CO2BIO PROJECT 2- CATARUBEN

Report by Diana Rauchwerger

Title of the Project	CO2BIO Project 2
Report Version	Version 2.0
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Client	Cataruben Foundation
Date of preparation	31/03/2023
Project Holder	Cataruben Foundation
Project Holder contact	Sandra Duarte Lisbeth Menjure Barrera
Audit Team:	Diana Rauchwerger Londoño
Technical review by:	Lucas Rivera
Certification criteria and requirements	BCR Standard. Version 2.1, September 21, 2022. Updated to Version 3.0 on March 7, 2023. Methodological Document AFOLU Sector/ Quantification of GHG Emission Reductions of REDD+ Projects BCR0002. Version 3.1. September 15, 2022. Methodological Document Sector AFOLU/BCR0004 Quantification of GHG Emission Reduction and Removals - Activities that prevent land use change in inland wetlands. Version 2.0 23 June 2022.
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Content

1. Introduction

1.1 Description of the project and objectives

The audit process carried out by VERSA's audit team of the CO2BIO P2 climate change mitigation initiative was developed through a detailed assessment of the historical information and a corroborating field visit, with the aim of:

- Provide an independent third-party opinion of the implementation assessment and GHG emission reduction/removal for the second monitoring period for the CO2BIO project.
- Verify that for this monitoring period the initiative met the principles and verification criteria defined by the regulations, current national legislation and the BCR Standard, v3.0.
- Identify significant changes in criteria or procedures with respect to the CO2BIO P2 Project Design Document.
- To determine that the greenhouse gas (GHG) emission reductions reported for the second monitoring period are materially accurate and that no significant changes were presented with respect to the first verification of the CO2BIO P2 project.
- Identify opportunities for improvement.

1.2 Scope and verification criteria

According to Proposition No. GEI-P-101 Legal Agreement No. VERSA-P-013321/02/2023, the audit criteria are as follows:

- ISO 14064-2:2019
- Decree 926 of 2017
- Resolution 1447 of 2018
- Resolution 831 2020

- Decree 446 of 2020

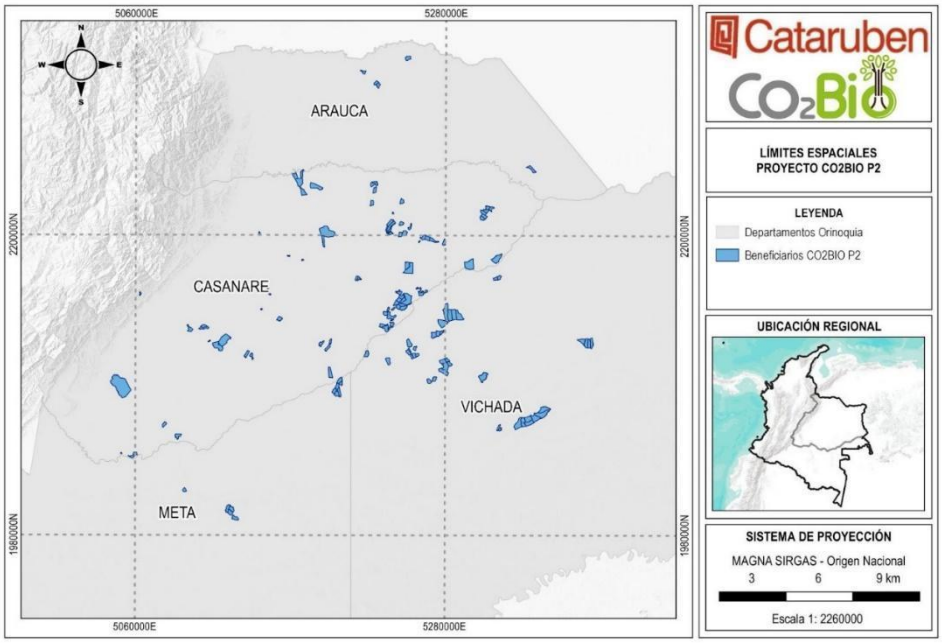
The project was validated and verified under the BCR Standard, version 2.1 of September 21, 2022, however, the Monitoring Report was updated to version 3.0 of March 7, 2023 and implemented the following methodologies and tools:

- Methodological Document AFOLU Sector/Quantification of GHG Emission Reductions of REDD+ Projects BCR0002. Version 3.1 of September 15, 2022.
- Methodological Document Sector AFOLU/BCR0004 Quantification of GHG Emission Reduction and Removals - Activities that prevent land use change in inland wetlands. Version 2.0 of June 23, 2022.
- Tool for determining contributions to the fulfillment of the Sustainable Development Goals (SDGs) of Greenhouse Gas (GHG) projects.
- Biodiversity Toolbox for Inland Wetlands, version 1.0 of October 27, 2021.
- REDD+ Safeguards Tool
- BCR Tool Environmental and Social Damage Avoided and Safeguards, Version 1.0 of March 7, 2023.

1.3 Spatial and temporal boundaries

The project is located in the departments of Arauca, Casanare, Meta and Vichada, which are closely related due to their location in the great biome of the Orinoco.

Image 1. Project location map.



Source: Cataruben Foundation.

The project began implementation of activities on May 6, 2016, and is valid for 30 years, culminating activities on December 31, 2045. The second monitoring report presents the quantification periods as follows:

- In the Wetlands ecosystem for activities that prevent land use change in continental wetlands began on January 1, 2021 and ended on December 31, 2022.
- In the Forest ecosystem for GHG emission reduction activities of REDD+ Projects started on January 1, 2021 and ended on December 31, 2021.

1.4 Assurance Level

During the audit process it was found that the assurance level of the CO2BIO P2 project was not lower than 95%, therefore, there is no material discrepancy between the data that support the quantification of the validation results against the previously validated

baseline and remains adjusted to the requirements of the defined criteria for verification.

The materiality threshold is also maintained for this second verification period at a range of less than 5% for the project in accordance with the requirements of Resolution 1447/2018 of the Ministry of Environment and Sustainable Development.

2 Verification Process

Step by step verification process for the CO2BIO P2 project carried out by VERSA, is detailed below:

- The pre-agreement and economic agreement between VERSA and the Cataruben Foundation: included the type of commission, the level of assurance, the objectives of the verification, the criteria, scope and the threshold of relative importance for the second verification of the CO2BIO project.
- Verification planning: included strategic analysis, risk assessment and audit plan design.
- Implementation of verification activities: the on-site visit was conducted in accordance with the guidelines of the audit plan, the issuance of verification findings and the assessment of changes to the declaration.
- Completion of Verification Activities: : the adequacy and suitability of the evidence was assessed with respect to the verification criteria established and all the evidence provided by the Project Holder. This was reviewed with the aim of identifying possible changes in: the risks, in the threshold of relative importance, the location of the project, in ownership and carbon rights, in the financial update process, in the monitoring of sustainable development, in the SDGs selected by the project, in the REDD+ activities, in the safeguards plan, in the monitoring of permanence, in the monitoring of project emissions and of the

possible deviations that could occur during the development of the activities of the monitoring plan.

- Independent technical review of the project documentation to confirm that the internal procedures established and implemented by VERSA were duly complied with, and that the opinion was issued objectively and in compliance with applicable criteria, policies and clauses.
- Issuance of the final verification report and submission of the registration application to the BioCarbon Registry v3.0 standard.

2.1 Audit plan and audit team

The following table lists the audit team selected by VERSA for the development of the audit process:

Table 1. Audit team for the verification of the CO2BIO P2 project

Full name(s)	Role
Diana Rauchwerger Londoño	Lead Auditor
Lucas Rivera Jaimes	Technical Reviewer

To start the verification activities, the VERSA audit team carried out a strategic analysis with the objective of identifying and evaluating the inherent risks, control risks, detection risks, complexity and extent of verification activities for the CO2BIO P2 project.

