*
- *QGIS add-on called AcATaMa (Accuracy Assessment of Thematic Maps) (See Instructions), a tool designed to assess the accuracy of land use/land cover classification.*

The audit team confirms that the verification analysis of the project's GHG reductions was carried out in an accurate, transparent and conservative manner, estimating a total of 77,606tCO2e in the verification period from January 1, 2021 to December 31, 2023. The evaluation took into account the 38,813.04 total hectares in 42 properties that make up the CO2BIO project, in the Counties of Arauca, Casanare and Vichada, in the Colombian Orinoquia.

VERSA's audit team verified that the material discrepancy underlying the baseline and estimated GHG removals reported for the monitoring period does not exceed 5%. This indicates for this audit that the information reported by the Cataruben Foundation, owner of the CO2BIO project, is reliable, credible and complete.

5.1.2.6 Procedures related to the evaluation of the project's contribution to the Sustainable Development Goals (SDGs).

VERSA's audit team verified that the CO2BIO project complies with the procedures and the use of the tool to manage sustainable actions in the framework of the following Sustainable Development Goals (SDGs):

SDG 5 Gender Equality: seeks to support and make visible the leadership and valuation of women's work. Documentation of workshops and two trainings, one on natural regeneration, silvicultural techniques, and the other on the importance of meliponiculture.
SDG 6 Clean water and sanitation: seeks changes in the efficiency of water use in the 42 properties linked to the CO2BIO project.
SDG 13 Climate Action: implements sustainable practices for forest conservation in the 42 properties that are part of the project.
SDG 15 Life of terrestrial ecosystems: Forest conversion is monitored and the aim is to reduce the rate of forest conversion compared to the baseline.

Each SDG has its own life sheet for follow-up and permanent feedback, which is considered adequate and pertinent to visualize its progress.

The CO2BIO project is formulated with the guidelines given in the BCR Standard From differentiated responsibility to common responsibility, the Sustainable Development Safeguards Tool (SDSs) Version 1.0 and the SDG Tool (2023). This seeks to mitigate climate change and reduce greenhouse gas (GHG) emissions, with the potentialization of the positive impacts derived from the implementation of the selected SDGs.

The project holder designed an SDG tool that through an Excel template guides the owners of the 42 properties called "ecosystem managers" in identifying Activities with the potential to generate a positive impact on the SDGs within the scope of their project. The tool will assist in transparent and measurable reporting of project Activities that contribute to the goals defined in the 2030 Agenda for Sustainable Development.

The following table evidences the contribution of the CO2BIO project to the selected Sustainable Development Goals SDG5, SDG6, SDG13 and SDG15 with appropriate criteria and indicators to impact through its implementation the Sustainable Development Goals.

Selection of SDGs applicable to the CO2BIO project and their contribution to the SDGs								
SDG	**Sustainable Development Goal**	**Goal**	**Indicator**	**Project Activity**	**Project contribution**	**Summary of the project contribution**	**Activity unit of measure**	**Verification (2021 – 2023 period)**
SDG 5	Gender Equality: Achieving Gender Equality and Empowering All Women and Girls	Ensure women's full and effective participation and equal opportunities for leadership at all decision-making levels in political, economic and public life.	5.5.2 Proportion of women in management positions	Capacity building for men and women involved in the project, in the following components: technical-environmental, social and administrative-financial, in	Training in technical, environmental, social and financial management provides women with key tools for the sustainable management	Integrate a gender focus in all scenarios designed for capacity building, with the main objective of ensuring equal access to	% Women owners linked to the project	Report of women owners in management positions

Selection of SDGs applicable to the CO2BIO project and their contribution to the SDGs								
SDG	**Sustainable Development Goal**	**Goal**	**Indicator**	**Project Activity**	**Project contribution**	**Summary of the project contribution**	**Activity unit of measure**	**Verification (2021 – 2023 period)**
				order to strengthen decision making in favor of the project's objectives.	of their properties. These spaces foster the development of leadership skills, allowing them to assume important roles and increase their participation in decision-making and management positions.	information and active participation, without distinction between men and women.		
SDG 6	Clean Water and Sanitation: Ensuring Availability and Sustainable Management of Water and Sanitation for All	By 2030, significantly increase the efficient use of water resources in all sectors and ensure the sustainability of freshwater abstraction and supply to address water scarcity and significantly reduce the number of people suffering from water scarcity.	6.4.1 Change in water use efficiency over time	Elaboration of the Programs for Efficient Water Use and Environmental Protection (PUEAA) developed by means of the predial characterization. This process aims to strengthen the community's technical capacities for the sustainable management and conservation of strategic ecosystem services, especially with regard to water resources.	Diagnose, design, implement and follow up on a program for Efficient Water Use and Environmental Protection (PUEAA), focused on complying with SDG 6, specifically indicator 6.4.1, which promotes efficiency in water use. This program focuses on the integrated management of water resources in rural areas, ensuring sustainable practices that optimize water use and contribute to environmental	Diagnose, design, implement and follow up on a program for Efficient Water Use and Environmental Protection (PUEAA) to improve the use of water for human consumption and wastewater management through capacity building and workshops.	Progress %	Activities Report SDG 6

Selection of SDGs applicable to the CO2BIO project and their contribution to the SDGs								
SDG	**Sustainable Development Goal**	**Goal**	**Indicator**	**Project Activity**	**Project contribution**	**Summary of the project contribution**	**Activity unit of measure**	**Verification (2021 – 2023 period)**
					conservation.			
SDG 13	Climate Action: Taking urgent action to combat climate change and its impacts	Incorporate climate change measures into national policies, strategies and plans.	13.2.2 Total greenhouse gas emissions by year	Quantify the project's GHG emissions and reductions.	Periodic monitoring of GHG emissions in the eligible project areas and leakage area will identify the impact of project development in relation to reducing deforestation and forest degradation.	The project's activities are focused on promoting sustainable practices for forest conservation in private properties in the Orinoco region. In this sense, it contributes directly to the reduction of GHG emissions from deforestation and forest degradation.	tCO2e	Annex Calculations_Monitoring_Ver3

Selection of SDGs applicable to the CO2BIO project and their contribution to the SDGs								
SDG	**Sustainable Development Goal**	**Goal**	**Indicator**	**Project Activity**	**Project contribution**	**Summary of the project contribution**	**Activity unit of measure**	**Verification (2021 – 2023 period)**
SDG 15	Life on Land: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss.	By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.	15.1.1 Forested area as a proportion of total area	Continuous monitoring of changes in forest area as a proportion of total area in project areas.	Given that the properties have biotic characteristics such as habitats and cover, it is necessary to determine what proportion of these coverages belong to forest areas such as forests and plantations, these areas play a relevant role in the conservation of biodiversity as they function as islands for the maintenance of diversity. Although they are scarce areas, it is important to know them and conserve them, for this reason the project contemplates the monitoring of these areas, compared to the total cover present in the properties.	The project provided the conservation of coverages of vital importance for the conservation of biodiversity, given that within the properties the most dominant coverages were dense, fragmented, open and gallery forests, as well as secondary vegetation and grasslands, which are of vital importance to generate structure in the different habitats. Likewise, the conservation of the multiple ecosystem services provided by this type of ecosystems present in the forests of the study area.	Percentage of forest cover compared to the rest of the project's cover.	Forest area as a proportion of total area

Selection of SDGs applicable to the CO2BIO project and their contribution to the SDGs								
SDG	**Sustainable Development Goal**	**Goal**	**Indicator**	**Project Activity**	**Project contribution**	**Summary of the project contribution**	**Activity unit of measure**	**Verification (2021 – 2023 period)**
			15.1.2 Proportion of sites of importance for terrestrial and freshwater biodiversity that are part of protected areas, by ecosystem type	Monitor biodiversity variables or indicators in land cover with the use of remote sensing for the project area and its surroundings.	Through the determination of the different landscape coverages and the properties found within these coverages, we can determine that the dense, fragmented, open and gallery forests, as well as the secondary vegetation and the lakes and bodies of water contribute directly to the conservation of biodiversity and are coverages that are protected within the 42 properties linked to the project. The determination of these areas of importance for diversity is necessary because from this we can infer which zones are necessary to conserve as well as the coverages they present.		Hectares conserved in forest, shrubland, secondary vegetation and water bodies.	Bioacoustic and ecoacoustic monitoring plan

The follow-up procedure to the real contributions that arise with the implementation of the plans associated with the SDGs that were raised for the CO2BIO project, show that, with the design of the tool for this purpose, they achieve a monitoring approach that is being

appropriated by the beneficiaries or ecosystem managers as they were designated.

5.1.2.7 Procedures associated with the monitoring of special category co-benefits, as appropriate.

The verification exercise by this audit was based on the information provided by the project owner contrasted directly with direct observations in the field visit conducted between August 22 and 25, 2024, the semi-structured interviews conducted as a sample to the owners and with conversation and direct dialogue with the environmental managers of the ecosystems. As a result of this corroboration, the concordance between the Activities of the project and its correspondence with the requirements for the Orquidea category is evident and this affirmation is reached based on what was observed during the field visit and the consistent and coherent record throughout the documentation presented by the Cataruben project owner.

The Project generates additional benefits in the ***Orchid*** *category, which encompasses three fundamental requirements:*

Biodiversity conservation,

The implementation of the general training plan is sufficiently documented and proof of this is the document entitled "Strengthening the knowledge of ecosystem managers linked to participatory acoustic monitoring and the project in the environmental component, which strengthens decision-making in favor of the project's objectives". There is documentary evidence and verbal information from the owners of the properties visited that an acoustic and bioacoustic monitoring plan was implemented, designed to identify the diversity of bird species and others present in the project area. This participatory bioacoustic monitoring also involves ecosystem managers interested in better understanding the diversity of fauna in their properties.

Benefits to communities

In addition to the environmental and cultural economic benefits, the training provided to landowners stimulates their attachment to nature and to the customs and traditions of the Llano. There is a document entitled "Capacity building for men and women involved in the project in technical, environmental, social and administrative-financial components to strengthen decision-making in support of the project's objectives.

Gender equity

The focus of this plan is on Promoting equitable participation, Reducing gender disparity, Improving sustainability by empowering the role of women, Fostering creativity and community development, and Promoting shared leadership and empowerment in rural environments, of great relevance and opportunity in the region.

	ACTIVITY NAME	***INDICATOR NAME***	***CO-BENEFITS COMPONENT***
I1	*Capacity building for men and women involved in the project, in the following components: technical-environmental, social and administrative-financial, in order to strengthen decision making in favor of the project's objectives.*	*Number of impacted people per year*	*Gender Equality*
I2	*Promote sustainable forest management through the implementation of sustainable productive practices and conservation actions in the properties, in line with the Environmental Management Plan and the Predial Implementation Plan.*	*Properties implementing sustainable production practices (SPP), ecosystem conservation actions and strategies*	*Community benefits*
S1	*Strengthening forest governance to promote the conservation and sustainable use of forests*	*Progress of the governance roundtable*	*Community benefits* *Gender Equality*
G1	*Continuous monitoring of changes in forest area as a proportion of total area in project areas.*	*Coverage rate of change*	*Biodiversity conservation*
G2	*Identifying and mapping areas of regeneration gain or loss*	*Forest Gain*	*Community benefits*
G3	*Monitor environmental threats (fire) in the project area and/or possible management alerts.*	*Thermal anomalies/cover fires monitoring*	*Biodiversity conservation*
B1	*Monitor biodiversity variables or indicators in land cover with the use of remote sensing for the project area and its surroundings.*	*Participatory biodiversity monitoring for identification of fauna in the project area*	*Biodiversity conservation*
A1	*Develop a Plan for Efficient Use and Saving of Water in Households (PUEAA) linked to the initiative.*	*Change in water use efficiency over time.*	*Community benefits*

As a conclusion and in the verification exercise, the concordance between the Activities of the project and its correspondence with the requirements for the Orquidea category is evidenced and this statement is reached based on what was observed in the field visit and the consistent and coherent record throughout the documentation submitted by the Cataruben project owner.

5.2 Quantification of GHG emission reductions and removals

The audit team verified the form, methodology and data used by the owner of the CO2BIO project for the quantification of GHG emissions. For this purpose, the following was performed:

a) *The review of the spreadsheet and its compliance with the formulas and parameters established versus the guidelines of the BCR 0002 methodology and the adjustments for national conditions to the CSB(project,year) for the years 2021-2023.*
b) *Documentary review and cross-checking with the requirements established in BCR 0002 Quantification of GHG emission reductions for REDD+ projects version 4.0, May 27, 2024.*
c) *Field visit and interviews with landowners participating in the project, conducting semi-structured interviews to address regional access and communication limitations.*
d) *Meeting in the city of Yopal, Casanare at the offices of Cataruben, owner of the CO2BIO project, to review quality procedures and information management, and verification of qualified personnel.*

Comparison of actual emission reductions with project document estimates.

The actual net emission reductions recorded during the 2021-2023 monitoring period showed differences compared to the ex-ante estimate, presenting a variation of approximately 46.7%, higher than initially projected.

These differences are mainly due to the decrease in deforestation and degradation events both in the leakage area and in the project area, being significantly lower than those projected in the baseline scenario. Thus, GHG emissions in the project scenario were lower, which has a direct impact on the project's total emissions reduction.

Comparison of estimated and reported GHG emission reductions in the monitoring period (2021-2023)

Year	***Estimated net GHG reductions*** *(tCO2e)*	***Net GHG reduction observed*** *(tCO2e)*	***Difference***
2021	*18.612*	*26.856*	*44,30%*
2022	*18.734*	*27.285*	*45,65%*
2023	*15.530*	*23.465*	*51,09%*

Total	***52.876***	***77.606***	***46,77%***

Source: *Fundación Cataruben, 2024*

5.2.1 Reference or baseline scenario

The baseline or reference scenario in the PDD validated for the CO2BIO project, in its table No. 31, which shows the "Annual reduction of deforestation (t CO2), shows estimated values above 50,000 (t CO2). Thus the declared in the MR report subject of this verification, shows a value of 77,706 (t CO2) for a period of three (3) years, allowed by the BCR standard for AFOLU projects and under assumptions with adequate uncertainty management, using conservative assumptions.

With respect to the emission factors, the BCR0002 methodology establishes that the validated values can be applied in the estimation of monitored emissions. Therefore, the same values were used for this monitoring period. For the quantification of emissions from deforestation in the reference scenario, the following equation was applied:

$$\boldsymbol{EA_{lb} = DA_{lb}\, x\, CT_{eq}}$$

Where:

EA_{lb} Emisión anual en el escenario de línea base; tCO_{2e}
DA_{lb} Deforestación histórica anual en el escenario de línea base; ha
CT_{eq} Dióxido de carbono equivalente total; tCO_{2e}/ha

The quantification of emissions due to forest degradation in the reference scenario contemplated the effects on carbon stocks between the transitions from core forest to patch and perforated forest to patch. Thus, the calculation of baseline Activity data was performed using the following equations:

$$DFP_{lb,año} = \left(\frac{1}{t_2 - t_1}\right) x \left(A_{núcleo,lb} - A_{núcleo-par,lb}\right)$$

Where:

$DFP_{lb,año}$	Degradación primaria histórica anual en línea base; ha
t_2	Año final del periodo de referencia; año
t_1	Año de inicio del periodo de referencia; año
$A_{núcleo,lb}$	Área de la región de referencia en clase núcleo en el año de inicio del periodo de referencia; ha
$A_{núcleo-par,lb}$	Área de la región de referencia que pasa de núcleo a parche en el año final del periodo de referencia; ha

and,

$$DFS_{lb,año} = \left(\frac{1}{t_2 - t_1}\right) x \left(A_{perforado,lb} - A_{perforado-par,lb}\right)$$

Where:

$DFS_{lb,año}$	*Annual historical secondary degradation in the without-project scenario; ha*
t_2	*Year end of reporting period; year*
t_1	*Year of start of reference period; year*
$A_{núcleo,lb}$	*Area of the reference region in class drilled in the year of the start of the reference period; ha*
$A_{núcleo-par,lb}$	*Area of the reference region changing from perforated to patched at the Year end of reporting period; ha*

Subsequently, the Activity data was multiplied by the equivalent carbon value contained in the difference of total biomass between fragmentation classes for the two types of degradation (primary and secondary), applying the following equation:

$$EA_{d,lb,año} = \left(DFP_{lb,año} x DCBT_{DP}\right) + \left(DFS_{lb,año} x DCBT_{DS}\right)$$

Where:

$EA_{d,lb,año}$	Emisión anual debido a la degradación, en el escenario de línea base; tCO2/ha
$DFP_{lb,año}$	Degradación primaria histórica anual en el escenario de línea base; ha
$DFS_{lb,año}$	Degradación secundaria histórica anual en el escenario sin proyecto; ha
$DCBT_{DP}$	Dióxido de carbono equivalente contenido en la diferencia biomasa total por hectárea en el clase de degradación primaria; tCO2e/ha
$DCBT_{DS}$	Dióxido de carbono equivalente contenido en la diferencia de biomasa total por hectárea en la clase de degradación secundaria; tCO2e/ha

Deforestation emissions

The estimation of deforestation in the project area involved the analysis of the change from forest to non-forest area during the monitoring period. Subsequently, the change value was related to the emission factor to calculate the GHG emissions in the project area. The following equations were applied to perform the analyses:

$$CSB_{proy,año} = \left(\frac{1}{t_2 - t_1}\right) x \left(A_{REDD+proy,1} - A_{REDD+proy,2}\right)$$

Where:

$CSB_{proy,año}$	*Annual change in area covered by forest in the project area; ha*
t_2	*Year end of monitoring period; year*
t_1	*Year of start of the monitoring period; year*
$A_{REDD+proy,1}$	*Forest area in the project area at the beginning of the monitoring period.; ha*
$A_{REDD+proy,2}$	*Forest area in the project area at the end of the monitoring period.; ha*

and,

$$EA_{REDD+proy,año} = DEF_{REDD+proy,año} x TCO_{2eq}$$

$EA_{REDD+proy,año}$	*Annual issuance in the project area; tCO2/ha*

$DEF_{REDD+proy,año}$ *Annual deforestation in the project area; ha*

TCO_{2eq} *Total carbon dioxide equivalent; tCO2e/ha*

For the 2021-2023 period, an average annual forest cover loss of 3.93 ha/year was recorded in the project areas. This corresponds to 765.4 tCO2e per year. This behavior is mainly due to natural causes such as flooding patterns in the area that occurred during the monitoring period.

Emissions from degradation

The estimation of annual degradation in the project area was estimated with the following equations:

$$DFP_{REDD+proy,año} = \left(\frac{1}{t_2 - t_1}\right) x \left(A_{núcleo} - A_{núcleo-parche}\right)$$

Where:

$DFP_{REDD+proy,año}$ *Annual primary degradation in the project area; ha*

t_1 *Year of start of the monitoring period; year*

t_2 *Year end of monitoring period; year*

$A_{núcleo}$ *project area in core class, in the Year of start of the monitoring period; ha*

$A_{núcleo-parche}$ *project area changing from core to patch, the Year end of monitoring period; ha*

and,

$$DFS_{REDD+proy,año} = \left(\frac{1}{t_2 - t_1}\right) x \left(A_{perforado} - A_{perforado-parche}\right)$$

Where:

$DFS_{REDD+proy,año}$ *Annual secondary degradation in the project area; ha*

t_1	*Year of start of the monitoring period; year*
t_2	*Year end of monitoring period; year*
$A_{perforado}$	*Project area in drilled class, in the Year of start of the monitoring period; ha*
$A_{perforado-parche}$	*Area that changes from perforated to patched, in the Year end of monitoring period; ha*

During the monitoring period, no alterations in the forest area due to primary or secondary degradation were observed.

Leakage
Emissions from deforestation
The calculation of emissions from deforestation in the leakage area was made taking into account the change in forest area and the emission factor, through the following equations:

$$CSB_{f,año} = \left(\frac{1}{t_2 - t_1}\right) x \left(A_{f,1} - A_{f,2}\right)$$

Where:

$CSB_{f,año}$	*Annual change in area covered by forest in the leakage area; ha*
t_2	*Year end of monitoring period; year*
t_1	*Year of start of the monitoring period; year*
$A_{f,1}$	*Area in forest, in the area of leakage at the beginning of the monitoring period; ha*
$A_{f,2}$	*Area in forest, in the leakage area at the end of the monitoring period; ha*

and,

$$EA_{f,año} = \left(DEF_{f,año} x TCO_{2eq}\right) - EA_{lb,f,año}$$

Where:

$EA_{f,año}$ *Annual emission in the leakage area; tCO2/ha*

$DEF_{f,año}$ *Annual deforestation in the leakage area; ha*

TCO_{2eq} *Total equivalent carbon dioxide; tCO2e/ha*

$EA_{lb,f,año}$ *Annual emission from deforestation in the leakage area in the baseline scenario; tCO2e*

In accordance with the foregoing, there was a $CSB_{f,año}$= 10,75 ha/year emissions during the monitoring period. This represents an annual emissions average of 2,091.41 tCO2e. However, when comparing this record to the baseline emissions scenario, it does not represent a significant increase in GHG emissions as a result of the project's implementation of REDD+ Activities.