Table 2. Identified inherent risks for the CO2BIO P2 project

Inherent risks	Probability	Impact	Risk assessment	Risk management measure
Very wide and difficult to access verification areas	HIGH	MEDIUM	MEDIUM	During the audit, all procedures developed by the project manager for monitoring of the relevant SRFs of the project, the processing of the overall project mapping information and methods for quantifying emission reductions or removal increases were reviewed.

				We also reviewed the monitoring of the SDGs (15, 13, 6 and 5), the monitoring plan and report risk management with its annexes, monitoring carbon ownership, risk management and co-benefits.
Barriers to communication with communities	HIGH	HIGH	LOW	In the communities, the majority of the population speaks Spanish.
Complex data management systems	MEDIUM	HIGH	LOW	Initially during the desk review phase the audit team studies how the project addresses and incorporates the criteria established for verification according to the audit criteria defined for the project. During this phase, it is normal for questions to arise as to how a project should manage its monitoring actions with respect to the requirements of the methodology. For this reason, the auditing team must inform the standard of these doubts, inconsistencies and / or deviations so that it indicates the route or guideline to be followed respectively.
Low participation of the communities where the validation and verification exercise will be carried out.	MEDIUM	HIGH	MEDIUM	To solve this type of inconvenience VERSA delivers in advance the FOR 109 Audit Plan format where the client is informed about the focus groups to be visited during the validation and verification exercise. In addition to the above, community participation during the field visit is also considered an indication of how appropriate and interested these are in the project. For this reason, at the end of the field visit, the audit team conducted a photographic record of the identification documents of the participants during the interviews.

Table 3. Identified Control Risks for the CO2BIO P2 Project

Identified control risk		
High	It is likely that the control system will not prevent, detect or correct the material error and that this risk will have a high probability of materializing during validation or verification.	
Medium	The audit team does not have sufficient confidence that the internal control system of the project will prevent, detect or correct a material error with any likelihood of materialization during the audit.	
Low	The control system is well structured, documented, implemented and maintained, generating sufficient confidence in its ability to prevent, avoid or correct possible material errors	X
Justification	Due to the high complexity of REDD+ projects in dealing with complex and dynamic living systems, working with the communities that own the initiatives, the origin of cartographic information and the scale (1:100,000) that is requested by law, the volume and quality of information gives the audit team sufficient confidence, therefore, it is highly likely that the project's internal control system will prevent, detect or correct a material error.	
Control risk management measures	In the documentary review phase the audit team will review how all the criteria defined for the second verification were developed and incorporated within the project. Any methodological deviations identified by the audit team must be consulted with the standard, so that it dictates the guideline to be followed, respectively.	

Table 4. Detection risks established for the CO2BIO P2 project

Risk of detection established for the project		**Control risk assessment**					
		Low		Medium		High	
Assessment inherent risk[1]	Low	Very low	☐	Low	X	Medium	☐
	Medium	Low	☐	Medium	☐	High	☐
	High	Medium	☐	High	☐	Very high	☐
Detection risk management measures		To reduce the risk of detection, the audit team within the audit plan defined the visit to more than 30% of the project owners. In addition to the above, during the documentary review phase it will be examined how the project developed and incorporated the criteria defined for this verification exercise, respectively. Any methodological deviations identified by the audit team must be consulted with the standard, so that it is the one that dictates the guideline to be followed, respectively.					

In accordance with the above, the VERSA audit team considered the following points in its study: GHG types, project scale, expected user materiality threshold, likely accuracy and completeness of the GHG declaration, project time and geographical limits, SSR

[1] The overall inherent risk assessment shall be equal to the highest identified inherent risk.

emissions and their contribution to the global GHG declaration, changes in the amounts of GHG emissions, removals and reservoirs since the previous reporting period, implementation of standard tools, suitability of quantification and reporting methods or any changes made, sources of GHG information, availability of evidence for GHG information and declaration, the monitoring methodology applied and other relevant information.

The audit team conducted a desk review of all documentation provided by the Project Holder, in accordance with the procedures established by VERSA to be able to reach an opinion in an objective manner, in compliance with the applicable rules and requirements.