Emissions from deforestation in the leakage area, for the period 2021-2023.

Year	***CSB**proy, year (ha/year)*	***CT**eq (tCO2e/ha)*	***GHG emissions in the leakage area** (tCO2e)*	***GHG emissions in the leakage area at baseline** (tCO2e)*	***GHG emissions attributable to leaks due to project activities** (tCO2e)*
2021	*10,75*	*194,59*	*2.091,41*	*4.903,67*	*-2.812*
2022	*10,75*		*2.091,41*	*4.903,67*	*-2.812*
2023	*10,75*		*2.091,41*	*4.903,67*	*-2.812*

Source: *Fundación Cataruben, 2024*

Emissions from degradation

The estimate of annual degradation in the leakage area was estimated by applying the following equations:

$$DFP_{f,año} = \left(\frac{1}{t_2 - t_1}\right) x \left(A_{núcleo,f} - A_{núcleo-parche,f}\right)$$

Where:

$DFP_{f,año}$	*Annual primary degradation in leakage area; ha*
t_1	*Year of start of the monitoring period; year*
t_2	*Year end of monitoring period; year*
$A_{núcleo,f}$	*Leakage area in core class, in the Year of start of the monitoring period; ha*
$A_{núcleo-parche,f}$	*Area of leakage changing from core to patch, in the Year end of monitoring period; ha*

and,

$$DFS_{f,año} = \left(\frac{1}{t_2 - t_1}\right) x \left(A_{perforado,f} - A_{perforado-parche,f}\right)$$

$DFS_{f,año}$	*Annual secondary degradation in leakage area; ha*
t_1	*Year of start of the monitoring period; year*
t_2	*Year end of monitoring period; year*
$A_{perforado,f}$	*Leakage area in perforated class Year of start of the monitoring period; ha*
$A_{perforado-parche,f}$	*area of leakage changing from perforated to patched, in the Year end of monitoring period; ha*

Similar to what occurred in the project area, there was no evidence of degradation processes affecting the forest cover in the leakage area. Therefore, annual emissions for the period 2021-2023 are considered to be zero (0) (Table below).

Emissions from degradation in the leakage area, for the period 2021-2023.

Year	***Degradation type***	***DF** if, año (ha/año)*	***DBTi** (tCO2e/ha)*	***GHG emissions attributable to leaks** (tCO2e)*
2021	*Core-Patch*	*0,00*	*251,85*	*0,0*
2022	*Core-Patch*	*0,00*		*0,0*
2023	*Core-Patch*	*0,00*		*0,0*
2021	*Perforated -Patch*	*0,00*	*177,86*	*0,0*
2022	*Perforated -Patch*	*0,00*		*0,0*
2023	*Perforated -Patch*	*0,00*		*0,0*

Source: *Fundación Cataruben, 2024*

Net reductions/removals of GHG emissions

The quantification of emissions reduced by avoided deforestation and degradation during the monitoring period is the result of the relationship between emissions in the baseline scenario, emissions during the project and emissions due to leakage, applying the following equation:

$$RE = (t_2 - t_1)x\left(EA_{lb,año} - EA_{proy,año} - EA_{f,año}\right)$$

Where:

RE	Reducción neta de emisiones de GEI; tCO2e
t_2	Año final del periodo de monitoreo; año
t_1	Año de inicio del periodo de monitoreo; año
$EA_{lb,año}$	Emisión anual en el escenario de línea base; tCO2e
$EA_{proy,año}$	Emisión anual en el área de proyecto para el periodo monitoreado; tC(
$EA_{f,año}$	Emisión anual en el área de fugas para el periodo monitoreado; tCO2e

For the monitoring period, there was no significant increase in GHG emissions in the area of leakage due to deforestation and forest degradation, so to avoid overestimations at the time of applying the equation, the values recorded as negative were taken as zero (0) in the final calculations.

Thus, during the third monitoring period of the project, a reduction of 77,606 tCO2e was recorded (Table below), of which 71.54% is attributed to avoided deforestation and the remaining 28.46% to avoided forest degradation.

Project emissions from deforestation, for the period 2021-2023.

Verification	***Year***	***GHG emissions under the baseline scenario (tCO2e)***	***Project GHG emissions (tCO2e)***	***GHG emissions attributable to leaks (tCO2e)***	***Net GHG Reduction (tCO2e)***
THIRD	*01/01/2021-31/12/2021*	*27.621*	*765*	*-*	*26.856*
	01/01/2021-31/12/2021	*28.050*	*765*	*-*	*27.285*
	01/01/2021-31/12/2021	*24.231*	*765*	*-*	*23.465*
	Total	***79.902***	***2.296***	*-*	***77.606***
	Annual average	***26.634***	***765***	*-*	***25.869***

Source: *Fundación Cataruben, 2024*

Due to the fact that 10 years have not passed since the validation of the project, the baseline is still valid for this project.

In addition to the application of the BCR0002 Methodology, we have as Source:

- *The data source is the Forest and Carbon Monitoring System - Own elaboration through supervised classification using the Google Earth Engine platform.*
- *Ramírez-Delgado et al. (2018) - Estimation of forest degradation in Colombia*

through a fragmentation analysis (Annex 2).

- *The adjustment for national conditions to the CSB(project,year) for the years 2021-2023, according to the estimated values in the national NREF (Ministry of Environment and Sustainable Development - IDEAM, 2020; Ministry of Environment and Sustainable Development - IDEAM, 2024).*

5.2.2 Conservative Approach and Uncertainty Management

This audit verified that the CO2BIO project owner used the values presented in the most recent evaluated NREF (Ministry of Environment and Sustainable Development - IDEAM, 2020) as a reference to define the emission factors, which have a variation coefficient of 11.4%. Since the values are in line with the national emissions scenario, no adjustments are made for uncertainty management.

The audit team corroborated through an exhaustive review of 100% of the documents provided by the project proponent, together with the semi-structured interviews developed in the framework of this verification audit to some of the owners of the properties participating in the CO2BIO project. Thus confirming that the risk assessment indicated that the probability of finding incorrect statements or significant non-compliance with the criteria is low.

The consistency of the baseline of the Sectoral Greenhouse Gas (GHG) Mitigation Project with the national regulations in force and/or the methodology applied was also examined. It was found that the project holder implements procedures to ensure the accuracy of emissions calculations, considering the uncertainty associated with the accuracy of maps and field information through:

(a) The use of high-resolution satellite images and field visits to verify the presence of natural vegetation cover.
(b) The determination of uncertainty in emission factors through secondary information and standard deviation.

The following table shows the emission reductions during the monitoring period:

Comparison of estimated and reported GHG emission reductions in the monitoring period (2021-2023)

Year	***Estimated net GHG reduction*** *(tCO2e)*	***Net GHG reduction observed*** *(tCO2e)*	***Difference***
2021	*18.612*	*26.856*	*44,30%*
2022	*18.734*	*27.285*	*45,65%*
2023	*15.530*	*23.465*	*51,09%*
Total	***52.876***	***77.606***	***46,77%***

In general terms, according to the information provided by the project owner, the accuracy

of the maps was established, complying with the criteria defined for the verification process.

5.2.3 Leakage and non-permanence

The audit team satisfactorily verified that the risks of leakage and non-permanence of the project are evaluated in detail in the CO2Bio MONITORING REPORT document, prepared by Cataruben Foundation, v1.1 dated 09/21/2024. It was verified that the calculation of emissions from deforestation in the leakage area was made taking into account the change in forest area and the emission factor, with its respective mathematical equation that provides the annual change in the area covered by forest in the leakage area in hectares.

The annual change in the area covered by forest in the leakage area (CSB) is 10.75 ha reported for the monitoring period for a value of 2,091.41 tCO2e, which compared to the baseline or reference value does not represent a significant increase in GHG emissions as a result of the implementation of the project's REDD+ Activities.

The audit team found that, as part of the monitoring and management of leakage and permanence risks for the reporting period, the area of leakage was monitored in accordance with the methodologies applied, and management was carried out to reduce the risk of leakage. While the permanence of the Activities is evaluated with the progress in the implementation of the project, as well as the permanence of the owners participating in the project.

The verification audit reviewed the documentation provided in the document "Adoption of measures to reduce the displacement of emissions", prepared by the owner of the CO2BIO project, for the control and management of possible leakage. Special emphasis is placed on aspects such as: Forest Control and Surveillance to Avoid Leakage, Knowing the Territory, Sociocultural Context and Socioeconomic Context.

Similar to what happened in the project area, there was no evidence of degradation processes affecting the forest cover in the leakage area. Therefore, annual emissions for the period 2021-2023 are considered to be zero.

5.2.4 Mitigation result

The CO2BIO project mitigation initiative shows coherence in the procedures and strategies to manage the identified risks, including environmental (floods during the long winter season and thermal variations in the heat points during the summer season that provide strong contrasts in the Orinoquia), financial (clarity and sufficient information to the parties involved) and social (carbon ownership). Additionally, it has sufficient technical tools and logistics to carry out continuous monitoring activities during the quantification period and ensure its permanence over time.

The CO2BIO project is aligned with Law 629 of 2000, which establishes provisions for climate change management in Colombia. The law promotes the adoption of measures to reduce GHG emissions and encourages the participation of public and private entities in mitigating the effects of climate change. This project for the period 2021-2023 managed the reduction of emissions in 77606 tons of carbon dioxide equivalent (tCO2e) as part of the efforts to mitigate climate change through the conservation of ecosystems that are part of the 42 properties formally linked to it. To achieve this reduction, activities are being carried out to reduce greenhouse gas (GHG) emissions in the region.

This audit showed that the project is implementing the following mitigation actions:

a) *Design of project activities involving fire management education.*
b) *Implementation of forest fire prevention measures,*
c) *Project activity for preventive monitoring in summer (early warnings).*
d) *Constant monitoring of applicable norms, national regulations and standards.*
e) *Project design with an adaptive model involving the landowners, Cataruben Foundation and the strategic collaborates in such a way that it can adapt to the circumstances.*
f) *Establishment of a project-monitoring platform with access for all project participants.*
g) *Design of a governance model among the main actors of the project.*

The audit team verified the documentary information and contrasted in the field the information related to the safeguards, observing that it is aligned with the general principles for the national interpretation of environmental and social safeguards for REDD+ projects in Colombia.

5.2.4.1 Baseline GHG Emissions

Deforestation emissions

The calculation of the Activity data was based on the historical change in forest area recorded in the reference region, applying the following equation:

$$CSB_{año} = (\frac{1}{t_2 - t_1})\ x\ (A_1 - A_2)$$

$$CSB_{año} = (\frac{1}{2015 - 2005})\ x\ (442.344 - 409.551)$$

$$CSB_{año} = 3.279$$

Where:

$CSB_{año}$ *Annual change in the area covered by forest in the reference region; ha*

t_1 *Year of start of reference period; year*

t_2 *Year end of reporting period; year*

A_1 *Area of forest in the reference region, at the initial moment.; ha*

A_2 *Area of forest in the reference region at the final point in time; ha*

According to the historical trend of deforestation in the reference region, the change in forest area in the eligible area of the project was projected. For the analysis period, an adjustment was made to the eligible area, so the CSB(project,year) projection was adjusted according to the new conditions (the adjustments applied are described in detail in section 1.4).

Likewise, the BSC(project,year) was adjusted for national conditions for the years 2021-2023, according to the estimated values in the national NREF (Ministry of Environment and Sustainable Development - IDEAM, 2020; Ministry of Environment and Sustainable Development - IDEAM, 2024).

Regarding emission factors, the BCR0002 methodology establishes that the validated values can be applied in the estimation of monitored emissions. Therefore, the same values were used for this monitoring period.

In this sense, for the quantification of emissions from deforestation in the reference scenario, the following equation was applied:

$$\boldsymbol{EA_{lb} = DA_{lb}\ x\ CT_{eq}}$$

Where:

EA_{lb} *Annual emission in the baseline scenario; tCO_{2e}*

DA_{lb} *Annual historical deforestation in the baseline scenario; ha*

CT_{eq} *Total carbon dioxide equivalent; tCO_{2e}/ha*

quantification of changes in forest area in the without-project scenario and baseline GHG emissions due to forest deforestation, contemplating the period 2021-2023.

Reference emissions from forest deforestation for the monitoring period.

Year	**Adjustment for national circumstances** *(%CN)*	**CSB lb,year + %CN**	**CTeq** *(tCO2e/ha)*	**GHG emissions in the baseline scenario** *(tCO2e/year)*
2021	*49,62%*	*103,81*	*194,59*	*20.200,0*
2022	*53,55%*	*106,32*		*20.689,1*
2023	*25,90%*	*87,00*		*16.928,7*

Source: *Fundación Cataruben, 2024*

Emissions from deforestation are calculated based on the annual historical deforestation in the reference region.

Emissions from degradation

The quantification of emissions from forest degradation in the reference scenario contemplated the effects on carbon stocks between the transitions from core forest to patch and perforated forest to patch. Thus, the calculation of baseline Activity data was performed using the following equations:

$$DFP_{lb,año} = \left(\frac{1}{t_2 - t_1}\right) x \left(A_{núcleo,lb} - A_{núcleo-par,lb}\right)$$

Where:

$DFP_{lb,año}$	*Annual historical primary degradation in baseline; ha*
t_2	*Year end of reporting period; year*
t_1	*Year of start of reference period; year*
$A_{núcleo,lb}$	*Area of reference region in core class in the Year of start of reference period; ha*
$A_{núcleo-par,lb}$	*Area of the reference region that passes from core to patch in the Year end of reporting period; ha*

and,

$$DFS_{lb,año} = \left(\frac{1}{t_2 - t_1}\right) x \left(A_{perforado,lb} - A_{perforado-par,lb}\right)$$

Where:

$DFS_{lb,año}$	*Annual historical secondary degradation in the without-project scenario; ha*
t_2	*Year end of reporting period; year*
t_1	*Year of start of reference period; year*
$A_{núcleo,lb}$	*Area of the reference region in class drilled in the year of the start of the reference period; ha*
$A_{núcleo-par,lb}$	*Area of the reference region changing from perforated to patched at the Year end of reporting period; ha*

Subsequently, the Activity data was multiplied by the equivalent carbon value contained in the difference of total biomass between fragmentation classes for the two types of degradation (primary and secondary), applying the following equation:

$$EA_{d,lb,año} = \left(DFP_{lb,año} x DCBT_{DP}\right) + \left(DFS_{lb,año} x DCBT_{DS}\right)$$

Where:

$EA_{d,lb,año}$	*Annual emission due to degradation, in the baseline scenario; tCO2/ha*
$DFP_{lb,año}$	*Annual historical primary degradation in the baseline scenario; ha*
$DFS_{lb,año}$	*Annual historical secondary degradation in the without-project scenario; ha*
$DCBT_{DP}$	*Carbon dioxide equivalent contained in the total biomass difference per hectare in the primary degradation class; tCO2e/ha*
$DCBT_{DS}$	*Carbon dioxide equivalent contained in the difference of total biomass per hectare in the secondary degradation class; tCO2e/ha*

Reference emissions due to forest degradation, for the monitoring period.

Year	***Degradation type***	***DFP,Ib year*** *(ha)*	***DBTi*** *(tCO2e/ha)*	***HG emissions in the baseline scenario*** *(tCO2e/year)*
2021	*Core - Patch*	*28,34*	*251,85*	*7.137,2*
2022	*Core - Patch*	*28,11*		*7.078,7*

2023	Core - Patch	27,88		7.020,6
2021	Perforated - Patch	1,59	177,86	283,7
2022	Perforated - Patch	1,59		282,5
2023	Perforated - Patch	1,58		281,4

Source: Fundación Cataruben, 2024

5.2.4.2 GHG project emissions

GHG emissions in the with-project scenario were lower, which directly impacts the total project emissions reductions.

Comparison of estimated and reported GHG emission reductions in the monitoring period (2021-2023)

Year	**Estimated net GHG reduction** (tCO2e)	**Net GHG reduction observed** (tCO2e)	**Difference**
2021	18.612	26.856	44,30%
2022	18.734	27.285	45,65%
2023	15.530	23.465	51,09%
Total	**52.876**	**77.606**	**46,77%**

5.2.4.3 GHG Leakage

The audit team found that there was an annual change in the area covered by forest in the leakage area of $CSB_{f,año}$= 10,75 ha/year emissions in the monitoring period from 1/01/2021 to 12/31/2023. This represents average annual emissions of 2.091,41 tCO2e. However, when comparing this record with the baseline emissions scenario, it does not represent a significant increase in GHG emissions as a result of the implementation of the project's REDD+ activities. Likewise, the forest cover in the leakage area was not affected because of degradation processes. Therefore, annual emissions for the period 2021-2023 are considered zero.

5.2.4.4 Ex ante vs. ex post comparison of GHG emission reductions/removals

The audit team verified 100% of the spreadsheets in the CO2BIO project Calculations Excel file "annexes" for the ex ante estimates during the quantification period of estimated GHG emission reductions (tCO2e) and net GHG emission reductions or removals (tCO2e) and ex post estimates for the period from 1/01/2021 to 12/31/2023, finding the following:

	Estimated GHG emission reductions or removals (tCO2e)	*Net GHG emission reductions or removals (tCO2e)*
Emissions reductions/removals (tCO2)	*52.876*	*77.606*

The differences observed between the baseline scenario and monitoring are mainly due to the behavior of GHG emissions in the leakage area and in the project area.

5.3 Safeguards for Sustainable Development (SDS)

VERSA's audit team verified the report on compliance with the Sustainable Development Goals, based on the verification of the BCR SDG tool, 2023. These were verified based on the Activities carried out by the project and contrasted with semi-structured interviews.

5.4 Contribution of the project to the Sustainable Development Goals (SDGs)

This audit verified in the field the contribution that the CO2BIO project has actively committed to the Sustainable Development Goals (SDGs).

In particular, it has focused its efforts on

a) *For SDG 5 (Gender Equality): The process of exchanging knowledge to support and make visible the leadership and valuation of women's work was documented. Documentation of workshops and two trainings, one on natural regeneration, silvicultural techniques, and the other on the importance of meliponiculture. These spaces were crucial because they promote gender articulation.*

b) *SDG 6 (Clean water and sanitation). With the implementation of Activities aimed at achieving changes in the efficiency of water use in the 42 properties and through the characterization of these properties linked to the CO2BIO project, allowing the identification of the sources of water supply and water management. That is, by promoting and adopting practices that encourage the responsible use of water in households, not only addressing an immediate vital need, but also contributing significantly to the fulfillment of global sustainable development goals. The project holder presents in the documentation the progress and implementation of the project in the document called "Annexes Implementation A".*

c) *SDG 13 (Climate Action): Sustainable forest conservation practices are promoted in*

private properties in the Orinoco region. In the field, for example, the construction of "guardrails" was observed, which consists of isolating forested areas by mechanized tillage of the edges to prevent the spread of fires that affect the forest cover, enclosures with fences, thereby contributing directly to the reduction of GHG emissions from deforestation and forest degradation.

d) *SDG 15 (Life on Land): During the development of this audit, the status of forest cover and possible impacts were verified on the ground. In the Yopal office, continuous monitoring of changes in the forest area as a proportion of the total area in the project areas was extensively documented, using satellite images and others. The determination of the different landscape coverages, and of the properties found within these coverages, we can determine that the dense, fragmented, open and gallery forests, as well as the secondary vegetation and the lakes and water bodies contribute directly to the biodiversity conservation and are coverages that are protected within the properties linked to the project. The multitemporal analysis of images allows affirming that in general, the forest mass for the years 2015 and 2023 remains constant, there are no abrupt changes that represent significant losses that affect the proportion of forest conservation, on the contrary, it is observed that some of the properties have a greater proportion of forest for the year 2023.*

The project was verified to be aligned with the current version 3.3 of the BCR Standard From Differentiated to Common Responsibility, the Sustainable Development Safeguards (SDSs) Tool Version 1.0 and the SDG Tool (2023). These documents provide clear guidelines for reporting contributions towards the Global Goals targets. Successful implementation of conservation activities under CO2Bio aims to mitigate climate change and reduce greenhouse gas (GHG) emissions, and to assess the positive impact on the selected SDGs.