In compliance with the above, a review of the conformity of the project was carried out according to the scope and verification criteria established in number 1.2, thus, 100% of the documents provided by the Project Owner, especially the spreadsheets of the Excel file Calculations of the CO2Bio P2 Project for the emission estimates of the second monitoring report for:

- Wetland Ecosystems in activities preventing land use change in inland wetlands (start date 01/01/2021-31/12/2022.
- Forest Ecosystems for REDD+ Project GHG emission reduction activities (start date 01 January 2021 and end date 31 December 2021).

Due to the high complexity of REDD+ projects, an in-person verification audit was conducted with interviews from March 13 to 17, 2023. Interviews were conducted with:

- Relevant Project Holder staff
- With the owners of the property.

The Technical Reviewer conducted an independent desk review of the documentation in accordance with the procedures established by VERSA in order to to reach an

objective opinion, in compliance with the applicable rules and requirements. In accordance with the above, this one carried out a review of:

- Competence of the audit team from the start of the contract.
- The validation and/or verification report, to show how it was presented by the lead auditor.
- Formulation, management and closure of findings.

2.2 Evaluation criteria

The scope of the verification for the CO2BIO P2 project is generally framed within the criteria of the following standards and methodologies:

1. It was determined that the Monitoring Report and the supporting documents provided by the Project Holder are aligned with the rules, procedures, methodologies and methodological tools of the Clean Development Mechanism; ISO standards: 14064-2:2019(es) and 14064-3:2019(es) and applicable Colombian legislation, including that related to the non-causation tax and the Colombian carbon market.
2. It was established that the monitoring report and supporting documents provided by the Project Holder comply with the applicable requirements of the BCR Standard for the Voluntary Carbon Market, version 3.0; the AFOLU Sector Methodological Document/Quantification of GHG Emission Reductions from REDD+ Projects BCR0002. Version 3.1 of 15 September 2022; the Methodological Document AFOLU/BCR0004 Quantifying the Reduction of Emissions and Removals of GHG - Activities that prevent land use change in inland wetlands. Version 2.0 of 23 June 2022 and of the tools: tool for determining contributions to the fulfillment of the Sustainable Development Goals (SDGs) of the Greenhouse Gas (GHG) projects, biodiversity toolbox for inland wetlands, version 1.0 of 27 October 2021, REDD+ Safeguards tool and the BCR Damage Avoided and Environmental and Social Safeguards tool, version 1.0 of 7 March 2023.

3. It was shown that the monitoring systems and procedures are real, comply with the systems and procedures described in the previously validated monitoring plan, including the approved methodology and the applicable tools.
4. It was demonstrated that the data recorded and stored according to the monitoring and calculation methodology are appropriate and consistent.
5. The project was able to demonstrate that the GHG removals determined for this verification process are accounted for for the determined monitoring period ranging from 01/01/2021 to 31/12/2021 for the Forest Ecosystem and for Wetland Ecosystems from 01/01/2021 to 31/12/2022.
6. The verification criteria were found to be relevant, comprehensive and understandable and documented in the Intended User Monitoring Report.

2.3 Documentary Review

The objective of this stage is to review the evidence provided by the Project Holder, to assess compliance with the verification criteria and the intended user objectives in a documentary way and to confirm the feasibility of continuing the evaluation process until the field visit of the project. The evaluation of the information met the following characteristics:

- Complete—The expected content is in the document.
- Correct - Content is compliant with reliable sources (rules, regulations, etc.)
- Consistent — The document is consistent with itself and related documents.
- Current: the content is valid according to the development of the technique or technological development.

Thus, the verification team designated by VERSA, for the REDD+ CO2BIO P2 project, carried out a careful review of the following documents:

- CO2BIO P2 Monitoring Report

- Biodiversity conservation: Documents of declared properties and KBA status assessment documents.
- Benefits to communities: documents of beneficiaries' income and governance mechanisms
- Equity and gender: certificates and training content
- Risk management: social project management, retired owners- stakeholders and dispute over land tenure, profitability, market, contractual, flood monitoring, leak monitoring and fire monitoring.
- Risk management monitoring plan and report
- Procedure for determining degradation and fragmentation in REDD+ projects
- CO2BIO P2 Report analysis proportion of degraded land
- Forest Cover
- CO2BIO P2 Forest Change Report
- Excel spreadsheets of emissions from activities that prevent land use change in inland wetlands monitoring year 2021
- REDD+ Emissions Monitoring 2021 Excel Sheets
- General diagnosis of water resource use and management in the home
- Characterization of access to clean water and basic sanitation
- Plans for cost savings and efficient use of water.
- Women in management positions
- REED+ Biodiversity Monitoring
- GIS REDD+
- REDD+ Socio-environmental effects
- Project activities.
- Biodiversity monitoring Wetlands.
- GIS Wetlands.
- Socio-environmental effects Wetlands.
- Project activities Wetlands.
- Other supporting documents (cartography, spreadsheets, etc.).

At this point, it is important to mention that the Lead Auditor examined 100% of the spreadsheets. Also, the project's GDB, the project ownership information, project participants' information, geographical location of the land, eligibility conditions, start date, sampling error, parameters, methodology and document management were evaluated, among others.

During the verification process, a number of findings were identified and listed in section 11.1 and all findings were duly closed.

Based on all the evidence gathered, it can be concluded that the criteria defined for this verification are constant and were implemented consistently over time, that emissions and removals are substantial, the evidence provided with the Cataruben Foundation is complete, correct, consistent, current, supports the scope of the audit and is sufficient to support the reported GHG reductions.

The project has a traceability of evidence and records to verify that the Project Holder provided 100% of the data used in the calculations to achieve the final amount of reported emission reductions, that the raw data was collected from reliable sources and is included in the Monitoring Report.

2.4 Evidence Collection Plan

The process of collecting, evaluating and documenting evidence carried out by the audit team involved several activities, which included the execution of procedures such as direct observation, control tests and interviews with owners.

2.5 Site Visit

CATARUBEN FOUNDATION, 13/03/2023. Photo Team CO2BIO P2 in Audit.

The site visit took place from 13/03/2023 to 17/03/2023, starting on 13/03/2023 with the opening meeting at Cataruben's offices. That day a review of the Monitoring Report was made with its respective annexes. Through direct observation and interviews, it was established that the attributes described in the Monitoring Report are measurable, specific, relevant, and time-framed.

Rauchwerger D, 14/03/2023. GOODNESS

Visit 1: Department of Casanare, Municipality of Trinidad, Vereda Porvenir de Guachiría, Buenaventura land property, owner: María Tomasa García.

Rauchwerger D, 17/03/2023. DISTANCES

Visit 2: Department of Casanare, Municipality of Paz de Ariporo, Vereda el Desierto, Lejanías land property, Owners: Rosa Helena Castro Berroteran / Carlos Eduardo Barón Castro.

Dates: 14/03/2023 and 16/03/2023

Two focal interviews were conducted with 28 representatives and owners of 25 land properties, in order to identify:

- How has their relationship with the CO2BIO P2 project been.
- How did they learn about the project and how well they know about the contract, the DDP and the activities defined in the monitoring report.
- What expectations were generated in relation to the activities proposed by the Project Holder.
- What kind of difficulties they have encountered throughout the project process.
- How has the process of empowerment and participation of women related to the initiative been.
- Start date and type of activities carried out to start implementing the CO2BIO project.
- How the governance system in the community of owners and the Cataruben Foundation is given.

- How their daily tasks have been influenced by the implementation of the project's own activities and how it has influenced and impacted their production systems (mainly livestock) among others.

In general, it was found that the CO2BIO P2 project ensures the guarantee of the land owners rights, respects the knowledge of the territory and the activities and / or events that periodically carries out the Cataruben Foundation, strengthens the relationships between neighbors (governance structures present in the territory), ensuring the integrity of the natural ecosystems present in the project.

The landowners know and describe the management processes of the REDD+ initiative, as they have been invited to different opportunities for socialization and accountability, they are clear about the results and how the resources obtained from the benefits of the project have been invested. In addition to the above, it is clear that the landowner community understands and identifies the types of benefits generated by the project and recognizes that the GHG Initiative Holder has clear procedures and rules that allow for equitable distribution among all participants.