5.5 Climate change adaptation

The project holder attached the verification supports that show how the project activities lead to climate change adaptation actions.

The audit team verified that the CO2BIO project holder complies with the criteria described in the BCR standard and that the adaptation actions are directly related to the implementation of the project activities during the monitoring period subject of this verification.

This verification audit included a review of the information and evidence of the implementation of the project Activities during the monitoring period against the criteria established in the BCR standard, as shown in the table below:

Climate change adaptation

Criteria	***Compliance***	***Project activity in which the adaptation action is derived.***	***Progress of the Activity in the monitoring period 2021 - 2023***
Improve the conditions of biodiversity conservation and its ecosystem services in the areas of influence, outside the project boundaries (e.g. natural coverage in areas of special environmental interest, biological corridors, water management in watersheds, among others.	*The project promotes and provides improvement actions for the conservation and safeguarding of biodiversity and its ecosystem services. In addition, it identifies and monitors HCVs within the geographical boundaries of the project, and manages the improvement of water resources within the properties.*	*I2: Promote sustainable forest management through the implementation of sustainable production practices and conservation actions in the properties, in line with the Environmental Management Plan and Predial Implementation Plan.*	***I2:** 66%*
		G1: Continuous monitoring of changes in forest area as a proportion of total area in project areas.	***G1:** 6,07%*
		G2: Monitor environmental threats (fire) in the project area and/or possible management alerts.	***G2:** 8,57%*
		B1: Conduct monitoring of biodiversity variables or indicators in coverages with the use of remote sensing for the project area and its surroundings.	***B1:** 25%*
		A1: Develop a Plan for Efficient Use and Saving of Water in Households (PUEAA) linked to the initiative.	***A1:** 15%*
Implements activities that contribute to sustainable low-carbon production landscapes.	*Complies. The project promotes the implementation of sustainable production systems and practices. The project strengthens the capacities of the project participants, with the purpose of empowering the communities in the development of responsible actions for the care and preservation of natural resources.*	*I1: Capacity building for men and women involved in the project, in the following components: technical-environmental, social and administrative-financial, in order to strengthen decision making in favor of the project's objectives.*	***I1:** 4.651 Trained people*
		I2: Promote sustainable forest management through the implementation of sustainable production practices and conservation actions in the properties, in line with the Environmental Management	***I2:** 66%*

Criteria	***Compliance***	***Project activity in which the adaptation action is derived.***	***Progress of the Activity in the monitoring period 2021 - 2023***
		Plan and Predial Implementation Plan.	
		S1: Strengthening forest governance to promote the conservation and sustainable use of forests.	***S1:*** *25%*
		B1: Conduct monitoring of biodiversity variables or indicators in coverages with the use of remote sensing for the project area and its surroundings.	***B1:*** *25%*
Design and implement adaptation strategies based on an ecosystem approach.	*Complies. The project is based on the conservation and sustainable management of natural ecosystems, within nature-based solutions. Therefore, it is important to develop actions to strengthen the capacities of local communities to achieve compliance with conservation strategies for strategic ecosystems.*	*I1: Capacity building for men and women involved in the project, in the following components: technical-environmental, social and administrative-financial, in order to strengthen decision making in favor of the project's objectives.*	***I1:*** *4.651 trained people*
		I2: Promote sustainable forest management through the implementation of sustainable production practices and conservation actions in the properties, in line with the Environmental Management Plan and Predial Implementation Plan.	***I2:*** *66%*
		A1: Develop a Plan for the Efficient Use and Saving of Water in Households (PUEAA) linked to the initiative.	***I2:*** *15%*
Strengthens the local capacities of institutions and/or communities to make informed	*Complies. The project includes the development of training for the transfer of knowledge with the local community, with the purpose of providing the*	*I1: Capacity building for men and women involved in the project, in the following components: technical-environmental, social and administrative-financial, in order to strengthen decision*	***I1:*** *4.651 trained people*

Criteria	Compliance	Project activity in which the adaptation action is derived.	Progress of the Activity in the monitoring period 2021 - 2023
decisions to anticipate negative effects derived from climate change (recognition of vulnerability conditions).	necessary tools for making informed decisions on the management of properties. These trainings are oriented towards climate change and conservation actions for strategic ecosystems. In addition, a governance strategy was implemented to coordinate the project's stakeholders.	making in favor of the project's objectives.	
		S1: Strengthening forest governance to promote the conservation and sustainable use of forests.	**S1:** 25%

Source: Fundación Cataruben, 2024.

5.6 Benefit-sharing (if applicable)

The project generates additional benefits in the Orchid category, which includes three fundamental approaches: Biodiversity conservation, community benefits and gender equity.

Biodiversity conservation:

We have worked on training and education through a "General Biodiversity Training Plan" aimed at landowners and the people they wish to involve in various topics related to the conservation, restoration and sustainable management of biodiversity. The process has been documented. See link: https://www.youtube.com/watch?v=Tr7Nprr265M&list=PLzcL6LHVF6g5IZSCzfKeOmMFhwiANDr3P&index=3.

Work was carried out on two fronts: The importance of conserving biodiversity (PGF1) and Effective actions and measures to halt biodiversity loss (PGF2).

Participatory ecoacoustic monitoring (PGF3): strengthening the knowledge of ecosystem managers linked to participatory acoustic monitoring and the environmental component of the project, which strengthens decision making in favor of the project's objectives.

Community benefits: The benefits for the community involved, which is made up entirely of natural and legal persons involved in productive activities such as agroforestry systems or raising livestock, can be manifested in both material and symbolic benefits. Through the focus on social and environmental safeguards, priority is given to action without harm, ensuring that all CO2BIO project activities contribute to the well-being of the social group and its territory.

- ***Social benefits**: These include the strengthening of the social fabric through the articulation of conservation efforts, the promotion of gender equity, the strengthening of trust between neighboring properties, conflict resolution and training in the management of natural capital.*
- ***Economic benefits:** These refer to the increase in income through the issuance and sale of verified carbon certificates (VCCs), as a result of the capture and storage of greenhouse gases. These resources are reinvested in technologies, strategies and materials to strengthen conservation practices and generate new sources of income, such as green jobs.*
- ***Environmental benefits:** Focus on the conservation of ecosystem services and natural capital, which contributes to regulating local and global climate, protecting endangered species, preserving strategic water sources and preventing soil erosion.*
- ***Cultural benefits:** Involve respect for and promotion of local knowledge, practices and beliefs, strengthening the identity of communities with their forest cover, promoting cultural ecotourism and reinforcing the link between the population and nature and their territory.*

The following table identifies the contribution to the fulfillment of the indicators for each SDG committed to in this project.

ACTIVITY NAME	INDICATOR NAME	MEASUREMENT UNIT	MONITORING METHODOLOGY	SUPPORT DOCUMENT	SDG CONTRIBUTION	CO-BENEFITS COMPONENT
Capacity building for men and women involved in the project, in the following components: technical-environmental, social and administrative-financial, in order to strengthen decision making in favor of the project's objectives.	Number of impacted people per year	Documentary analysis of the records generated during the Activity	Documentary analysis of the records generated during the Activity (attendance records, field logs, photographic records and/or memories, etc.).	Fortalecimiento de Capacidades	SDG 5 SDG 15	Gender Equality
Promote sustainable forest management through the implementation of sustainable productive practices and conservation actions in the properties, in line with the Environmental Management Plan	Properties implementing sustainable production practices (SPP), ecosystem conservation actions and strategies	Percentage of progress	characterization of the properties linked to the project, which represents 15%, implementation of sustainable productive practices in natural savannas.	Gestión sostenible del bosque	SDG 5	Community benefits

ACTIVITY NAME	INDICATOR NAME	MEASUREMENT UNIT	MONITORING METHODOLOGY	SUPPORT DOCUMENT	SDG CONTRIBUTION	CO-BENEFITS COMPONENT
and the Predial Implementation Plan.						
Strengthening forest governance to promote the conservation and sustainable use of forests	Progress of the governance roundtable	Percentage of progress	development of the governance strategy and operating regulations. reports from the governance committee during the life of the project.	Estrategia de Gobernanza Forestal	SDG 5 SDG 15	Community benefits Gender Equality
Continuous monitoring of changes in forest area as a proportion of total area in project areas.	Rate of change in coverage	Reports	Technical Report. The methodology used is exactly the same as the IDEAM National Indicator of the same name.	Superficie forestal como proporción de la superficie total	SDG 15	Biodiversity conservation
Identifying and mapping areas of regeneration gain or loss	Forest Gain	reports	In the linked project areas the forest is counted and then cross-referenced with the project areas to see the increase or decrease of regenerated forest versus eligible forest	Forest Gain	SDG 15	Community benefits
Monitor environmental threats (fire) in the project area and/or possible management alerts.	Thermal anomalies/land cover fire monitoring	Reports	During the dry season (December to April), daily monitoring of the presence of thermal anomalies that could pose a risk to the project is carried out.	Monitoreo puntos de calor REDD	SDG 15	Biodiversity conservation
Monitor biodiversity variables or indicators in land cover with the use of remote sensing for the project area and its surroundings.	Participatory biodiversity monitoring for identification of fauna in the project area	Species monitoring report	Through secondary data reporting and remote sensing monitoring in the properties, identify the species present in the project area with the participation of ecosystem managers.	Plan de monitoreo de biodiversidad	SDG 15	Biodiversity conservation
Develop a Plan for Efficient Use and Saving of Water in Households (PUEAA) linked to the initiative.	Change in water use efficiency over time.	Percentage of progress	Predial characterization (water component), which will allow us to diagnose the key points where Cataruben can intervene for the improvement of the resource; with this, plans will be made (PUEAA-Design Stage). Training and knowledge transfer for a better use of water will be implemented.	Planes de uso Eficiente y Ahorro del Agua	SDG 6 (6,4,1)	Community benefits

ACTIVITY NAME	INDICATOR NAME	MEASUREMENT UNIT	MONITORING METHODOLOGY	SUPPORT DOCUMENT	SDG CONTRIBUTION	CO-BENEFITS COMPONENT
			Finally, the plans will be followed up in order to implement improvement activities regarding the use and management of the resource.			

5.7 REDD+ safeguards (if applicable)

VERSA's audit team verified the REDD+ Safeguards Monitoring Plan report. This plan is periodically updated following the guidelines of the Biochar Standard's "Tool for Demonstrating Compliance with REDD+ Safeguards", version 1.1, and its National Interpretation, focusing on the 15 elements mentioned.

Below is a detailed report describing how each of the REDD+ safeguards are addressed, guided by the documents mentioned above:

Safeguard A approach according to the project's Activities.

SALVAGUARDA A TEMÁTICA INTERPRETACIÓN NACIONAL: INSTITUCIONALES					
Item	***Requirement "BCR tool to demonstrate compliance with REDD+ safeguards".***	***National Interpretation Element***	***ID***	***Project Activity***	***Compliance***
1.1	*On compatibility: Demonstrate that the project's Activities are in accordance with these policies and are not contrary to them.*	*A1 Conformity with national legislation.*	*I1*	*Capacity building for men and women involved in the project, in the following components: technical-environmental, social and administrative-financial, in order to strengthen decision making in favor of the project's objectives.*	*Compliance with this national element of the REDD+ safeguards is visualized in the 2.1.1 Legal Compatibility Matrix. This matrix lists all of the project's conservation Activities and shows their alignment with the United Nations Framework Convention on Climate Change, the Kyoto Protocol, the Paris Agreement, the National Code on Renewable Natural Resources and Environmental Protection, the Forestry Policy. The*
			I2	*Promote sustainable forest management through the implementation of sustainable production practices and conservation actions in the properties, in line with the Environmental Management Plan and Predial Implementation Plan.*	

			S1	Strengthening forest governance to promote the conservation and sustainable use of forests.	National Policy for the Integrated Management of Biodiversity and its Ecosystem Services, the National Climate Change Policy, and the National Plan for the Prevention and Control of Forest Fires and Restoration of Affected Areas, among other relevant norms.
			G1	Continuous monitoring of changes in forest area as a proportion of total area in project areas.	
			G1	Identify and map areas of regeneration gain or loss.	
			G2	Monitor environmental threats (fire) in the project area and/or possible management alerts.	
			B1	Monitor biodiversity variables or indicators in land cover with the use of remote sensing for the area, project and its surroundings.	
			A1	Develop a plan for efficient use and saving of water in households (PUEAA), linked to the initiative.	

Safeguard B approach according to project Activities.

SAVAGUARDS B ***THEMATIC NATIONAL INTERPRETATION: INSTITUTIONAL***					
Item	***Requirement "BCR tool to demonstrate compliance with REDD+ safeguards".***	***National Interpretation Element***	***ID***	***Project activity***	***Compliance***
	Implement appropriate communication channels to deliver and share project information.	B2 Transfer and access to information	I1	Capacity building for men and women involved in the project, in the following components: technical-environmental, social and administrative-financial, in order to strengthen decision making in favor of the project's objectives.	During this verification period, access to information was ensured through multiple channels such as 2.2.1.1.1. CARBO and varied digital platforms, including phone calls, text messages, 2.2.1.4.4. WhatsApp and 2.2.1.2.1. email. The 2.2.2.2.1. PQRS system was efficiently managed. In addition, various social networks were used to disseminate relevant information such as 2.2.1.4.2. Instagram, 2.2.1.4.1. Facebook, and 2.2.1.4.3. YouTube, through publications 2.2.3.1. Post and 2.2.3.2. Videos among other

SAVAGUARDS B THEMATIC NATIONAL INTERPRETATION: INSTITUTIONAL					
Item	**Requirement "BCR tool to demonstrate compliance with REDD+ safeguards".**	**National Interpretation Element**	**ID**	**Project activity**	**Compliance**
					formats. The 2.2.1.3.1 Web page was also kept active, and the mobile application 2.2.1.3.4.
	PQRS system for addressing and attending to comments, questions, suggestions or complaints.	*B2 Transfer and access to information*	*I2*	*Promote sustainable forest management through the implementation of sustainable production practices and conservation actions in the properties, in line with the Environmental Management Plan and Predial Implementation Plan.*	*The PQRS system, designed to manage petitions, complaints, claims and suggestions within the project, operated efficiently. In year 2021, 2 petitions and 2 complaints were received and addressed; in 2022, 1 petition, 1 complaint and 2 petitions; and in 2023, 5 petitions and 1 complaint. All PQRS were addressed in a timely manner and are currently closed.*
	Digital documents produced and disseminated within the framework of the project, such as brochures, posters, illustrative documents, guides, among others.	*B2 Transfer and access to information*	*I1*	*Capacity building for men and women involved in the project, in the following components: technical-environmental, social and administrative-financial, in order to strengthen decision making in favor of the project's objectives.*	*A series of 2.2.3.1. Post and 2.2.3.2. Videos were produced which were of vital importance to raise awareness of the importance of forest and biodiversity conservation. In addition, this material is used to show ecosystem managers visual data on the development of the project.*
	Activities or documents carried out with organizations, associations, community action boards or interest groups.	*B2 Transfer and access to information*	*I1*	*Capacity building for men and women involved in the project, in the following components: technical-environmental, social and administrative-financial, in order to*	*In 2021, the 2nd Biodiversity and Carbon Forum was held virtually. III Biodiversity + Carbon and Water Forum was held in Yopal in 2022, while in 2023 the IV Biodiversity + Carbon and Water Forum was held in Barranquilla.* *These events were attended by*

SAVAGUARDS B ***THEMATIC NATIONAL INTERPRETATION: INSTITUTIONAL***					
Item	***Requirement "BCR tool to demonstrate compliance with REDD+ safeguards".***	***National Interpretation Element***	***ID***	***Project activity***	***Compliance***
				strengthen decision making in favor of the project's objectives.	*leading organizations such as USAID, Latam Airlines, LUKER Chocolate, USDA, Partners of the Americas, Unubac and Ecopetrol, among other environmental entities and corporations. These meetings and the resulting documents contributed to the strengthening of collaborative and coordinated community participation in the protection of natural ecosystems.*
	Project registration in the RENARE platform	*B2 Transfer and access to information*	*I2*	*Promote sustainable forest management through the implementation of sustainable production practices and conservation actions in the properties, in line with the Environmental Management Plan and Predial Implementation Plan.*	*Currently, the formulation phase of the CO2BIO project is registered in 2.2.5.1. RENARE, and progress is being made to transfer the project from the formulation phase to the implementation phase.*
	Project management reports	*B3 Accountability*	*S1*	*Strengthening forest governance to promote the conservation and sustainable use of forests*	*2.2.6.2. Carbon Certificate Emissions Reporting, and 2.2.6.3. Statements of Account, to keep ecosystem managers informed about the economic benefits derived from ecosystem conservation. In addition, 2.2.6.1. Newsletters have also been created to communicate the progress of the project.*
	Forest governance strategy	*B4. Recognition of Governance Structures*	*S1*	*Strengthening forest governance to promote the conservation and sustainable use of forests*	*Forest Governance Strategy has been designed as a mechanism to recognize governance structures through the active participation of stakeholders, promoting informed decision making and facilitating dialogue and collaboration between local people, governmental and private entities and conservation experts.*

SAVAGUARDS B ***THEMATIC NATIONAL INTERPRETATION: INSTITUTIONAL***					
Item	***Requirement "BCR tool to demonstrate compliance with REDD+ safeguards".***	***National Interpretation Element***	***ID***	***Project activity***	***Compliance***
	Socializations, workshops, knowledge exchange, capacity building and other scenarios that contribute to building a participatory dynamic.	*B5 Capacity building*	*I1*	*Capacity building for men and women involved in the project, in the following components: technical-environmental, social and administrative-financial, in order to strengthen decision making in favor of the project's objectives.*	*Activities were carried out to strengthen capacities, focusing on natural regeneration, silvicultural techniques, meliponiculture, biodiversity, climate change, non-timber forest products and alternative water solutions. The importance of conserving biodiversity was highlighted and effective actions were implemented to halt its loss. In addition, participatory eco-acoustic monitoring was carried out in areas of high biological diversity. In the social area, leadership was addressed and women's work was valued.*

SAFEGUARD C **THEMATIC NATIONAL INTERPRETATION: SOCIAL AND CULTURAL**					
Item	**Requirement "BCR tool to demonstrate compliance with REDD+ safeguards".**	**National Interpretation Element**	**ID**	**Project activity**	**Compliance**
3.1	Working groups held with the communities	C6 Free, prior and informed consent	S1	Strengthening forest governance to promote the conservation and sustainable use of forests	ID 1.2. Pre-farm implementation plans which reflect the willingness of ecosystem managers to carry out conservation activities. In addition, several participation spaces are highlighted, such as ID I.1. Trainings, and 2.2.4.
3.2	Analysis of community mappings developed.	C7. Respect for traditional knowledge	C1	Continuous monitoring of changes in forest area as a proportion of total area in project areas.	2.3.1.2. Inventory specifying the ethnic communities legalized or in process, complemented by a 2.3.1.1. map showing the location of these territories. In addition, the Request for the Proceeding and Opportunity of Prior Consultation was carried out, according to Resolution No. ST-1477 of October 29, where it was

					determined that the consultation does not proceed.
3.3	To supervise and guarantee the adequate distribution of economic benefits.	C8. Profit sharing	S1	Strengthening forest governance to promote the conservation and sustainable use of forests	2.3.2 Economic Benefit Sharing Report is presented, taking into account the benefits generated and delivered in the first two verifications of the project.
3.4	Legal analysis of land tenure	C9. Territorial rights	S1	Strengthening forest governance to promote the conservation and sustainable use of forests	2.3.4. Updated legal documents were analyzed, which demonstrate that the ecosystem managers maintain ownership of the carbon.

SAFEGUARD D **THEMATIC NATIONAL INTERPRETATION: SOCIAL AND CULTURAL**					
Item	**Requirement "BCR tool to demonstrate compliance with REDD+ safeguards".**	**National Interpretation Element**	**ID**	**Project activity**	**Project activity**
4.1	Means of communication for the transparent, clear, complete, inclusive and effective dissemination of information.	D10. Participation	S1	Strengthening forest governance to promote the conservation and sustainable use of forests	Various communication channels have been established to ensure clarity and effectiveness in communication with all stakeholders. Notable among these are the 2.2.1.1.1.1. CARBO, which includes phone calls, text messages, 2.2.1.4.4. WhatsApp, 2.2.1.2.1. email and the 2.2.2.2.1. PQRS system.
			I1	Strengthening the technical capacities of the community in relation to sustainable forest management, delimitation, marking, conservation, ecosystem regeneration and sustainable production practices.	
4.2	Real and effective participation mechanisms from the feasibility and structuring phase of the project.	D10. Participation	C1	Continuous monitoring of changes in forest area as a proportion of total area in project areas.	Various participation channels were used, through social networks such as, 2.2.1.4.2. Instagram, 2.2.1.4.1. Facebook, 2.2.1.4.3. YouTube, and digital

			G2	Monitor environmental threats (fire) in the project area and/or possible management alerts.	platforms such as 2.2.1.3.1. Website and 2.2.1.3.4. II Biodiversity and Carbon Forum, 2.2.4.2. III Biodiversity + Carbon and Water Forum, 2.2.4.3. IV Biodiversity + Carbon and Water Forum, as well as training and exchanges of knowledge on technical environmental, biodiversity and gender equity issues were carried out.

SAFEGUARD E **THEMATIC NATIONAL INTERPRETATION: ENVIRONMENTAL AND TERRITORIAL**					
Item	**Requirement "BCR tool to demonstrate compliance with REDD+ safeguards".**	**National Interpretation Element**	**ID**	**Project activity**	**Compliance**
5.1	High Conservation Values (HCV's) Report	E11. Conservation of Forests and their Biodiversity	I2	Promote sustainable forest management through the implementation of sustainable production practices and conservation actions in the properties, in line with the Environmental Management Plan and Predial Implementation Plan.	An analysis was conducted to identify High Conservation Value Areas (HCVs) under the project, which was documented in report 2.5.1.1 High Conservation Value HCVs.
5.2	No conversión de bosque		C1	Continuous monitoring of changes in forest area as a proportion of total area in project areas.	An analysis of the conservation areas was carried out and documented in 2.5.2.1. This analysis includes maps that visualize this non-conversion.
			G1	Identify and map areas of regeneration gain or loss	
			G2	Monitor environmental threats (fire) in the project area and/or possible management alerts.	
			B1	Monitor biodiversity variables or indicators in land cover with the use of remote sensing for the area, project and its surroundings.	

5.3	Cycles of training given to the community	E12. Provision of Environmental Goods and Services	I1	Capacity building for men and women involved in the project, in the following components: technical-environmental, social and administrative-financial, in order to strengthen decision making in favor of the project's objectives.	A series of training sessions have been held to strengthen knowledge about the conservation of natural ecosystems and biodiversity.
5.4	Compliance with environmental regulations		S1	Strengthening forest governance to promote the conservation and sustainable use of forests	It is important that the Cataruben Foundation, as the developer of the project, does not incur in investigations for environmental infractions, according to the Corporinoquia Certificate.

SAFEGUARD F **THEMATIC NATIONAL INTERPRETATION: ENVIRONMENTAL AND TERRITORIAL**					
Item	**Requirement "BCR tool to demonstrate compliance with REDD+ safeguards".**	**National Interpretation Element**	**ID**	**Project activity**	**Compliance**
6.1	Reversal risk analysis carried out under the initiative	F13. Environmental and territorial planning F14. Sectorial planning	I1	Strengthening the technical capacities of local men and women in relation to sustainable forest management, delimitation, marking, conservation, ecosystem regeneration, sustainable production practices, and access to and management of financial goods and services.	A 2.6.1 Reversion Risk Analysis was performed to evaluate the possible risks, which were documented in 2.6.4 Risk Analysis and Management. This document identifies the environmental, social and financial risks, evaluating their level of impact and probability of occurrence, and each of them are rated, establishing appropriate mitigation actions.
			S1	Strengthening forest governance to promote the conservation and sustainable use of forests	
6.2	Actions to ensure that the project is sustained over time		C1	Continuous monitoring of changes in forest area as a proportion of total area in project areas.	To guarantee the continued maintenance of the project's Activities, specific clauses have been included in the linkage contract to ensure their long-term continuity. 2.6.3.
			G1	Identifying and mapping areas of regeneration gain or loss	

			G2	Monitor environmental threats (fire) in the project area and/or possible management alerts.	
			B1	Monitor biodiversity variables or indicators in land cover with the use of remote sensing for the area, project and its surroundings.	

SAFEGUARD G **THEMATIC NATIONAL INTERPRETATION: ENVIRONMENTAL AND TERRITORIAL**					
Item	**Requirement "BCR tool to demonstrate compliance with REDD+ safeguards".**	**National Interpretation Element**	**ID**	**Project activity**	**Compliance**
7.1	Analysis of leakage identification and causes	G15. Forestry control and monitoring to avoid displacement of emissions.	C1	Continuous monitoring of changes in forest area as a proportion of total area in project areas.	A report was prepared analyzing the possible causes, monitoring and actions to mitigate and minimize the impact of leakage during the implementation of the CO2Bio Activities 6.7.2.
			G1	Identifying and mapping areas of regeneration gain or loss	
7.2	Response protocol to minimize such leakage		G2	Monitor environmental threats (fire) in the project area and/or possible management alerts.	
			B1	Monitor biodiversity variables or indicators in land cover with the use of remote sensing for the area, project and its surroundings.	

This audit verified the documents that support the compliance of these safeguards during the period 2021-2023, the REDD+ Safeguards Monitoring Plan was adjusted. This plan is periodically updated following the guidelines of the "Tool for Demonstrating Compliance with REDD+ Safeguards" of the Biochar Standard, version 1.1, and its National Interpretation, focusing on the 15 elements mentioned above. In addition, the document "Sustainable Development Safeguards (SDSs) Tool" version 1.0 is considered, which links the safeguards to the Sustainable Development Goals (SDGs) and projects possible negative effects of REDD+ Activities, thus ensuring that these Activities minimize or do not cause adverse environmental, social or economic impacts in the long term.

5.8 Avoid double counting

The audit team verified and reviewed 100% of the documented information provided by the project owner. The registration in the Renare Platform was verified. In addition, the verification considered the possible alignment with Colombia's Law 2 of 1959, which establishes norms for the conservation of renewable natural resources and the country's forest economy and forest reserve zones, the absence of overlaps with protected areas (SINAP), and the possibility of overlaps with mining titles and hydrocarbon exploration and exploitation areas.

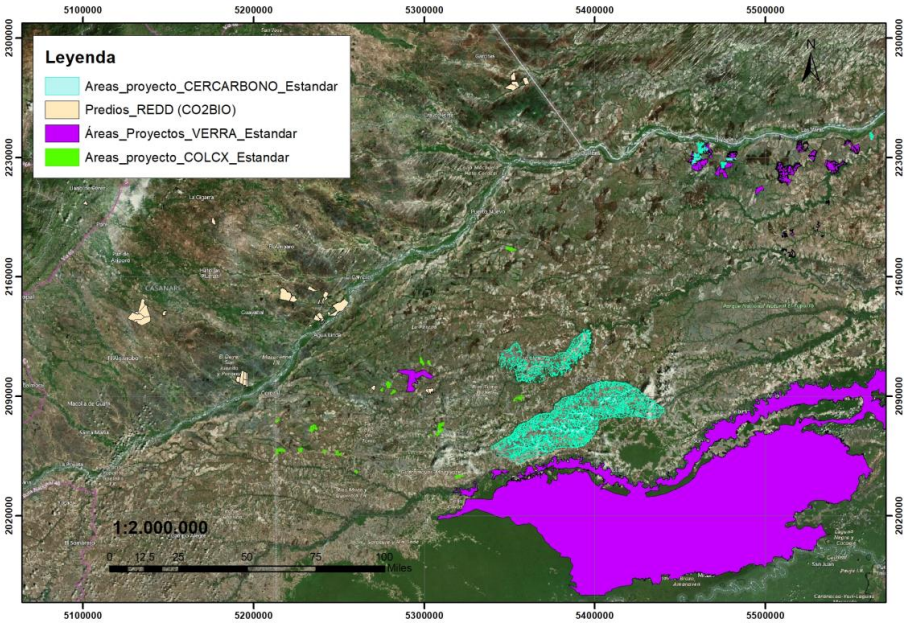
During the documentary review it was confirmed that the Project Holder has mechanisms in place to review standards and programs to avoid double counting, according to the following:

The REDD+ Geodatabase REDD+ folder Annexes / 6. Geospatial / 6.2 Geodatabase /6.2.1 REDD+ Geodatabase, incorporates two feature classes named "Evidence no overlap Indigenous Reserves" and "Evidence no overlap RUNAP" within the feature dataset "Restricted_access". These shapefiles aim to validate that the CO2BIO project does not present overlaps or conflicts related to boundaries or claims of Legalized Indigenous Reserves or Protected Areas.

The analysis of the shapefile results allows identifying that the CO2BIO project does not overlap with other greenhouse gas (GHG) projects or programs.

The evaluation also considered possible alignments with Law 2 of 1959, the absence of overlaps with protected areas (SINAP), the absence of overlaps with other programs or in the CO2BIO project area, and the absence of overlaps with other programs.

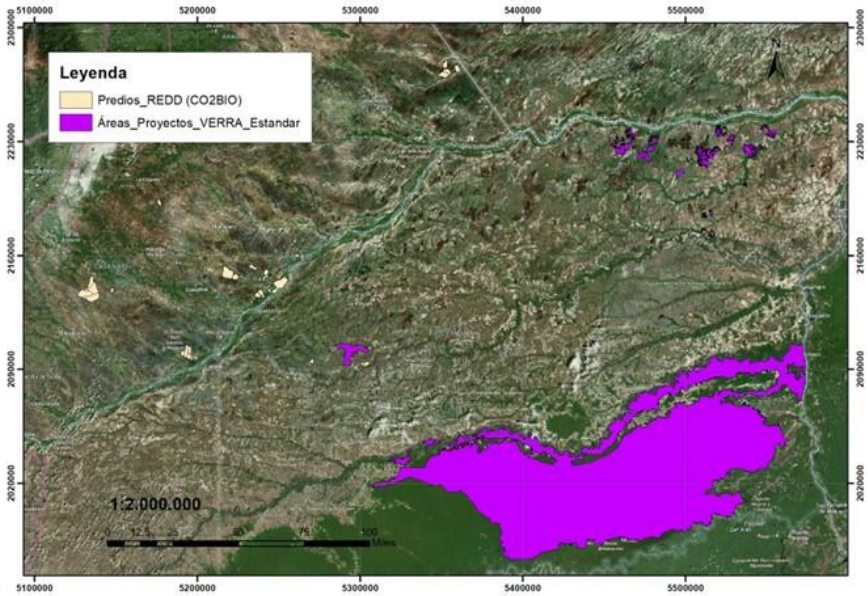
Figure of Location of CO2BIO project areas versus other standards.



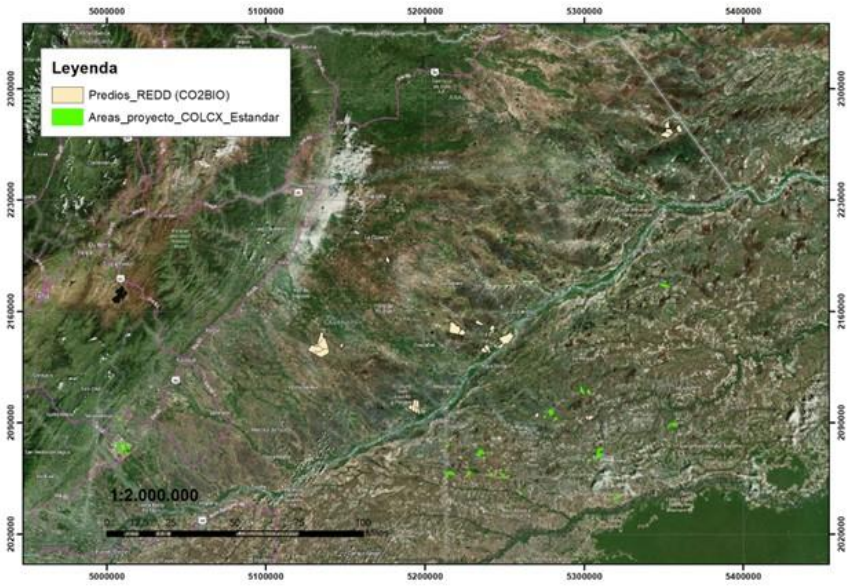
Source: Bing satellite images vs Cataruben CO2BIO monitoring report

It is verified that the CO2BIO project is not registered in other standards such as: (VERRA, Gold Standard, ColCX, UN CDM, CERCARBONO, Plan Vivo, Carbon Action Reserve), as shown below with the standards with presence in the Orinoquia sector:

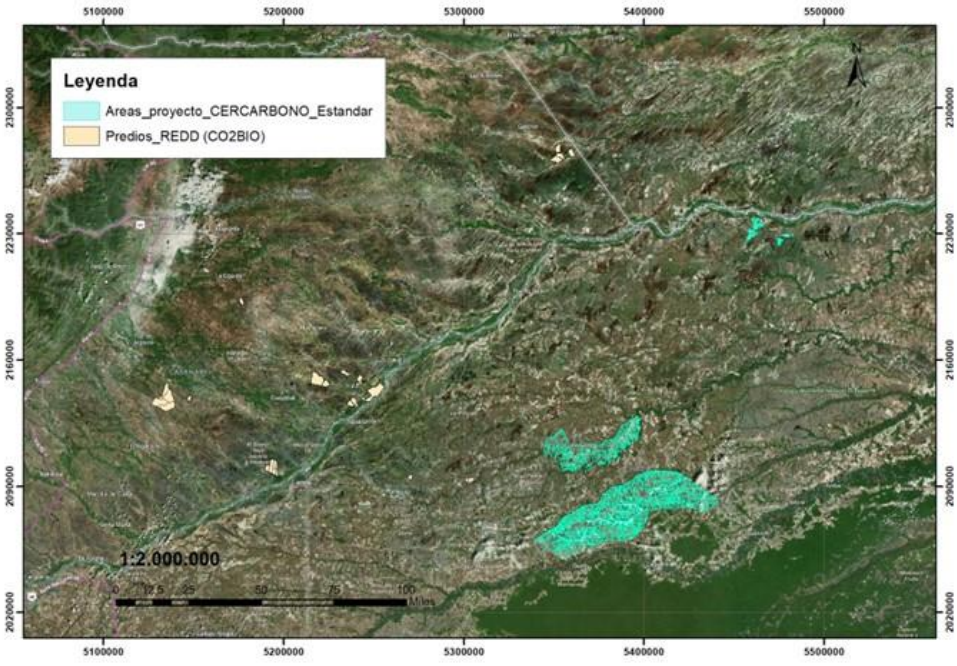
VERRA:



ColCX:



CERCARBONO:



According to what was evidenced by this audit, it can be concluded that:

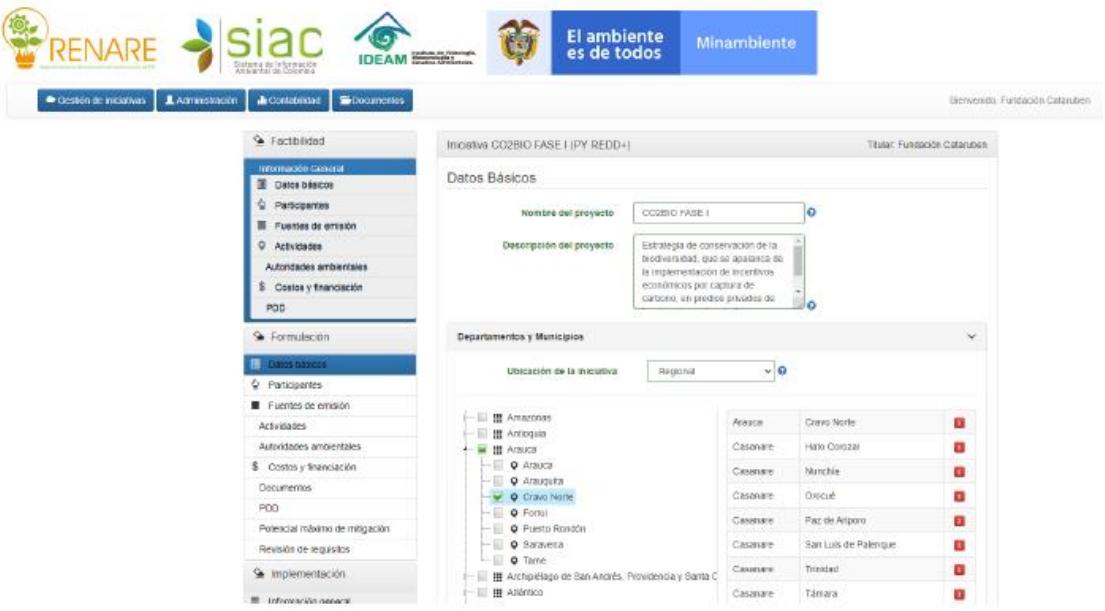
(a) The project only belongs to the Biocarbon Standard registry.

(b) *The reductions or removals generated by the project are only part of the BIOCARBON Standard.*
(c) *The CO2BIO project complies with the requirements established in the national legal framework, as well as with the rules and procedures established by BIOCARBON.*
(d) *The CO2BIO project already participates in the framework of the BCR Program.*

In conclusion, it is possible to affirm that the areas of the CO2BIO project, i.e. the 42 linked properties, do not present overlaps, and the project complies and is consistent with the criteria established in paragraph 1.2 of this document, with the requirements of the BCR Standard, Version 4.0. May 27, 2024.

Registration of the CO2BIO project in RENARE

The CO2BIO project is registered in the RENARE platform of MINAMBIENTE, as shown below:



After evaluating all possible overlapping scenarios in the project area, the audit team determined that there are no compatible or incompatible overlaps with other programs or projects in the project area. It was evidenced in the verified documentation that the tool to Avoid Double Accounting, Version 1. March 09, 2023, Compliance with Laws, Statutes and Other Regulatory Frameworks is adopted.

5.9 Compliance with Laws, Statutes and Other Regulatory Frameworks

VERSA has confirmed that the greenhouse gas mitigation project complies with the applicable legal requirements, as established in the PDD documents. This verification included the identification of the relevant regulations, laws or resolutions, as well as an analysis of their context of application and compliance. VERSA's audit team, in its role as verification organization, relies on the transparency, consistency and traceability of the information provided by the project owner.

Additionally, compliance with new standards and existing policies such as the development plan law 2294 of 2023 and the BCR Tool to demonstrate compliance with safeguards was verified.

In addition to the above, the project also implements measures to continuously monitor possible changes in relevant legislative aspects that may have an impact on the CO2BIO project's Activities.

5.10 Carbon ownership and rights

The CO2BIO project has 42 privately owned properties linked to the project, which have undergone an exhaustive analysis of the ownership according to the documents provided by each owner and the update of the same to validate that there has been no modification or transfer of such ownership. This information is included in a document of Cataruben's quality system called "Title Study", which provides a solid basis for the results of the analysis carried out and the carbon ownership rights in the project.

In accordance with the provisions established in the clauses of the contract, the owners of the properties formally linked to the project may request their voluntary withdrawal; when this happens, the withdrawal request is processed, generating impact reports on the project and subsequently the withdrawal contract is sent.

Likewise, in the field work carried out by this audit, verbal statements were received from the owners of the seriousness and respect protocols by the owner of the project regarding payments of the carbon credits. This has been in compliance with what was agreed with each owner; there are receipts of payments and received to their satisfaction.

5.11 Risk management

Catastrophic Fire Events, of natural or anthropogenic origin that will be mitigated by, define the highest risk:

1. Design of Project Activities involving fire management education 2.

2. Execution of forest fire prevention measures,

3. Project activity preventive monitoring during the summer season (early warnings).

Based on version 3.3 of the BCR Standard entitled "From differentiated responsibility to common responsibility", REDD+ safeguards are detailed, covering crucial aspects such as compliance with current legal regulations, promotion of transparency and access to information, respect for the knowledge of local communities and stakeholders, full and effective participation, as well as conservation of forests, water sources and native biodiversity. In addition, emphasis is placed on the timely prevention of reversion risks to ensure the permanence of conservation and restoration practices, avoiding predatory dynamics and minimizing the leakage of greenhouse gas emissions.

The risk analysis shows the treatment of the low possibility of occurrence of non-permanence of some properties in the project due to a change of economic activity, sale, lease or transaction that generates more income or dissatisfaction with the project's activities, for which the following mitigation actions have been taken:

1. Establishment of permanence clauses in the contract of engagement.

2. Strengthening of the PQRS mechanism.

3. Establishment of a governance model among project stakeholders.

The above was verified by this audit, highlighting the PQRS mechanism, which the owners interviewed expressed their agreement with, since it provides them with immediate, timely and accurate attention.