The landowners stated that the educational programs and the recognition of the flora and fauna present on their land have strengthened their technical capacities, even some are already adopting sustainable production models on their farms and recognize that thanks to this new knowledge they can make better decisions regarding programs or projects currently and in the future in their territories.

It was possible to demonstrate that within the activities of the CO2BIO P2 Monitoring Report a thorough legal analysis was carried out to ensure that the participants of the project continue being the legitimate owners of the land and, therefore, possess the rights on carbon.

2.6 Interviews

Table 5. Interviews conducted with focal points of the CO2BIO P2 Project.

Name	Role
Cataruben Foundation	
Sandra Duarte	Superleader Carbon
Shirley Rojas	Geospatial Leader
Adriana Galán	Legal Coordinator
Lisbeth Menjure	Leading Initiative CO2BIO
Jhoana Albarracín	Legal support
Marinela Camargo	Quality Coordinator
Ludy Pérez	Legal Leader
Edwin Hinemphasis	Superleader Biodiversity
Juan David Arévalo	Biodiversity monitoring
Jhoan Martínez	SIG Coordinator
Laura Jiménez	Economic Benefits Unit Coordinator
María Camila Fajardo	Implementation Coordinator
Laura Sanabria	Quantification Coordinator
Miguel Wilches	Superleader Water
Alonzo Rosillo	Coordinator of the Safeguards Unit
LANDOWNERS	
Sonia Arismendy Martínez	Owner: Macarena Property
Emilio Jaspe	Representative: RNSC ALGARROBO DEL LAGUNAZO and RNSC BETANIA EL LAGUNAZO.
Fredy Arenas	Owner: Flor Amarillo property
Fernando Arenas	Owner: Villarrica property
Luis Arenas	Owner: Plot Campin 2 property
Alberto Arenas	Owner: Arizona property
Víctor Salazar Lucy Amparo Duarte	Owners: Buenaventura property
José Pérez	Representative: El Boral and RNSC QUINTO PATIO DEL LAGUNAZO.
Polycarp Arenas	Administrator of RNSC LOS MATAPALO

Olga Parada	Owner: RNSC VALLEDUPAR 1 And 2
Angélica Arenas	Owner: el Peligro property
Gisela Arenas	Owner: Padrote 4 Property
Jaime Macías	Owner: LOS CAÑOFISTOL property
Fidel Solorzano	Representative: LA ESTACIÓN property
Edilia Maldonado José Demetrio Hernández	Owners: La Victoria property
Walter Rincón Leal Marine Light	Owners: EL CANARIO property
María González José Amario	Owners: ENMANUEL property
Rosa Elena Castro	Owner: Lejanías property
Carlos Barón	Co-owner: Lejanías property
Luis Alfonso Abril	Owner: LA ESPERANZA property
Ernesto Chaparro	Owner: SINALOA property
Julián Barón	Owner: GUAYANAS property
José Antonio Betancourt	Owner: LAS BRISAS property
Soledad Berroteran	Owner: Israel Property

2.7 OVV applications

The findings were identified after reviewing the evidence provided by the Project Holder. The non-conformities identified are related to non-compliance with: the requirements of the Cancun Safeguards, Resolution 1447 of 2018, ISO 14064-2:2019, 14064-3:2019 and the BRC v 3.0 Standard, methodologies BCR0004 v 2.0 and BCR002 v 3.1 are listed in Chapter 11.1 of this document.

The Project Owner responded to the findings and made appropriate adjustments to the Monitoring Report, in total 3 requests for corrective action and 2 requests for clarification were identified.

2.8 Information system, data handling and control

It was possible to demonstrate that the Cataruben Foundation has a robust database in which you can consult all the information of the project in the databases and in the physical archive. This is an advantage, since it allows the Project holder to constantly monitor the implementation of its activities and the GHG emission reductions attributable to them and also makes it possible to track with transparency the traceability of the processes defined in the monitoring of the project.