It was verified that commitments have been established through the contract of engagement of the 42 property owners called ecosystem managers. This contract contains the specific obligations of the ecosystem managers, focusing on guaranteeing the permanence and vigilance of the conserved area. It also ensures the conservation of the area by mitigating actions that could result in the reduction, decrease or displacement of emissions (See: Annexes Folder / 2. Compliance Safeguards REDD+ / 2.6. Safeguard F / 2.6.1. Reversal Risk)

This audit verified that the project holder, in order to address potential risks related to land tenure and disputes between neighbors, developed an action plan to establish a set of concrete actions to prevent, mitigate and manage the risks associated with land tenure disputes and conflicts between CO2BIO project stakeholders. (See: Folder Annexes / 2. Compliance Safeguards REDD+ / 2.6. Risks Land Tenure Disputes / Action Plan Land Tenure Disputes and Conflict Between Project Stakeholders)). The above was the subject of a finding during the current verification process (Finding No. 3) (see Annex 2). Requests for clarification, requests for corrective action and requests for resubmission action, which was corrected and closed. The Project's Land Tenure Disputes and Stakeholder Conflict Action Plan was verified by this audit and it was evidenced that the Permanence and Risk Management Tool (version 1.1 dated March 19, 2024) was applied.
In conclusion, this audit verified that the owner of the "Cataruben Foundation" project provided adequate, accurate and objective evidence showing an analysis to classify the risks identified based on their criticality, probability of occurrence, impact and direct or indirect effect on the project.

5.12 Stakeholder participation and consultation

This audit verified the level of communication with stakeholders that the Cataruben foundation maintains about its CO2BIO project, through the following mechanisms

- *Regular meetings, newsletters, events and workshops ("Annexes" file).*
- *Digital platforms: various digital platforms and communication tools to share updates, achievements and opportunities for participation, ensuring a constant flow of information among all stakeholders.*
- *Participation in different conservation bodies and the implementation of a Governance strategy. This strategy consists of the installation of the governance table with the participation of ecosystem managers (carbon owners), LATAM Airlines as a strategic ally, and the Cataruben Foundation.*
- *The governance table was set up and is made up of representatives of the ecosystem*

managers, representatives of the strategic partner and representatives of Cataruben, as owner of theCO2BIO project.

- *Constant and open dialogue with the ecosystem managers, representatives of local communities, NGOs and governmental entities, ensuring their active participation in the project's initiatives.*
- *The project holder Catruben Foundation organizes an annual Biodiversity, Carbon and Water Forum in commemoration of Earth Day: progress is socialized and accountable to the community on the progress of the project.*
- *Cataruben participates in the Orinoquia Municipal System of Protected Areas (SIRAPO).*
- *Cataruben is a member of the board of directors of the Colombian Association of Actors. (ASOCARBONO)*

The aforementioned was verified in the support constituted in the Governance Strategy document, "Social Appropriation of Local Conservation". In Annexes of the revised documentation.

5.12.1 Public Consulting

The owner of the project, Fundación Cataruben presents a Request for Determination and Proceeding of the Prior Consultation before the National Authority of Prior Consultation of the Ministry of Interior, for which this entity issued Resolution No. ST-1477 of October 29, 2021, where it resolves that prior consultation does not proceed for the indigenous, black, Afro-Colombian, Raizal and Palenquero communities located in the Municipalities of Cravo Norte (Arauca), Hato Corozal, Nunchía, Orocué, Paz de Ariporo, San Luis de Palenque, Tamara, Trinidad and Yopal (Casanare), as well as in the Municipality of Santa Rosalía (Vichada). This process is also detailed in the Action Plan for Land Tenure Disputes (folder: Annexes / 2. Compliance with REDD+ safeguards / 2.3. Safeguard C / 2.3.3.)

The CO2BIO project develops activities in private properties that are not part of the special indigenous jurisdiction. Respect for the rights of indigenous peoples is not only a legal and ethical obligation, but also a necessity to ensure the sustainability and legitimacy of any project that affects these communities. By following the principles of the United Nations Declaration on the Rights of Indigenous Peoples, the CO2BIO project can promote a more just, equitable and respectful collaboration with all parties involved directly or indirectly.

6 Internal quality control

During the verification process which included:

a) *Virtual meetings, first meeting, acquaintance and presentation of Auditor team and project holder's team August 16, 2024, September 3, 2024, meeting on verification findings.*
b) *Documentary verification*

c) *Field visit: Visit to properties in the Municipalities of Trinidad, San Luis de Palenque, August 22 to 25, 2024.*
d) *Face-to-face meeting at the Cataruben Foundation facilities in the city of El Yopal on August 21, 2024.*

The CO2BIO project holder successfully demonstrated the development and implementation of quality control and quality assurance procedures. These procedures include manuals, guidelines and formats that have proven to be relevant, appropriate, sufficient and consistent, fully complying with the criteria established by the BCR v3.1 Standard.

7 Verification opinion

VERSA's audit team performed the independent verification of the CO2BIO project in accordance with the following documents and regulations:

- *Methodological Document for the AFOLU Sector / BCR0002 Quantification of GHG Emission Reductions from REDD+ Projects, version 4.0, May 27, 2024.*
- *Tool to demonstrate compliance with REDD+ safeguards, version 1.1, January 26, 2023.*
- *Additionality and Baseline Tool, version 1.3, March 1, 2024.*
- *Sustainable Development Safeguards (SDG Tool), version 1.1, July 1, 2024.*
- *BCR Tool. sustainable development goals (SDGs). Version 1.0. June 27, 2023.*
- *Avoidance of Double Counting (ADC) Tool, Version 2.0 by February 7, 2024.*
- *Monitoring, Reporting and Verification (MRV) Tool, Version 1.0, February 13, 2023.*
- *Permanence and Risk Management Tool Version 1.1 dated March 19, 2024.*
- *Greenhouse Gas Project Validation and Verification Manual, Version 2.4 dated March 23, 2024.*
- *ISO 14064-3:2019 - Specification with guidance for validation and verification of greenhouse gas (GHG) declarations.*
- *ISO 14064-2:2019 - Specification with project-level guidance for quantification, monitoring and reporting of greenhouse gas (GHG) emission reduction and GHG removal enhancement activities.*

In accordance with the above, this Audit declares that it has verified that all the Activities indicated in the Monitoring Report for the third period (3) corresponding 01/01/2021 to 12/31/2023, its annexes and responses to the findings are true and correspond to the project called CO2BIO. Additionally, it is confirmed that the declaration related to Greenhouse Gas (GHG) emissions lacks substantial and material discrepancies, ensuring an assurance level of 95% as stipulated in Resolution 1447 of 2018.

This Audit verified that for the corresponding monitoring period 01/01/2021 to 12/31/2023, the total estimated reduction of Greenhouse Gas (GHG) emissions was 77,606 tCO2e/year. These reductions can be traded in the voluntary or regulated market and meet the requirements to opt out of the carbon tax, as stipulated in Decree 926 of 2017.

	Estimated GHG emission reductions or removals (tCO2e)	Net GHG emission reductions or removals (tCO2e)
Emission reductions/removals (tCO2)	52.876	77.606

In accordance with the above, the Versa Audit team recommends a positive opinion to the present verification.

Therefore, the Lead Auditor recommends issuing a positive verification opinion for the CO2BIO project, whose owner is the Cataruben Foundation. In this order of ideas, the verification process was developed as follows: i) strategic planning of the plan as established as the opening and closing of the GHG verification process; ii) on-site documentary audit and interviews with environmental managers or owners; iii) resolution of two rounds of findings and issuance of the final verification report.

The review of the Monitoring Report (MR) documentation and document folder in the "Annexes" file, along with the background research, semi-structured interviews in the field and resolution of findings has provided VERSA's audit team with sufficient evidence to validate compliance with the criteria established for verification.

8 Verification Statement

Versa Expertos en Certificación S.A.S. was contracted by the Cataruben Foundation to verify the REDD+ CO2BIO GHG emission reduction project, which has been developed according to the guidelines of the international standards ISO 14064-2:2019, ISO 14064-3:2019 and the specific requirements of the GHG Biocarbon Standard program.

The CO2BIO project activities are developed in the Orinoquia region of Colombia, in County: Arauca, Municipality: Cravo Norte; County: Casanare, Municipalities of Hato Corozal, Paz de Ariporo, Orocué, Pore, San Luis de Palenque, Trinidad and Yopal; and County: Vichada, Municipality: Santa Rosalia.

Versa Expertos en Certificación S.A.S. conducted a detailed review of the supporting documentation submitted by the project holder Cataruben Foundation for the elaboration of the REDD+ CO2BIO project, and conducted a field visit together with the Cataruben team. Through semi-structured interviews and review of primary information sources, he confirmed the organizational and reporting boundaries, Activity data, emission factors and global warming potentials used; as well as the methodological assumptions used.

Versa Expertos en Certificación S.A.S. established the objectives, scopes and verification criteria in the commercial proposal and legal contract VERSA-P-266 and in the approved

audit plan for the verification of the CO2BIO project. The objectives, scopes and verification criteria are described below:

Objectives

5. *Evaluate with a level of assurance of 95% that the project design document and/or monitoring reports prepared by Versa Expertos en Certificación S.A.S. comply with the guidelines of ISO 14064-2:2019, as well as with the regulations of the selected GHG program, the methodologies used and the legislation of the country where the project is developed.*
6. *Verify that the Activities, methods and procedures, including monitoring, have been implemented in accordance with the project's PD.*
7. *Confirm that the material discrepancy underlying the baseline and estimated GHG removals reported for the monitoring period does not exceed 5%.*
8. *Validate and verify the Project Activities, Project Design Document (PDD), monitoring plan, GHG sources, sinks and/or reservoirs, GHG emission reductions quantification period, baseline scenario, legal management requirements, processes and information, as well as guidelines and methodological documents for the Biocarbon Registry.*

Scope

Sectoral scope: Forestry and reforestation; and focused on verifying the project's Activities, its PDD, its monitoring plan, its sources, sinks and/or reservoirs of GHG, its GHG emission reduction quantification period, its baseline scenario, its legal requirements and information management processes, guidelines and methodological documents of the Biocarbon Standard.

verification criteria

The audit team in this independent process, applied and considered the following documents as criteria for verification:

- *BCR Standard, V 3.4 October 2024.*
- *Resolution 1447 of 2018.*
- *Decree 926 of 2017.*
- *Methodological document AFOLU sector BCR0002 Quantification of GHG Emission Reductions from REDD+ Projects. Version 4.0. 27 May 2024.*
- *Baseline and Additionality Tool Version 1.3, March 01, 2024.*
- *Tool for demonstrating compliance with REDD+ safeguards Version 1.1, January 26, 2023.*
- *ISO 14064-2:2019 Standard.*
- *ISO 14064-2:2019*
- *ISO 14064-3:2019*

- *Biocarbon Standard Requirements.*

Versa Expertos en Certificación S.A.S. confirms that the data and information supporting the GHG statement is historical in nature. The 95% assurance level in the audit means that the auditor has a high degree of confidence in the accuracy of the findings and that the results accurately reflect the status of the project; however, there remains a 5% risk of possible inaccuracies or undetected errors. The verification activities are structured to provide a high, but not absolute, level of assurance.

Versa Expertos en Certificación S.A.S. identified that since the beginning of the initiative the CO2BIO project has generated contributions to the Sustainable Development Goals (SDG 1, SDG 6, SDG 13 and SDG 15 defined by the project) applicable for both components (REDD+), according to the relevant criteria and indicators. This according to the review of the evidence provided by Fundación Cataruben and during the field visit,

Versa Expertos en Certificación S.A.S. verified that the project presents the procedures related to co-benefits monitoring for the special categories. The project applies to the Orquidea category

Versa Expertos en Certificación S.A.S. based on the results of the Activities developed, declares for all intended users that the CO2BIO project of the Catruben Foundation, complies with the principles established by ISO 14064-2:2019, ISO 14064-3:2019 and BioCarbon Standard, are within the level of assurance and materiality and are free of material errors. This statement is issued and addressed to BioCarbon Standard and other interested parties.

Assurance level: 95 %.
Legal agreement no.: VERSA-P-0266
Material discrepancy: 5 %.

9 Facts found after verification

This Audit states that it has not found any findings for the CO2BIO project, subsequent to the verification process.

Annex 1. Competence of team members and technical reviewers

Members of the verification team and technical reviewers.

Full name	*Position/Role*

Joaquin Emilio Montealegre Villanueva	*Lead Auditor*
Wilson López	*Technical Expert*
Juan Camilo Arroyave	*Technical Expert Reviewer*
Julián Ávila B.	*Technical Reviewer*
Camilo Andrés Montaña Salamanca	*Endorser*

Joaquin Emilio Montealegre Villanueva, Lead Auditor

Forestry Engineer, Specialist in Renewable Natural Resources Management, with experience in coordination, execution and environmental monitoring. I obtained my degree in Forestry Engineering in 1990, I worked for the company Maderas de Urabá S.A. - Maduraba, based in Urabá Chocoano in forest inventories, later experience in environmental consulting until 2003.

Senior Coordinator in Environment, Industrial Safety and Communities in the oil & gas industry, for exploration and development projects of oil fields in the Counties of Putumayo, Casanare and Meta. Design and execution of compensation plans and environmental investments from 2003 to 2013.

Subsequently, since January 2014 as biotic reviewer in the National Authority of Environmental Licenses - ANLA of the Ministry of Environment and during the years 2019 and 2020, as technical leader and as Biotic Reviewer in the Subdirectorate of Evaluation of Environmental Licenses SELA of ANLA for the Group of Hydrocarbons. During the second semester of 2023, leader from the technical aspects in a pilot group for Environmental Complaints Attention created in the Sub-Directorate of Environmental Licenses Follow-up of ANLA.

Forestry expert in the certification processes for access to Carbon Credits for REDD+ projects with the certifying company VERSA, in:

- *The Caquetá river basin, Huitora and Coropoya indigenous communities, Municipality of Solano, Caquetá County, Colombian Amazon;*
- *With the indigenous and Afro communities of Alto Baudó, Municipalities of Quibdó, Istmina and Baudó in the County of Choco, Colombia,*
- *REDD+ AWIA TUPARRO +9 Project, in the Amazon and Orinoquia Regions, Counties of Casanare, Guainía and Vichada, Colombia.*

Participation in GHG validation and verification trainings

Participation in the training program on "PlanetAI Nature Space (PNS) Standard and

Methodologies for Validation and Verification of versions: Standard version 2.0, August 2024; Forest Carbon Methodology - PNSS0000202 AFOLU-REDD+, version 2.0, August 2024; Blue Carbon Methodology - PNSS 0000303 REDD+ version 1.0, March 2024, certificate issued on November 7, 2024.

BIOCARBON REGISTRY GHG Program Training, January 15, 2024 / group workshop, virtual 4 hours and Update on BioCarbon GHG Protocol version 3.4, October 18, 2024 4 hours, speaker Francy Ramirez, Biocarbon Registry.

COLCX GHG Program Training, January 15, 2024 / group workshop, virtual, 4 hours

ISO /IEC 17029:2019 and ISO 14065:2020 training, 23/April/2024, duration: 6 hours, speaker Germán García.

Green growth course: County Nacional de Planeación de Colombia and the Global Institute for Green Growth and the British Embassy in Colombia, consisting of 9 modules with 8 hours of study, June 27, 2021.

Ernesto Wilson López González, Technical Expert

Forestry Engineer, Master in Forestry and Environmental Conservation, with experience in: UNIVERSITY OF ANTIOQUIA, Faculty of Exact and Natural Sciences -CIEN-.

1) *Provision of personal services by the contractor for the development of Activities in which monitoring of terrestrial fauna and flora is performed, under the agreement CT-2021-000023 between UdeA and EPM.*
2) *Provision of personal services by the contractor for development of Activities in which monitoring of terrestrial fauna and flora is done, under the agreement CT2021-000023 between UdeA and EPM. Functions: A. Support the timely and effective execution of field work in the monitoring and inventory of flora Porce II and Porce III. B. Accompany the field work in the monitoring and inventory of the Porce II and Porce III flora. C. Elaborate the partial and final analysis and reports of the flora component of the monitoring and inventory program; deliver the respective annexes for the final reports Porce II and Porce III. D. Respond to the requirements requested by the University, EPM or any entity involved in the same. Quantify the aerial biomass of the forests from the structural data obtained in the field Porce II and Porce III.*
3) *Provision of personal services by the contractor in the development of the monitoring program of terrestrial flora and fauna in the cooperation agreement CT2021-000023 between EPM and the University of Antioquia.*
4) *Carry out the monitoring of terrestrial flora and the study of secondary succession of vegetation in the protection strip of the Amani reservoir of the hydroelectric power plant miel I.*
5) *Contract for the provision of services in the execution of professional personnel in forestry engineering or related areas, with experience equal to or greater than*

two years in flora studies, permanent plots and biomass calculations.

6) *Estimation and analysis of aerial biomass and carbon stored per unit of time in the project "Monitoring and follow-up plan of the physical biotic component, ninth monitoring of fauna and vegetation in the area of direct influence of the Porce II and Porce III reservoirs.*
7) *"Joaquin Antonio Uribe" BOTANICAL GARDEN FOUNDATION. From July 03, 2018 to July 30, 2018 and from September 25, 2018 to February 25, 2019. Project Coordinator.*

8) SNC-LAVALIN. From February 20, 2012 to April 15, 2014. Position: environmental professional, forestry engineer. Duties and responsibilities: Prepare vegetation cover maps - CORINE Land Cover methodology -, biomes and ecosystems in the environmental management measures for the forest biotic component, according to the Terms of Reference HTER -105 for integrity projects in the hydrocarbon transport system.

Participation in GHG validation and verification trainings

Participation in the training program on "PlanetAI Nature Space (PNS) Standard and Methodologies for Validation and Verification of versions: Standard version 2.0, August 2024; Forest Carbon Methodology - PNSS0000202 AFOLU-REDD+, version 2.0, August 2024; Blue Carbon Methodology - PNSS 0000303 REDD+ version 1.0, March 2024, certificate issued on November 7, 2024.

BIOCARBON REGISTRY GHG Program training, January 15, 2024 / group workshop, virtual 4 hours and Update on BioCarbon GHG Protocol version 3.4, October 18, 2024 4 hours, speaker Francy Ramirez, Biocarbon Registry.

Two training courses on ISO norms referring to GHG standards (ISO 14064-1:2018; 14064-2:2019; 14064-3: 2019) in the years 2024 and 2015 course for developers and auditors for carbon projects. Additionally, in 2011 he participated in the field data collection for the validation of LIDAR images for the calibration of allometric models for biomass and carbon estimates in the Colombian Amazon and the proposal of wood debris measurement for the proposals developed by IDEAM in the national and subnational biomass-carbon estimation protocols in Colombia. He has also participated in the measurement and analysis of biomass dynamics in the Porce II power plant of EPM as part of the monitoring of the REDD+ EPM project.

Course: International GHG Standards (ISO 14064-1:2018; 14064-2:2019; 14064-3: 2019). Bogotá, April 5 to 18, 2024, duration: 24 hours. Experts Group SAS.

Course: Training of Forest Carbon Project Developers and Auditors, held between July and November 2015 in the city of Bogotá D.C., with an intensity of 72 hours. Fundación Natura and the Colombian Institute of Technical Standards and Certification - ICONTEC, within the framework of the initiative MECANISM FOR VOLUNTARY MITIGATION OF GREENHOUSE GASES IN COLOMBIA - MVC COLOMBIA.

Julián Camilo Ávila Ballesteros, Revisor Técnico

Environmental Engineer, passionate about Management Systems with work experience in processes under ISO 14064-1:2018 (Elaboration and Audit of Carbon Footprints), implementing mitigation strategies focused on sustainability and carbon neutrality. Additionally, I possess outstanding competence in the Validation and Verification of processes related to the assessment of Greenhouse Gas (GHG) Compliance of renewable energy projects, based on ISO 14064-2:2019, 14064-3:2019 and carbon credit standards. Experience also in areas such as ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018, in which he has led processes in accordance with HSEQ standards.

In VERSA he participated as Coordinator and supervisor of all evaluation Activities of the greenhouse gas validation and verification body and other services related to sustainability and environment. Accompaniment in the transition of the ISO 17029:2019 Standard for Accreditation before ONAC. Review projects in accordance with the guidelines: Resolution 1447 of 2018 and Law 2294 of 2024.

In VERSA he has been leader in validation and verification activities of GHG reduction and removal projects and Corporate Greenhouse Gas Inventories, in accordance with the requirements of the management system, the standards applicable to the service and the criteria of the GHG program when applicable. Documentary review, findings, completion of audit plan and audit risk assessment.

Juan Camilo Arroyave

Forestry Engineer and Geographic Information Systems Specialist from the National University of Colombia, with more than 7 years of experience in supporting Nature Based Solutions (NBS) projects to implement actions aimed at reducing Greenhouse Gas (GHG) emissions. This through the management of Geographic Information Systems (GIS) and Remote Sensing (RS) in the Monitoring, Reporting and Verification (MRV) of REDD+ and ARR projects.
In the GIS computer sector, Camilo stands out for the management of geospatial analysis and interpretation, georeferencing, processing of Landsat, Sentinel, Rapideye, ALOS AVNIR 2, Planet Scope images, and use of raster and vector information in the classification and monitoring of land cover from satellite images. Also in the use of different GIS software and Google Earth Engine that provide innovative ideas.

Camilo Andrés Montaña Salamanca

Mechanical engineer and project manager with more than 12 years of experience in compliance assessment and monitoring of technical standards. Former head of the technical regulations group of the Superintendence of Industry and Commerce. He has completed courses for leading formulators for the validation and verification of greenhouse gas (GHG)

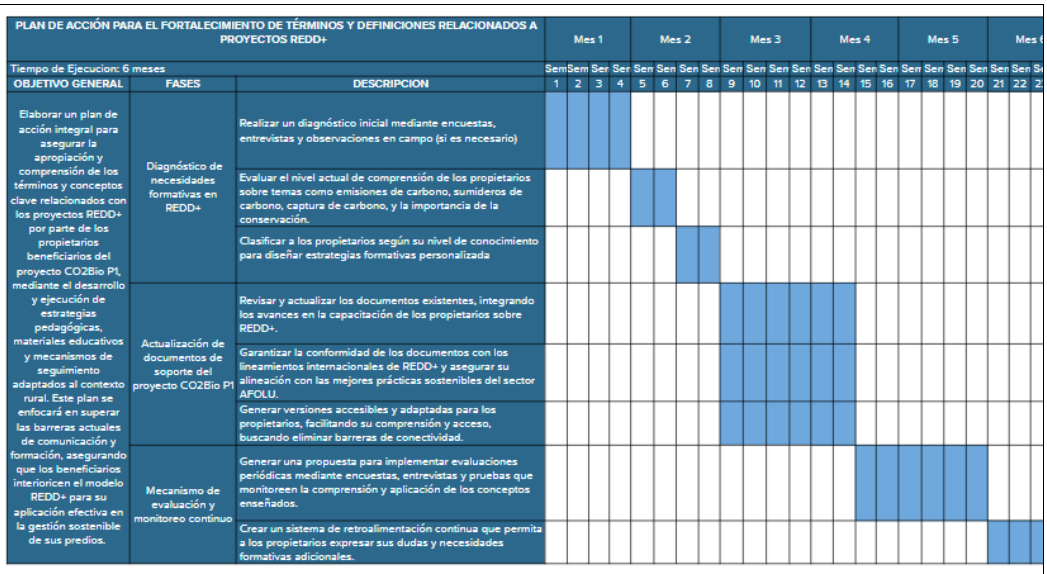
mitigation projects given by Asocarbono-Asocec. He currently serves as General Director of Versa Expertos en Certificación SAS.

Annex 2. Clarification requests, corrective action requests and resubmission action requests.

Finding Nº	*1*	*Finding type:*	*CAR*		*CL*	***X***
Description:	*Methodological Document AFOLU Sector / BCR0002 Quantification of GHG Emission Reductions from REDD+ Projects. Version 4.0. May 27, 2024. Numeral 4. Scope, paragraph b.*					
Objective Evidence	*The owner of the CO2BIO project does not guarantee the appropriation of knowledge by landowners regarding the scope of REDD+ projects.* *The internalization of the specific REDD+ definition is not documented; and it is not supported how to achieve the reduction of emissions due to unplanned deforestation; and the reduction of emissions due to forest degradation with a focus on landowners in a REDD+ project.* *During the field audit, it was observed in some of the properties visited that some activities are implemented that are in contrast to a REDD+ project, such as clearing the undergrowth in forest areas, where, in addition, the importance of fencing some areas to prevent cattle grazing inside the forest is not evident, which in turn deteriorates the natural regeneration.*					
Action Plan	*The Cataruben Foundation carried out several activities, both virtual and face-to-face, to strengthen the knowledge of ecosystem managers within the framework of the CO2BIO project. To this end, a comprehensive training plan was implemented, covering three components: technical-environmental, biodiversity and gender equity.* *One of the topics covered in the technical-environmental component was the importance of safeguards. Basic concepts on REDD+ Activities were addressed and each of the safeguards were developed in detail, including transparency and access to information, reversal risk management and leakage mitigation. 47 people attended this exchange of knowledge, of which 27 were women and 20 were men. The report of this Activity was included in the Activity I1 of technical capacity building (See: Annexes Folder / 1. Project Activities / ID.1 / Report Activity I1- CO2BIO technical capacity building (2021-2023)).*					

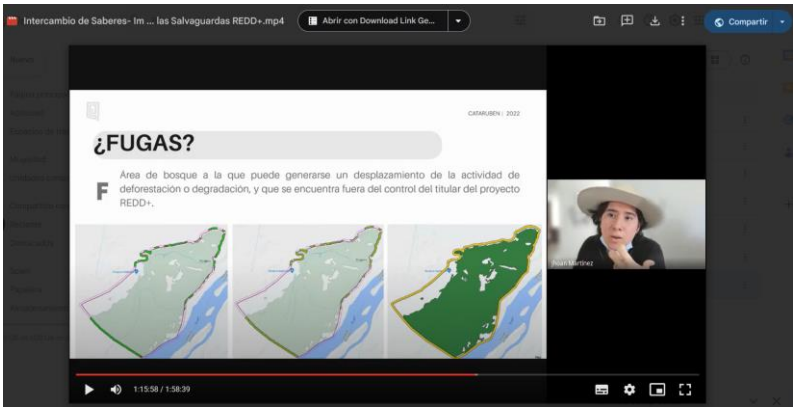
	 *Figure 1. Knowledge exchange on the Importance of Safeguards. Date: September 14, 2022* *These training sessions, knowledge exchanges, specialized forums and practical workshops have addressed key issues such as natural regeneration, biodiversity conservation, sustainable forest management, conservation figures, carbon ownership, governance models and safeguards, among others. These efforts not only seek to transmit technical knowledge, but also to raise awareness of the importance of taking action to prevent deforestation and ecosystem degradation.* *On the other hand, recognizing that many of the ecosystem managers come from contexts with limited educational levels, we have adjusted the project's communication to make it understandable and relevant to their reality. Instead of focusing on technical terms such as REDD+, we focus on clearly explaining how their daily actions prevent deforestation and improve forest management, contributing to carbon sequestration and emissions reductions.* *Practical training allows them to understand how their activities directly impact ecosystem conservation and climate change mitigation, even if we do not always explicitly mention the term REDD+. The tools we provide ensure that they implement these practices effectively on their properties, encouraging understory protection, natural regeneration and livestock exclusion in key areas.* *Even so, we have identified the need to reinforce these educational processes, and we will continue to generate additional materials such as illustrated guides, explanatory videos and fact sheets. These resources will help them understand in a more accessible way how their daily practices contribute to forest conservation and emissions reduction, facilitating a greater appropriation of knowledge.*
VVB Evaluation	*Round 1:* *What did they evidence in the field regarding the educational level of the landowners belonging to the CO2BIO project is varied, which does not imply NO appropriation of REDD+ terminology,. This appropriation should be ensured at least by the 42 landowner beneficiaries of the project.* *The supporting document called "REPORT: Capacity building for men and women linked to the project, in technical, environmental, social and administrative-financial components, to strengthen decision making in favor of the project objectives.*

	Sub-themes: Technical and environmental", does not contain the necessary argumentation to fill the gap caused by the lack of appropriation, internalization and assimilation of REDD+ projects. It is a continuous work on the technical definitions of the project, to which they belong and from which tangible and lasting environmental and economic benefits originate in time and in their properties. The support dates from previous years, which should be redesigned with the approach of significance and definition for the Agriculture, Forestry and Other Land Use sector AFOLU and Reducing Emissions from Deforestation, Degradation and forest conservation, sustainable management or enhancement of carbon stocks in REDD+ forests. ***There is no evidence of a document that guarantees the appropriation of the REDD+ model, updated to 2024.***
Action plan	*Round 2* *In response to the identified finding, a Comprehensive Action Plan has been developed to ensure ownership and understanding of key terms and concepts related to REDD+ projects for the landowner beneficiaries of the CO2BIO project. The plan has been developed with the following key components:* ● *Design of customized educational strategies: Training strategies will be structured according to the level of knowledge of the landowners, with the objective of facilitating the understanding of key REDD+ concepts.* ● *Creation of educational materials adapted to the rural context: Visual and didactic materials focused on the local reality will be prepared, with clear and practical examples to facilitate learning.* ● *Definition of monitoring and evaluation mechanisms: Tools such as surveys, interviews and field visits have been planned to monitor the assimilation of the concepts once the implementation of the plan has started.* ● *Communication plan: An accessible and continuous communication system has been designed to address the doubts and additional training needs of the owners, ensuring technical support during implementation.* *The execution of the Action plan for the strengthening of terms and definitions related to REDD+ projects will be implemented starting in the last quarter of 2024. (See: Annexes Folder / 1. Project Activities / ID I.1 / Action plan - Knowledge Appropriation / Timeline - Action plan implementation).*

VVB Evaluation	*Round 2:* *The action plan formulated is oriented to the recognition by the landowners who are members of the CO2BIO project to internalize the responsibility of a project classified as REDD+. Its applicability will be subject to future verifications with indicators that support the strength of knowledge and ownership of the project by the landowners involved in the project implementation process.* *There is evidence of a document that guarantees ownership of the REDD+ model, updated to 2024.* *Finding satisfactorily resolved, no additional clarifications are required.*					
Conclusion	*Close Finding*	***X***	*Mantain Finding*		*FAR*	

Finding Nº	*2*	*Finding type:*	*CAR*		*CL*	*X*
Description:	*Methodological Document AFOLU Sector / BCR0002 Quantification of GHG Emission Reductions from REDD+ Projects. Version 4.0. May 27, 2024. Section 9.3. Leakage area, paragraph a.*					
Objective Evidence	*The owner of the CO2BIO project does not present support on didactic exercises focused on the owners' understanding of the term "Leakage". It was evidenced in the field that the owners are not clear at what moment they incur in possible leaks due to omission or ignorance.* *There is no evidence of exercises oriented to the gradual replacement of some techniques that may cause these leaks and thus to prevent them from being transferred to surrounding or neighboring areas.* *During the field audit phase it became evident that the owners have not understood the issue of leakage, for example, to meet their demand for wood, they buy it from neighboring properties, so as not to record deforestation or degradation in their properties. It is possible that these leaks will not be detected in the monitoring, since the area identified for leaks is a buffer area of 500 meters around the forested area.*					

Action Plan	*The Cataruben Foundation carried out several activities, both virtual and face-to-face, to strengthen the knowledge of ecosystem managers within the framework of the CO2BIO project. To this end, a comprehensive training plan was implemented, covering three components: technical-environmental, biodiversity and gender equity.* *One of the topics covered in the technical-environmental component was the importance of safeguards. Basic concepts on REDD+ Activities were addressed and each of the safeguards were developed in detail, including transparency and access to information, reversal risk management and leakage mitigation. The report of this Activity was included in the Activity I1 report on technical capacity building (See: Annexes Folder / 1. Project Activities / ID.1 / Report Activity I1-CO2BIO Technical Capacity Building (2021-2023)).*  *Figure 2. Knowledge exchange on the Importance of Safeguards.* *Date: September 14, 2022* *In this space, the ecosystem managers had the opportunity to clarify their doubts and acquire a deeper understanding of the key aspects related to the concept of leakage, providing information on the Activities that could compromise the conservation objectives of the project, emphasizing the importance of avoiding the displacement of Activities that generate emissions to surrounding areas.* *Additionally, one of the activities carried out to internalize conservation actions is the coordination of pre-farm implementation plans, carried out one by one with the ecosystem managers. During this exercise, various sustainable alternatives were socialized, such as the implementation of wood energy banks (known locally as firewood banks), which provide a renewable source of fuel and reduce the pressure on the forests. Other options have also been promoted, such as agroforestry, the use of live fences and the adoption of cover crops, all designed to strengthen the project activities that can be implemented in their properties without compromising the integrity of protected ecosystems (See: Annexes Folder / 1. Project Activities / ID I.2 / Pre-farm implementation plans / Field records).* *These actions have been complemented by the project's governance roundtable, a strategy that promotes participatory governance and articulation among stakeholders. The objective of this initiative is to strengthen environmental leadership and encourage the adoption of good practices among ecosystem managers, ensuring a responsible community approach to natural*

	resource management. As part of the improvement process, we seek to strengthen knowledge and provide tools and alternatives to mitigate leakage and properly manage forest areas, focusing on three main areas: 1. *Capacity Building: Existing training will be continued, incorporating specific modules to understand and manage leakage. In face-to-face meetings, clear information will be provided on Activities that could compromise project objectives and practical tools will be offered to manage land in a sustainable manner.* 2. *Sustainable alternatives: Incentives will continue to be provided to prevent displacement of emissions and promote desirable practices, such as the use of wood energy banks, agroforestry and forest governance.* 3. *Local collaboration: We will work hand in hand with authorities and community networks to strengthen governance in the project areas, creating opportunities for landowners to share knowledge and experiences with neighboring properties, thus fostering a network of best practices in the project's areas of influence.* *On the other hand, the leakage area identified for the project covers a total area of 4,931 hectares, which represents 57.0 % of the total project area. In this area, forest cover that meets the official definition of forest in Colombia is constantly monitored, covering 710.8 hectares of forest (Cartographic Information Geodatabase). To ensure accurate detection of leakage, we implemented rigorous satellite monitoring, supported by national mapping data, such as the Natural Forest Area Maps for Colombia, complemented by advanced remote sensing techniques.* *This robust monitoring approach ensures that any changes in forest cover are detected, strengthening the project's ability to identify leakage and mitigate environmental impacts..*
VVB Evaluation	*Round 1* *Although the document in question (1. Project Activities / ID.1 / Report Activity I1- Strengthening of CO2BIO technical capacities (2021-2023))) in its Items 5.3, 5.4 and 5.6, highlights the importance of biodiversity and mentions the issue of leakage, socialization that the report indicates took place in the year 2022. However, the three (3) items indicated to "strengthen knowledge and provide tools and alternatives to mitigate leakage and adequately manage forest areas" are considered in line and aligned with the Methodological Document Sector AFOLU / BCR0002 Quantification of GHG Emission Reductions from REDD+ Projects. Version 4.0. May 27, 2024. Item 9.3. Leakage area, subparagraph a.*

Conclusion	*Close Finding*	***X***	*Mantain Finding*		*FAR*	

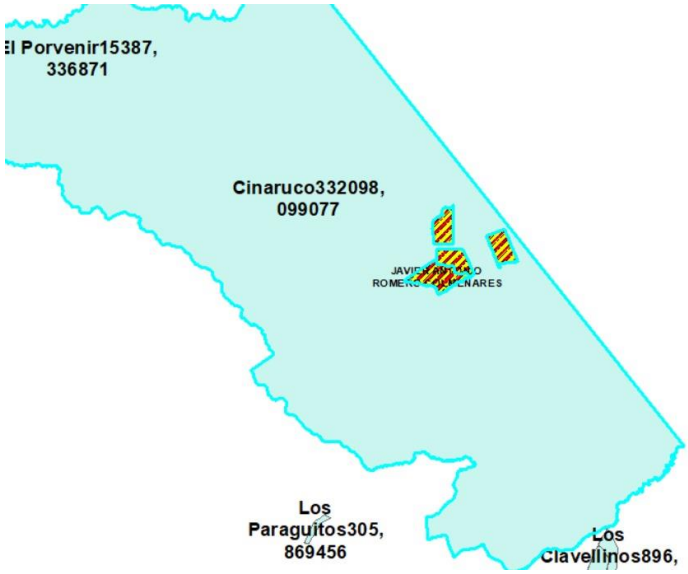
Finding Nº	*3*	*Finding type:*	*CAR*	*X*	*CL*	
Description:		*Methodological Document AFOLU Sector / BCR0002 Quantification of GHG Emission Reductions from REDD+ Projects. Version 4.0. May 27, 2024. Monitoring of REDD+ project permanence. "disputes related to land tenure, conflicts between project stakeholders."*				
Objective Evidence		*The owner of the CO2BIO project does not attach evidence of the actions to be implemented to prevent possible conflicts that could jeopardize the permanence of properties in the project and thus maintain the function of conserving carbon stocks.* *There is no evidence of an action plan document with strategies for possible conflicts with neighbors and neighbors of the CO2BIO project.*				
Action Plan		*An action plan was prepared (See: Folder Annexes / 2. Compliance REDD+ Safeguards / 2.6. Risks Land Tenure Disputes / Action plan Land Tenure Disputes and Conflict Between Project*				

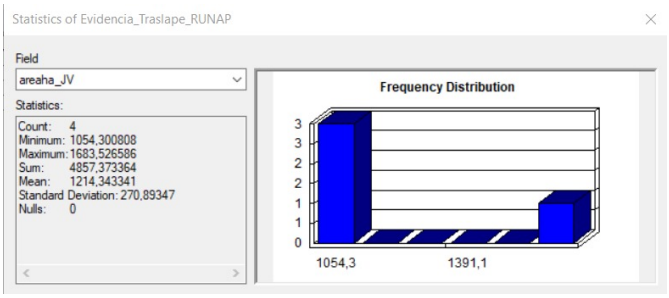
	Stakeholders) was prepared by the project holder, which details the process to ensure the legality and security of land ownership. This plan includes verification of titles, ongoing review of tenure to detect changes or irregularities, and regular monitoring to prevent future conflicts. It also establishes a communication and dialogue mechanism to resolve disputes between neighbors and ethnic communities within the project territory. *The process is aligned with national regulations and follows Cataruben's guidelines for linking or disassociating stakeholders, thus guaranteeing the legal security of the project. The Plan was prepared considering the criteria and guidelines of the BCR Standard "Empowering Sustainability, Redefining Standards" (version 3.4 of June 28, 2018), the Sector Afolu Methodological Document "Quantification of GHG Emission Reduction REDD+ Projects BCR002" (version 4.0 of May 27, 2024) and the Tool "Permanence and Risk Management" (version 1.1 of March 19, 2024).*
VVB Evaluation	*Round 1:* *The document that is part of "Annexes", called: "ACTION PLAN FOR THE MANAGEMENT OF DISPUTES RELATED TO LAND TENURE, CONFLICTS BETWEEN PROJECT ACTORS", will be part of the strategy implemented by the holder of the CO2BIO project. To ensure the management to prevent possible conflicts that put at risk the permanence of the properties in the project and thus maintain the function of conserving carbon stocks.* *The document states that "**However, although the CO2BIO project is being developed on private property, the Cataruben Foundation strictly respects the rights of the ethnic communities and guarantees that its activities do not interfere with the territories of these groups**".*