During the documentary review phase and the visit to the offices of the Cataruben Foundation, the audit team was able to verify that there are clearly defined procedures for storing information on both physical and digital media. According to the above, it can be stated that the information, management and data control system of the CO2BIO P2 Project is sufficient, coherent, complete and aligned with the requirements set out in ISO 14064-2:2019(es) and 14064-3:2019(es).

3 Validation and Verification Results

3.1 Project Description

CO2Bio Project 2 is a climate change compensation initiative that aims to conserve biodiversity by preventing deforestation, degradation and the transformation of these natural ecosystems through the implementation of conservation activities. The project is leveraged in economic incentives for demonstrating CO_2 removals or reductions and for mitigating the threat of habitat loss associated with natural ecosystems in private properties of the Colombian Orinoquia.

The total area of the project is 167,518ha, distributed in 143 private properties, its eligible areas correspond to 83,534.5ha which are in the flooded savanna landscape of the departments of Arauca, Casanare, Meta and Vichada. The project started on May 6, 2016 and is valid for 30 years. A total emission reduction of 7,257,996.8tCO_2eq

(3,535,179tCO2eq for Forest Ecosystems in the REDD+ Projects GHG emission reduction activities and 3,722,817.75 tCO2eq for Wetland Ecosystems in activities preventing land use change in inland wetlands) is projected.

In this second monitoring, a total of 445,449tCO2eq were reported, distributed as follows:

- 199.997, tCO2eq for Wetland Ecosystems from activities that prevent land use change in inland wetlands
- 245,452.0 tCO2eq for forest ecosystems from GHG emission reduction activities of REDD+ Projects.

During the verification process carried out by the VERSA audit team, it was confirmed that the CO2BIO P2 initiative has sufficient and appropriate evidence to support that the analysis of GHG reductions reported in the Monitoring Report was carried out in a precise and conservative way by the Project Holder. For the second monitoring period, VERSA issues a positive verification opinion for verified GHG emission reductions of 445,449 tCO2eq.

3.1.1 Sectoral scope Project

It was confirmed that the CO2BIO P2 project is a REDD+ initiative and is part of the AFOLU sector, which covers greenhouse gas emissions and/or removals attributable to project activities in the sectors of agriculture, forestry and other land uses. In its second verification phase, it is consistent with its objective of conserving biodiversity in 167,518 total hectares, distributed in 143 private lands in the Orinoquia, avoiding deforestation, degradation and transformation of these natural ecosystems from the implementation of conservation and climate change mitigation activities, which ensure the provision of environmental services, reduce the factors and threats on these ecosystems.

3.1.2 Project Location, Boundaries, and Area

The audit team's assurance consisted of reviewing the cartographic information and the results of the definition of eligible areas for the execution of the activities that were previously validated with the information provided, to assess whether there were changes with respect to the previously validated and verified project design document (PDD).

According to the above, the GIS information associated with eligibility, identification of project boundaries and effective areas provided by the project proponent is consistent, meets the criteria and no changes were presented with respect to this verification period, the total 167,518 Ha of the initiative, the eligible area 83,534.5 Ha, are maintained, which is distributed in:

- 20.206 Ha for forest ecosystems from GHG emission reduction activities of REDD+ projects
- 63.328.5 Ha for Wetland ecosystems from activities that prevent land use change in inland wetlands.

The audit team's assurance consisted of reviewing cartographic information and previously validated and verified eligible areas for the execution of forestry activities and their implementation within the framework of the project.

It was corroborated that the location, geographic and temporal boundaries of the project presented in the Monitoring Report have not changed from the previously validated and verified Project Description Document (PDD) and it is confirmed that these are comparable, accurate and reliable according to the principles defined by the MRV system of nationally mitigating actions article 9 of resolution 1447 of 2018.

3.1.3 Ownership or right to use land

During the audit it was evident that the Project Holder made a thorough cadastral update of the 143 private properties, where it was found that for the second monitoring period were sold (4) properties and was made the modification, correction or addition of information related to 13 properties, through a document called "other". The evidence provided shows that the sold properties entered into a contract assignment between the Cataruben Foundation and the buyers of the respective real estate, thus demonstrating that the same project area is maintained, validated and initially verified.