Conclusion	*Close Finding*	***X***	*Mantain Finding*		*FAR*	

Finding Nº	*4*	*Finding type:*	*CAR*	*X*	*CL*	
Description:	*Resolution 1447 of 2018, Article 14. Status of the initiative in the RENARE and article 43.*					
Objective Evidence	*The owner of the CO2BIO project does not present cartographic evidence of possible conflicts due to the proximity or contiguity of the project properties with indigenous reserves and RUNAP areas.* *There is no evidence of a strategy to reduce the risk of legal action in the event of future conflicts with communities neighboring the CO2BIO project. This in the event of claims for boundaries or limits of the properties and to ensure that there is no need for prior consultation processes (Law 2294 of 2023, Article 230, paragraph 2, for AFOLU initiatives).*					
Action Plan	*An update has been made to the REDD+ Geodatabase See Folder: Annexes / 6. Geospatial / 6.2 Geodatabase / 6.2.1 REDD+ Geodatabase, incorporating two new feature classes called "Evidence of no overlapping Indigenous Reserves" and "Evidence of no overlapping RUNAP" within the feature dataset "Restricted_access". These shapefiles aim to validate that the CO2BIO project does not present overlaps or conflicts related to boundaries or claims of Legalized Indigenous Reserves or Protected Areas.* *The shapefile corresponding to "Evidence of no overlapping Indigenous Reserves" does not contain attributes, i.e. it appears empty, which confirms that, after performing the*					

	corresponding statistical operation, no type of geographic conflict was found between the entities involved, thus guaranteeing the territorial integrity of the project. *On the other hand, the "Evidence of RUNAP overlaps" shapefile identifies properties within the category of Cinaruco National Integrated Management District, located in the eastern part of Arauca County, specifically in the jurisdictions of the Municipalities of Arauca (Cinaruco and Matal de Floramarillo) and Cravo Norte (Juriepe, Lejanías del Juriepe, Cinaruco, La Virgen and Buenos Aires).* *The identified overlap does not represent a risk for the project, since the areas were linked in 2015, while the declaration of the Cinaruco DNMI was made on July 31, 2018, through Resolution 1441 of the Ministry of Environment and Sustainable Development, "Whereby the Cinaruco National Integrated Management District is reserved, delimited, bounded and declared". This time lag ensures that there are no regulatory or legal conflicts that could affect the viability of the project.* *To address potential conflicts related to territorial boundaries between private property owners and ethnic communities in the CO2BIO project, dialogue spaces will be organized in the presence of guaranteed entities. These spaces will promote open and respectful communication, allowing all parties to express their concerns and expectations. This strategy is contemplated in the Action plan for Land Tenure Disputes (See: Annexes Folder / 2. Compliance REDD+ Safeguards / 2.6. Risks Land Tenure Disputes / Action plan Land Tenure Disputes and Conflict Between Project Stakeholders).* *To avoid the need for prior consultation processes, the Cataruben Foundation submitted a Request for Determination and Proceeding of Prior Consultation before the National Authority for Prior Consultation of the Ministry of Interior, for which this entity issued Resolution No. ST-1477 of October 29, 2021, where it resolves that prior consultation does not proceed for the indigenous, black, Afro-Colombian, Raizal and Palenquero communities located in the Municipalities of Cravo Norte (Arauca), Hato Corozal, Nunchía, Orocué, Paz de Ariporo, San Luis de Palenque, Tamara, Trinidad and Yopal (Casanare), as well as in the Municipality of Santa Rosalía (Vichada). This process is also detailed in the Action Plan for Land Tenure Disputes (See folder: Annexes / 2. Compliance with REDD+ safeguards / 2.3. Safeguard C / 2.3.3.)* *The Plan was developed considering the criteria and guidelines of the BCR Standard "Empowering Sustainability, Redefining Standards" (version 3.4 of June 28, 2018), the Sector Afolu Methodological Document "Quantification of GHG Emission Reduction REDD+ Projects BCR002" (version 4.0 of May 27, 2024) and the Tool "Permanence and Risk Management" (version 1.1 of March 19, 2024).*
VVB Evaluation	*Round 1* *The project owner presents cartographic evidence that identifies possible conflicts given the proximity or contiguity of the project properties with indigenous reserves and RUNAP areas.*

	Special emphasis is made regarding the boundaries of the DNMI Cinaruco to which the holder of the CO2BIO project states: *"The identified overlap does not represent a risk to the project, since the areas were linked in 2015, while the declaration of the DNMI Cinaruco was made on July 31, 2018, through Resolution 1441 of the Ministry of Environment and Sustainable Development, 'Whereby the National District of Integrated Management Cinaruco is reserved, delimited, bounded and declared'.* *This time lag ensures that there are no regulatory or legal conflicts that could affect the viability of the project". The strategy proposed in the Action Plan for Land Tenure Disputes (See: Annexes Folder / 2. Compliance REDD+ Safeguards / 2.6. Risks Land Tenure Disputes / Action plan Land Tenure Disputes and Conflict Between Project Stakeholders). This audit considers that this will reduce the risk of legal action in the event of future conflicts with communities neighboring the CO2BIO project.* 

	  *Nevertheless, this finding needs to be verified in the future.*
Action plan	*Round 2: In accordance with the recommendation for future verification, we ratify our commitment to guarantee the quality of the information presented. We understand the importance of mitigating the risks of legal action in the face of potential land conflicts. Therefore, we will continue to work on mitigating any potential land conflicts related to the Cinaruco National Integrated Management District. Ensuring that the actions implemented, as described in the Action plan Land Tenure Disputes and Conflict Between Project Stakeholders, are periodically reviewed and updated to ensure their effectiveness and alignment with national standards. In addition, it is important to note that the goals of the Cinaruco DNMI are aligned with the conservation and sustainable development objectives of the CO2BIO project, which allows us to continue working in a complementary manner in the protection of ecosystems without generating conflicts of interest.* *Based on the Action Plan, strategies have been established to guarantee harmonious coexistence between private property owners and neighboring communities, promoting open dialogue and cooperation. The spaces for discussion and resolution of possible disputes will be focused on ensuring that both parties can coexist in mutual agreement, always respecting the territorial rights and conservation objectives of each party.* *This approach ensures that future legal risks are mitigated and that, should claims arise, clear and effective mechanisms are in place to resolve them. We will continue to advance the implementation of these strategies to reduce any risk of legal action related to property boundaries and limits, in accordance with the principles of REDD+ safeguards.*
VVB Evaluation	*Round 2:* *The Action Plan for Land Tenure Disputes and Conflict Among Project Stakeholders, although it does not explicitly involve the relationship with the DNMI Cinaruco, is the tool to be implemented in the event of such a case. However, the document establishes guidelines to address any type of conflict that may arise in the future between the CO2BIO project and other*

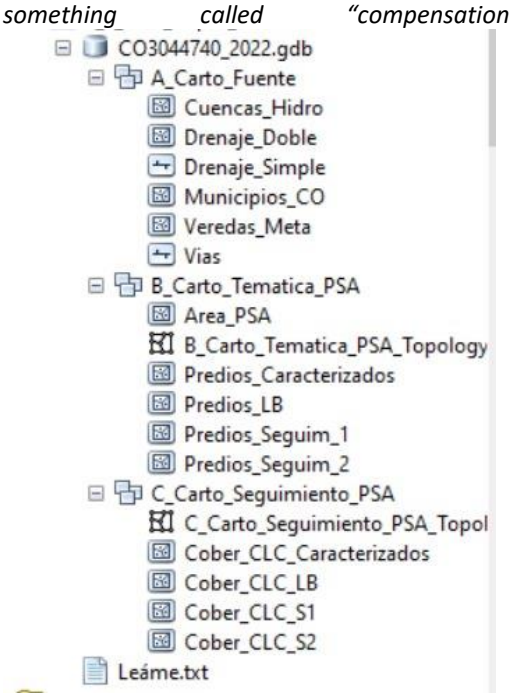
	groups or legal entities of interest in the area. This finding requires future verification, given its applicability throughout the life of the project. *Finding requires future verification*					
Conclusion	*Close Finding*		*Mantain Finding*		*FAR*	***X***

Finding Nº	*5*	*Finding type:*	*CAR*		*CL*	***X***
Description:	*Resolution 1447 of 2018, Article 14. Status of the initiative in the RENARE and Article 43.*					
Objective Evidence	*The owner of the CO2BIO project does not evidence in its cartography and in a georeferenced manner the areas in the project properties that are currently benefiting from the implementation of biotic compensation plans. These are due to environmental licensing processes or from compensation obligations for obtaining environmental permits or authorizations issued by the regional or national environmental authority, as appropriate. Submit updated cartography including polygons of areas of the project properties destined for the establishment of biotic compensations by third parties.* *It should be clarified that these properties with offsets evidenced in the field visit by the audit team do not currently conflict with the forested areas where the GHGs of this project are measured.*					
Action Plan	*An update has been made to the REDD+ Geodatabase, See Folder: Annexes / 6. Geospatial / 6.2 Geodatabase / 6.2.1 REDD+ Geodatabase, incorporating a new feature dataset called "Compensation Zones", which includes the areas where environmental compensation has been implemented as part of the Payments for Environmental Services program. It should be noted that the REDD+ areas of the project do not overlap with the identified compensation zones, ensuring the correct delimitation of the project.*					
VVB Evaluation	*Round 1:* *The holder of the CO2BIO project, records evidence by updating the cartography in which includes in Annexes / 6. Geospatial / 6.2 Geodatabase /6.2.1 REDD+ Geodatabase, incorporating a new feature dataset called "Compensation zones":*					

MODELO DE DATOS DE LA GEODATABASE PARA LA PRESENTACION DE CARTOGRAFICA DEL MONITOREO DE BOSQUE (2020-2023) - PROYECTO CO2BIO P1 VERIFICACIÓN 3

GEODATABASE	DATASET	FEATURE CLASS	GEOMETRÍA
REDD CO2BIO P1 V3.gdb	Acceso_Restringido	Categorías_Runap	Polígono
		Consejos_Comunitarios_Comunidades_Negras	Polígono
		Resguardos_Indígenas_Legalizados	Polígono
		Zonas_Reservas_Campesinas	Polígono
	Area_de_Fugas	Area_Fugas	Polígono
		Bosque_AF_Monitoreo_Verificacion2	Polígono
		Bosque_AF_Monitoreo_Verificacion3	Polígono
		Fragmentación_AF_Verificacion2	Polígono
		Fragmentación_AF_Verificacion3	Polígono
	Area_de_Proyecto	Predios_REDD	Polígono
		Bosque_AP_Monitoreo_Verificacion2	Polígono
		Bosque_AP_Monitoreo_Verificacion3	Polígono
		Fragmentación_AP_Verificacion2	Polígono
		Fragmentación_AP_Verificacion3	Polígono
	Observaciones_Insitu	Puntos_Control_AcATaMa	Punto
		Puntos_REDD_ODK	Punto
	Proyectos_Carbono	Areas_proyecto_BCR_Estandar	Polígono
		Areas_proyecto_CERCARBONO_Estandar	Polígono
		Areas_proyecto_COLCX_Estandar	Polígono
		Areas_proyecto_VERRA_Estandar	Polígono
	Modelo_Bosque_2023	-	Ráster

After reviewing the annex, it is not possible to visualize in the dataset and in the cartography something called "compensation zones" is not observed.



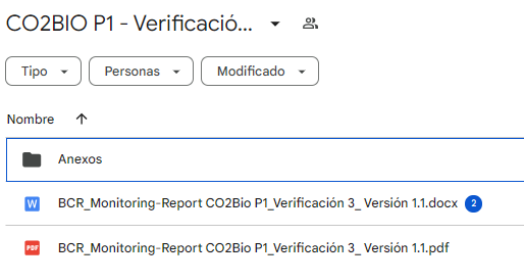
Action plan	*Round 2:* *Based on the evaluation of the OVV Round 1, the cartographic data dictionary corresponding to the Geodatabase (GDB) "REDD CO2BIO V3" has been updated. In this update, the dataset*

"offset_zones" was included, which is available in the final version of the GDB in compressed format (.zip).

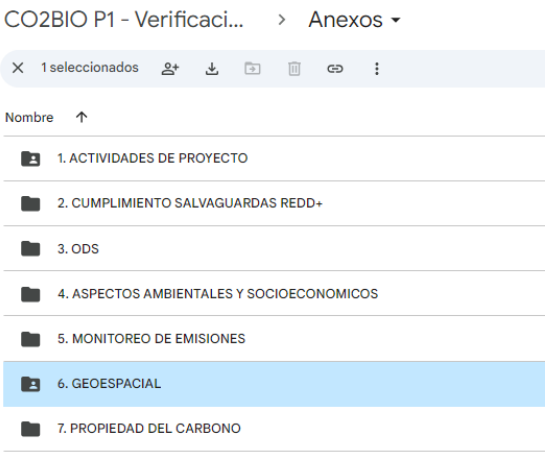
CO2BIO	MODELO DE DATOS DE LA GEODATABASE PARA LA PRESENTACION DE CARTOGRAFICA DEL MONITOREO DE BOSQUE (2020-2023) - PROYECTO CO2BIO P1 VERIFICACIÓN 3		
GEODATABASE	**DATASET**	**FEATURE CLASS**	**GEOMETRÍA**
REDD CO2BIO P1 V3.gdb	Acceso_Restringido	Categorías_Runap	Polígono
		Consejos_Comunitarios_Comunidades_Negras	Polígono
		Resguardos_Indígenas_Legalizados	Polígono
		Zonas_Reservas_Campesinas	Polígono
	Area_de_Fugas	Area_Fugas	Polígono
		Bosque_AF_Monitoreo_Verificacion2	Polígono
		Bosque_AF_Monitoreo_Verificacion3	Polígono
		Fragmentación_AF_Verificacion2	Polígono
		Fragmentación_AF_Verificacion3	Polígono
	Area_de_Proyecto	Predios_REDD	Polígono
		Bosque_AP_Monitoreo_Verificacion2	Polígono
		Bosque_AP_Monitoreo_Verificacion3	Polígono
		Fragmentación_AP_Verificacion2	Polígono
		Fragmentación_AP_Verificacion3	Polígono
	Observaciones_Insitu	Puntos_Control_AcATaMa	Punto
		Puntos_REDD_ODK	Punto
	Proyectos_Carbono	Areas_proyecto_BCR_Estandar	Polígono
		Areas_proyecto_CERCARBONO_Estandar	Polígono
		Areas_proyecto_COLCX_Estandar	Polígono
		Areas_proyecto_VERRA_Estandar	Polígono
	Zonas_Compensaciones	Compensaciones_Areproyecto	Polígono
		Cormacarena_Predios_PSA	Polígono
		Cormacarena_Predios_Zonas_Intervenidas_PSA	Polígono
		Ecopetrol_GDB_PM_APIAY_Compensacion	Polígono
		Ecopetrol_APE_CP09_Inversion1PorCiento_PG_OtrasCompensaciones	Polígono
		Ecopetrol_CP50_ODS02_Inversion1PorCiento_PG	Polígono
		Ecopetrol_GDB_PM_APIAY_Compensacion	Polígono
		Ecopetrol_MP_1P_Cubarral_ODS02_CompensacionBiodiversidad	Polígono
		Ecopetrol_MP_1P_ODS11_CompensacionBiodiversidad	Polígono
		Ecopetrol_PM_Cubarral_Compensaciones	Polígono
		Ecopetrol_VEX_1PC_Inversion1PorCientoPG	Polígono
		Ecopetrol_VEX_CA_Inversion1PorCiento_PG	Polígono
		Ecopetrol_VEX_CA_Inversion1PorCiento_PG_otrasCompensaciones	Polígono
	Modelo_Bosque_2023	-	Ráster

A review of the Geodatabase (GDB) was performed, confirming the presence of all the feature datasets specified in the updated data dictionary. Within the folder structure, the dataset titled "Compensation zones" was verified, which is correctly linked to its corresponding cartography. This file is located in the path: "CO2BIO - Verification 3 (2021 - 2023)/ Annexes/6. Geodatabase / 6.2.1. Geodatabase REDD+/ REDD CO2BIO V3.gdb ".

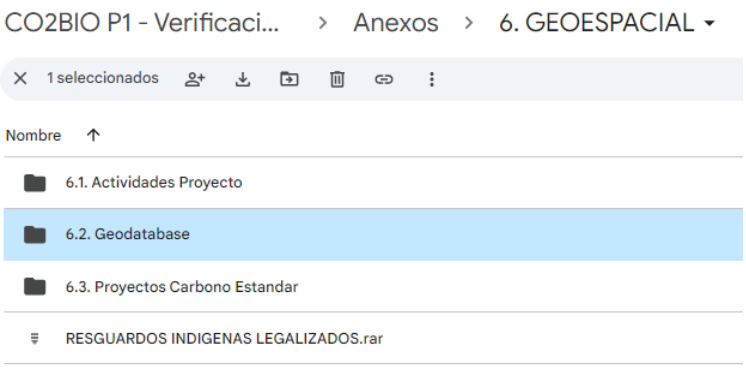
The following section shows the step by step for the identification of the GDB, which is located in the general folder of CO2BIO - Verification 3 (2021 - 2023):



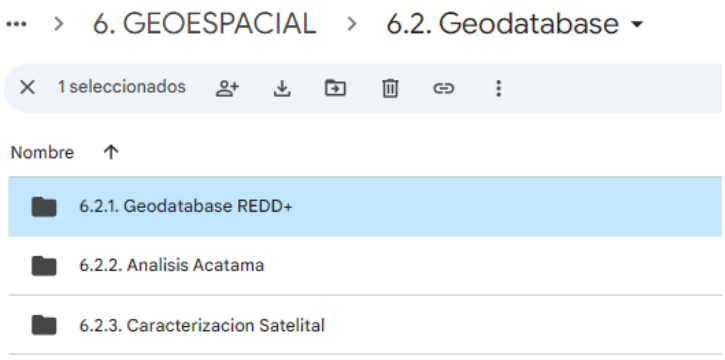
In attachments, we go to folder 6.geospatial.



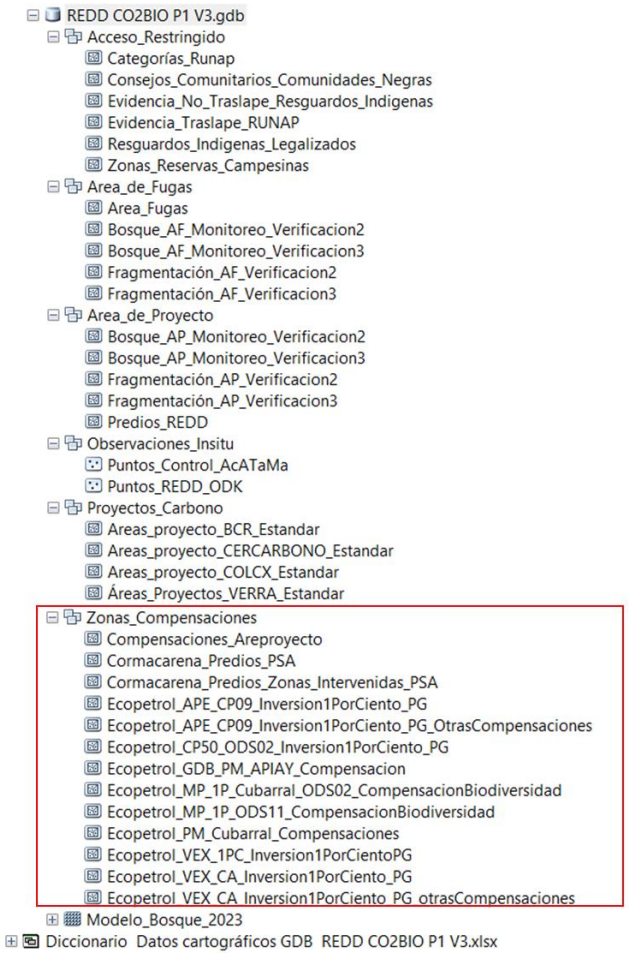
Geospatial folder 6. Geodatabase 6.2.



Finally, the GDB is located in the subfolder 6.2.1 Geodatabase REDD+.



When downloading the REDD CO2BIO V3 GDB, you can view the datasets corresponding to each feature class, as detailed in the data dictionary.



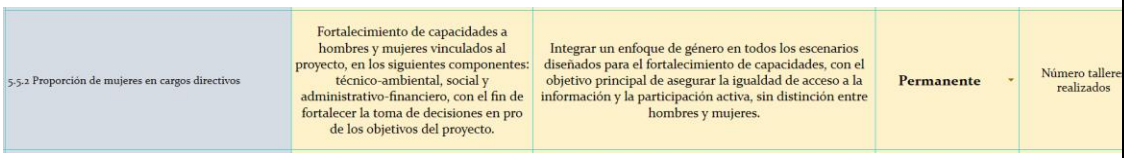
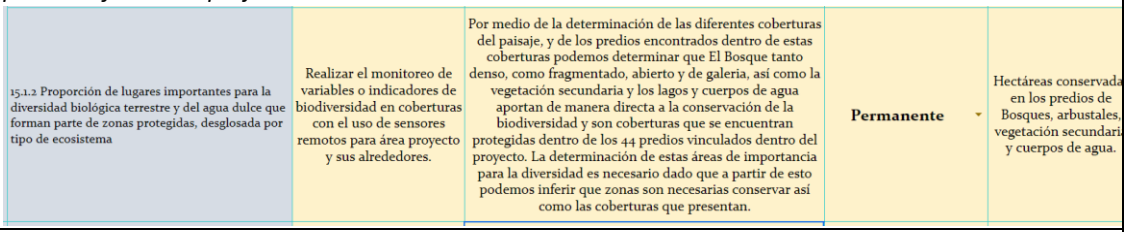
In the following path: "CO2BIO - Verification 3 (2021 - 2023)/ Annexes/6. Geospatial/ 6.1. General Procedures/ 6.1.1.2. Requests for compensation areas", you can see the requests and petition rights,

	which have been made by the Cataruben Foundation for the identification of conservation areas in the Counties where the project is located, which is still in the process of sending the information.					
VVB Evaluation	*Round 2.* *This audit evidences the update made to the REDD+ GEDATABASE and in the link: "CO2BIO - Verification 3 (2021 - 2023)/ Annexes/6. Geospatial/ 6.1. General Procedures/ 6.1.1.2. Requests for compensation areas, there is room for compensation areas, 1% investment and areas with benefits for Payments for Environmental Services, which correspond to areas in restoration processes originated by the compliance with environmental obligations of projects subject to environmental licensing.* *Finding satisfactorily resolved, no additional clarifications are required.*					
Conclusion	*Close Finding*	***X***	*Mantain Finding*		*FAR*	

Finding Nº	*6*	*Finding type:*	*CAR*		*CL*	*X*
Description:		*Methodological Document AFOLU Sector / BCR0002 Quantification of GHG Emission Reductions from REDD+ Projects. Version 4.0. May 27, 2024. Numeral 14.6 Quality control and quality assurance procedures.*				
Objective Evidence		*Documento Metodológico Sector AFOLU / BCR0002 Cuantificación de Reducciones de Emisiones de GEI de Proyectos REDD+. Versión 4.0. 27 de mayo de 2024. Numeral 14.6 Procedimientos de control y aseguramiento de la calidad.*				
Action Plan		*In response to the identified finding, we would like to clarify that the difference in the number of properties mentioned in the document "SECOND MONITORING DOCUMENT OF THE PROJECT" and those reported in the third verification is due to the following adjustments in the project:* *Property Buenavista I: This property was initially linked to the project, but during the internal verification process it was determined that it did not have eligible areas of Forest for the CO2BIO project. Therefore, it was decided to exclude it before the third verification. See folder: Annexes / 7. Carbon Property / Properties De-linked / Buenavista I / Termination Act Property Buenavista I.* *Property La Mapora: This property requested its disassociation from the project on a voluntary basis. The request was accepted and formalized, and is duly documented in the annexes of the third verification monitoring report. See folder: Annexes / 7. Carbon Property / De-linked Properties / Buenavista I / Termination Act Property La Mapora* *These modifications reduced the total number of properties to 42, consistent with the documentation presented at the third verification. Both changes are clearly supported in the corresponding annexes.*				
VVB Evaluation		*Round 1:* *This Audit considers the clarification acceptable and acknowledges throughout the document that there are 42 properties included in the CO2BIO project.*				
Conclusion		*Close Finding*	***X***	*Mantain Finding*		*FAR*

Finding Nº	*7*	*Finding type:*	*CAR*		*CL*	*X*
Description:	*Methodological Document AFOLU Sector / BCR0002 Quantification of GHG Emission Reductions from REDD+ Projects. Version 4.0. May 27, 2024. Numeral 14.6 Quality control and quality assurance procedures and ISO 14064-2. quality principles.*					
Objective Evidence	*The owner of the CO2BIO project will guarantee the quality of the project information. Documents were found that do not correspond to the format or do not have the necessary elements in relation to change control, version, maps without coordinate systems, grid, north and other minimum elements for the presentation of cartographic information; images not described or related to or in the text and formats that are not homogeneous in the documents. This is contrary to the quality principles of ISO 14064-2.* *These situations are present in the RM document and the Project Activities folder; verify these elements in the other folders and annexes submitted.*					
Action Plan	*We have carried out a complete review of the documents indicated, such as the Monitoring Report (MR), the Activities folder of the project and other annexes, verifying that they comply with the principles of ISO 14064-2. The formats were adjusted to include change control, and the cartographic information was updated in accordance with the provisions of Resolution 471 of 2020, which defines the minimum specifications for basic cartographic products in Colombia. This update has been reflected in the CO2BIO V3 Monitoring Report, the images linked to the content were adequately described.* *This effort ensures that the project meets the highest standards of accuracy and cartographic consistency, thus ensuring greater reliability in the monitoring and management of the areas involved.*					
VVB Evaluation	*Round 1:* *MR CO2BIO V3 is verified. And other documents, consistency is maintained, applying ISO 14064-2 quality standards.*					
Conclusion	*Close Finding*	***X***	*Mantain Finding*		*FAR*	

Finding Nº	*8*	*Finding type:*	*CAR*	*X*	*CL*	
Description:	*Methodological Document AFOLU Sector / BCR0002 Quantification of GHG Emission Reductions from REDD+ Projects. Version 4.0. May 27, 2024. Numeral 14.2 Monitoring the implementation of REDD+ Activities.*					
Objective Evidence	*The head of the CO2BIO project does not guarantee the consistency of the Activities in terms of the SDG indicators.* *For example, when verifying the SDG tool, there are inconsistencies between the Activities and the SDG indicators: In SDG 5, its indicator refers to the proportion of women in management positions (page 22) and its Activities are presented in the unit of measurement number of workshops.*					

	 *For SDG 6, the indicator refers to 6.4.1 Change in water use efficiency over time, and involves elements that refer to volumes of water used efficiently. Therefore, it would be key to find a way to articulate it with the Activities reported by this indicator.* *For SDG 15, indicator 15.1.2 Proportion of sites important for terrestrial and freshwater biodiversity that are part of protected areas, broken down by type of ecosystem. It is important to note that protected area refers to an area where there is an administrative act according to national legislation. These areas for Colombia, in the context of the project, would be those of Decree 1996 of 1999, "By which articles 109 and 110 of Law 99 of 1993 on Natural Reserves of the Civil Society" are regulated. There is no evidence of a strategy for these areas to enter and remain in this or any other category, as provided for in the project..* 
Action Plan	*Taking into account the observations, the following actions were taken:* ***SDG 5:*** *The unit of measurement for indicator 5.5.2, which measures the proportion of women in management positions, was adjusted. The change was made because the previously proposed unit of measurement was not consistent with the indicator. Now the unit of measure of (%) is used, which corresponds to women who have assumed leadership roles in the sustainable management of their properties, leading them to influence the local economy and environmental conservation, thus increasing their presence in managerial positions within forest governance.* ***SDG 6:*** *Since 2018, the CO2BIO project has sought to contribute to the compliance of Sustainable Development Goal (SDG) number 6, focused on sustainable water management. Within this framework, indicator 6.4.1, which measures water use efficiency over time, has been prioritized. The strategies implemented so far have achieved significant progress, aligning with the different stages of the project by promoting a more efficient and responsible use of this resource.* *However, achieving this objective in rural areas presents additional challenges due to social, economic, technological and environmental factors. In these areas, where access to water depends on non-centralized sources such as wells, rivers or rainwater harvesting, measuring the volumes of water used efficiently requires a context-specific approach. In the implementation phase (taking into account the design and diagnostic work carried out), a strategy focused on two key components will be developed:* ● ***Estimation of water use:*** *This will be calculated on the basis of the storage capacity of the catchment systems and the frequency of recharge, which will make it possible to estimate the volume of water available and its use in households.*

<table>
<tr><td></td><td>

- ***Household surveys:*** *These surveys will facilitate the calculation of daily consumption per person or per household, taking as a reference the traditional storage containers used, thus adjusting to local conditions.*

These adapted methodologies will be critical to effectively monitor water use efficiency in rural areas, contributing directly to compliance with indicator 6.4.1 and advancing towards SDG 6 targets.

SDG 15: *Within this Activity related to the proportion of important sites for terrestrial and aquatic biodiversity that are part of protected areas, within the framework of the CO2BIO project, which contributes significantly to the conservation of key ecosystems. SDG / SDG15 / 15.1.2 / Property RNSC CO2BIO project.xlsx), but also promotes the incorporation of new properties as Civil Society Nature Reserves (RNSC), providing technical and logistical support to interested landowners. In addition, it is strengthened through the training of ecosystem managers, facilitating their linkage and formalization within the reserve system. SDG / SDG15 / 15.1.2 / Auto Inicio con requerimiento RNSC 104-24 AVES D'JAH.pdf), currently in the process of formalization as a RNSC, which reflects the tangible impact of these actions. In this way, the Activity covers the objectives of the project and the SDGs, promoting the protection and sustainable management of biodiversity in strategic areas.*</td></tr>
<tr><td>VVB Evaluation</td><td>

Round 1

SDG5: Does the percentage refer to women of the 42 properties or only female owners, the target population is not specifically defined. Percentage vs. total number of women. It is only defined as women who take training on the subject or measure their progress in the role of women in management positions.

5.5.2 Proporción de mujeres en cargos directivos	*Fortalecimiento de capacidades a hombres y mujeres vinculados al proyecto, en los siguientes componentes: técnico-ambiental, social y administrativo-financiero, con el fin de fortalecer la toma de decisiones en pro de los objetivos del proyecto.*	*Las capacitaciones en gestión técnica, ambiental, social y financiera brindan a las mujeres herramientas clave para la administración sostenible de sus properties. Estos espacios fomentan el desarrollo de habilidades de liderazgo, permitiéndoles asumir roles importantes y aumentar su participación en la toma de decisiones y posiciones directivas*	***Permanente***	

SDG6: Regarding the efficient use of water, the two components of the strategy are considered sufficient; it should be applied to each of the 42 properties in particular and to the detail for each project property.

SDG15: Complies with the finding and demonstrates that it promotes the protection and sustainable management of biodiversity in strategic areas.</td></tr>
<tr><td>Action plan</td><td>

Round 2:

SDG 5: *The target population for SDG 5 was defined, establishing that it would be women owners linked to the CO2BIO project. (See: Folder Annexes / 3. SDG / SDG Tool and Folder Annexes / 1. Project Activities / ID I.1 / Report Activity I1- Capacity Building in the Leadership and Valuation of Women's Work component.*</td></tr>
</table>

	5.5.2 Proporción de mujeres en cargos directivos | Fortalecimiento de capacidades a hombres y mujeres vinculados al proyecto, en los siguientes componentes: técnico-ambiental, social y administrativo-financiero, con el fin de fortalecer la toma de decisiones en pro de los objetivos del proyecto. | Las capacitaciones en gestión técnica, ambiental, social y financiera brindan a las mujeres herramientas clave para la administración sostenible de sus predios. Estos espacios fomentan el desarrollo de habilidades de liderazgo, permitiéndoles asumir roles importantes y aumentar su participación en la toma de decisiones y posiciones directivas | Permanente | % Mujeres propie vinculadas al pr ***SDG 6**: For each of the 42 properties linked to the project, a Water Efficiency and Saving Plan has been implemented, focused on compliance with the Sustainable Development Goal (SDG6). This plan has been prepared based on the results obtained in the previous characterization carried out in each property, allowing to adapt the strategies and actions to the specific needs and particularities of each place. In this way, optimal and efficient management of water resources is guaranteed. In the Annexes Folder /1.Activities of Project/ID A.1/ Water Use Efficiency and Saving Plans, the PUEAA of the 42 properties can be accessed.*
VVB Evaluation	*Round 2:* *The indicator for SDG 5, shows coherence in its metric (unit of measurement according to what was proposed for leadership and better valuation of female work and oriented to the owners of properties participating in the CO2BIO project.* *Regarding SDG 6, it corresponds to the plan for efficient use of water, with a landing to the particularities of the properties that make up the CO2BIO project.* *Finding satisfactorily resolved, no additional actions are required.*
Conclusion	*Close Finding* | ***X*** | *Mantain Finding* | | *FAR* |

Finding Nº	*9*	*Finding type:*	*CAR*		*CL*	*X*
Description:		*Methodological Document AFOLU Sector / BCR0002 Quantification of GHG Emission Reductions from REDD+ Projects. Version 4.0. May 27, 2024. Numeral 14.6 Quality control and quality assurance procedures.*				
Objective Evidence		*The owner of the CO2BIO project shall ensure the quality control of its information. There is a lack of relevant primary information such as: attendance lists that allow verifying the relevance of workshop spaces, trainings and others, which is a risk because it is not in accordance with the principle of auditing with an evidence-based approach as it allows having confidence in the results presented.* *This situation is evidenced in the project Activities folder, verify these elements in the other folders and annexes delivered, if this information is available please attach it in order to evaluate.*				
Action Plan		*After a thorough review, the information corresponding to the attendance lists requested in the report has already been attached. These lists allow us to verify the relevance of the workshops and training sessions held, ensuring compliance with the principle of evidence-based auditing, which guarantees confidence in the results presented.* *The information can be viewed at the following link: I.1 - Attendance records See (Folder Annexes/ID I.1/Evidences/Attendance records).* *In addition, we have taken additional measures to reinforce the quality control of the information, verifying that all folders and annexes submitted have the necessary documents to comply with the audit requirements.*				

VVB Evaluation	*Round 1:* *Information is verified and complies with what is required in the finding.*					
Conclusion	*Close Finding*	***X***	*Mantain Finding*		*FAR*	

Finding Nº	*10*	*Finding type:*	*CAR*		*CL*	*X*
Description:	*Methodological Document AFOLU Sector / BCR0002 Quantification of GHG Emission Reductions from REDD+ Projects. Version 4.0. May 27, 2024. Item Monitoring of REDD+ safeguards*					
Objective Evidence	*The CO2BIO project does not show differentiated information in reference to compliance with safeguards b and c decision 1/COP.16 paragraph 19 and safeguard 2 BCR Tool to demonstrate compliance with REDD+ safeguards.* *The project holder does not present evidence of the disaggregation in compliance of the social and environmental safeguards applicable to Colombia, as required by Law 2294 of 2023, in Article 230, paragraph 2:* ***"The holders of greenhouse gas mitigation initiatives shall comply with the provisions of the regulations on environmental, social and economic matters and, in the case of greenhouse gas mitigation initiatives in the Agriculture, Forestry and Other Land Use -AFOLU sector, comply with the social and environmental safeguards defined by the United Nations Framework Convention on Climate Change - UNFCCC, and adopted by the country through its National Interpretation of Social and Environmental Safeguards.... ".*** *It is necessary to have clarity on the reporting of safeguards according to its monitoring plan.*					
Action Plan	*The Cataruben Foundation, in its commitment to the respect and compliance of REDD+ safeguards, has developed a Monitoring Plan (See: Folder Annexes / 2. Compliance REDD+ Safeguards / Monitoring Plan REDD+ Safeguards) specific to these safeguards. This plan has been developed in accordance with the criteria established in the Afolu Sector Methodological Document "Quantification of GHG Emission Reductions REDD+ Projects BCR002", version 4.0, dated May 27, 2024, developed by BioCarbon Standard. The plan defines specific monitoring indicators aligned with the evidence required by the Tool for Demonstrating Compliance with REDD+ Safeguards, version 1.1, dated January 26, 2023, also developed by BioCarbon Standard. In addition, it considers the criteria of the National Interpretation of Environmental and Social Safeguards for REDD+ in Colombia (Camacho A., Lara I., Guerrero R.D., 2017).* *Thus, the Plan integrates both the Cancun safeguards and Colombia's national safeguards, complying with the requirements of the BioCarbon Standard and Law 2294 of 2023. The Monitoring Plan establishes specific indicators and evidence of compliance for each safeguard, and ensures that the national elements are interrelated in a coherent manner.*					
VVB Evaluation	*Round 1:* *Monitoring plan is adjusted in safeguards c and d, screenshot of the RENARE registry is presented, the certificate of registration should be obtained.* *In the Governance strategy, the document "Social Appropriation of Local Conservation" is presented in a link "Forest Governance Strategy", but the document is a strategy that includes several variables, including the forestry component.*					

	However, the requested disaggregation can be evidenced in the REDD+ Safeguards Monitoring Plan. (Excel document from the MP annexes file).					
Conclusion	*Close Finding*	***X***	*Mantain Finding*		*FAR*	

Annex 3. Documentation review

The documentation reviewed in the process of this verification was as follows:

Title / Document version	***Author***	***Organization***	***dates of completion/ publication***	***Document supplier (if applicable)***
BCR_Monitoring-Report CO2Bio_Verificación 3_ Versión 1.0 (Versión inicial del documento)	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
BCR_Monitoring-Report CO2Bio_Verificación 3_ Versión 1.1 (Actualización de mapas y títulos, descripción de SDG y Salvaguardas)	*Fundación Cataruben*	*Fundación Cataruben*	*September 21st, 2024*	*NA*
Plan de monitoreo de Activities de proyecto	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Diagnóstico general del uso y manejo del recurso hídrico en el hogar.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Plan de capacitación uso eficiente y ahorro de agua	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Documento aporte al SDG 6: Capacitaciones de la calidad, uso y manejo del recurso hídrico en los hogares.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*

Title / Document version	***Author***	***Organization***	***dates of completion/ publication***	***Document supplier (if applicable)***
Planes de uso eficiente y ahorro de agua.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Capacitaciones SDG 6. Metodología AVC.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Plan de monitoreo bioacústico y ecoacústico.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Superficie forestal como proporción de la superficie total.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Forest Gain.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Monitoreo de points de calor.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Points de anomalías térmicas.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Índice normalizado de quema.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Informe Fortalecimiento de capacidades en el componente liderazgo y valoración del trabajo femenino.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Informe fortalecimiento de capacidades técnicas.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Informe fortalecimiento de capacidades de biodiversidad.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*

Title / Document version	***Author***	***Organization***	***dates of completion/ publication***	***Document supplier (if applicable)***
Action plan apropiación de conocimientos.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Evidencias de implementación de Activities.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Planes de implementación predial.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Caracterizaciones socioambientales y productivas actualizadas.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Reporte de Activities de gestión sostenible del bosque.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Seguimiento conservación y sostenibilidad por property.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Estrategia de Gobernanza.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Reglamento operativo de la mesa de gobernanza.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Plan de monitoreo de Salvaguardas REDD+.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Matriz de compatibilidad legal.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Análisis de mapeo sobre comunidades.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Informe de distribución de beneficios	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*

Title / Document version	***Author***	***Organization***	***dates of completion/ publication***	***Document supplier (if applicable)***
económicos.				
Resolución de procedencia de consulta previa.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Documentos de tenencia de la tierra.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
DNMI Cinaruco información cartográfica.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Certificado de no incurrencia en infracciones ambientales.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Análisis satelital de no conversión Bosque.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Análisis de fugas.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Documentos Herramientas SDG.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Properties RNCS del CO2BIO project.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Evaluación ambiental y económica CO2Bio.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Cálculos monitoreo verificación 3.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Procedimiento código bosque - no bosque.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Solicitudes sobre áreas de compensación.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*

Title / Document version	***Author***	***Organization***	***dates of completion/ publication***	***Document supplier (if applicable)***
Guía de verificación de áreas viables.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Instructivo AcATaMa.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Documentos de solicitudes sobre áreas de compensación.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Soportes formato de observaciones in Situ.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Geodatabase	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Soportes caracterización satelital.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Información cartográfica de resguardos indígenas	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Documentos de propiedad de carbono.	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
Otros documentos de respaldo (cartografía, hojas de cálculo, etc.)	*Fundación Cataruben*	*Fundación Cataruben*	*June 28th, 2024*	*NA*
BCR en Versión 4.0 https:// biocarbonstandard.com /es_es/herramientas-bcr/	*Biocarbon Standard*	*Biocarbon Standard*	*May 27th, 2024*	*Biocarbon Standard*
Herramienta para la Línea Base y Adicionalidad Versión 1.2	*Biocarbon Standard*	*Biocarbon Standard*	*September 27th, 2023*	*Biocarbon Standard*
Herramienta para demostrar el compliance de las salvaguardas REDD+ Versión 1.1.	*Biocarbon Standard*	*Biocarbon Standard*	*January 26th, 2023*	*Biocarbon Standard*

Title / Document version	Author	Organization	dates of completion/ publication	Document supplier (if applicable)
Sustainable Development Safeguards SDSs Tool Versión 1.0	Biocarbon Standard	Biocarbon Standard	April, 2024	Biocarbon Standard
Herramienta Objetivos de Desarrollo Sostenible (SDG) Versión 1.0	Biocarbon Standard	Biocarbon Standard	June 27th, 2023	Biocarbon Standard
Herramienta para Evitar la doble contabilidad, Versión 1.	Biocarbon Standard	Biocarbon Standard	Macrh 9th, 2023	Biocarbon Standard
Tool Permanence Risk Management Versión 1.1	Biocarbon Standard	Biocarbon Standard	March 19th, 2024	Biocarbon Standard
Plantilla de informe de verificación BCR Estándar BCR versión 3.4	Biocarbon Standard	Biocarbon Standard	October, 2024	Biocarbon Standard

Annex 4. Abbreviations

Abbreviations used in this report.

Abbreviations	Full text
BCR	Biocarbon Standard
CMNUCC	United Nations Framework Convention on Climate Change
AFOLU	Agriculture, Forestry and Other Land use
PDD	Project Design document
RM	Monitoring Report
GHG	Greenhouse Gas

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NOTE: This format shall be completed following the instructions included. However, it is important to note that these instructions are complementary to the BCR STANDARD, and to the BioCarbon Validation and Verification Manual, where more information on each section can be found.