It was verified that the Project Holder carried out two analyzes to confirm the location, size and geographical boundaries of the properties, as well as the identification of the owner of the domain to verify that the ownership, possession or tenure of the property corresponds to those linked to the project. It also reviewed encumbrance records, such as lawsuits, liens, mortgages, anti-crisis, leases, resolution status, and any other limitations on dominance, to ensure that there were no legal restrictions that prevented binding parties from continuing as project beneficiaries and owning carbon rights.

According to the above, it is concluded that the analyzes performed by the project holder are adequate and allow to determine which properties do not present any type of irregularity such as foreclosures, mortgages or other limitations of ownership. Therefore, the carbon rights are in this case the property of the owners that make up the project.

3.1.4 Preconditions for starting the project

The time plan proposed by the Project Holder is coherent and consistent with the lifetime of the CO2BIO P2 Project (30 years). During the documentary review and interviews with owners it was confirmed that the start date of project activities is 2016, therefore, it complies with the principles set out in ISO 14064-2:2019 and ISO 14064-3:2019.

The frequency of verification events did not change with respect to the PDD.

3.1.5 Assessment to the time plan

The project defined monitoring every year, which is in accordance with what is defined in the Network. 1447 of 2018 (Art. 14). Regarding reporting and updating in the RENARE platform, the project's useful life is expected to be 30 years. However, in order to safeguard what is established in the national regulations regarding reporting, monitoring and verification, the credit period of the initiative determines that it is in fact 28 years.

3.1.6 Project Technologies, Products and Services

The technologies, products, services and / or measures developed by the Project Holder, have already been validated and verified before. The Monitoring Report did not find evidence that there were significant changes in the technologies, products, services and / or measures of the project, therefore, they remain adequate and sufficient to meet the proposed objectives and are in force for the second verification of the project.

3.2 Methodological Elements

3.2.1 Selected Methodology

In compliance with the provisions of ISO 14064-2:2019(es), the BCR Standard in its 3.0 version and the national regulations in force, the audit team verified the following:

- For forest ecosystems in the GHG emission reductions activities of REDD+ Projects the sources of information provided by the Project Holder for the Monitoring Report are consistent with the AFOLU/BCR 0002 METHODOLOGICAL DOCUMENT SECTOR Quantification of GHG Emission Reductions or Removals of REDD+ Projects in version 3.1 of September 15, 2022.

- For wetland ecosystems in activities that prevent land use change in wetlands, the sources of information provided by the Project Holder for the Monitoring Report are relevant and consistent with METHODOLOGICAL DOCUMENT SECTOR AFOLU/BCR 0004 Quantifying GHG Emission Reduction and Removals with Activities that prevent land use change in inland wetlands. In version 2.0, June 23, 2022.
    - The sources of information provided by the Project Holder for the Monitoring Report are consistent with the Protocol for national and subnational biomass estimation in Colombia. Institute of Hydrology, Meteorology and Environmental Studies - IDEAM (in spanish); for biomass and carbon parameters.
    - The sources of information provided by the Project Holder for the Monitoring Report are consistent with the requirements of Resolution 1447 of 2018 Ministry of Environment and Sustainable Development, which aims to regulate the Monitoring, Reporting and Verification System (MRV) of mitigation actions at the national level, in relation to the GHG Reduction and Removal Accounting System and the National Greenhouse Gas Emission Reduction (GHG) Register.

3.2.2 Additionality

The project has already been validated and verified, therefore, the project is considered to meet the additionality criteria for REDD+ projects set out in Article 43 of Resolution 1447 of 2018 by producing a net benefit to the atmosphere in terms of reduced emissions and the mitigation result would not have occurred in its absence.

3.2.3 No double counting

As part of its monitoring activities, the CO2BIO initiative carried out two detailed legal analyzes of all the properties participating in the project, with the aim of confirming the

geographical location and spatial limits of the project. In the Monitoring Report and the GDB, the audit team found no evidence that shows that new properties were added to the project or that the project area and boundaries have changed from the initial validation and verification of the project. Therefore, as the conditions of the first validation/verification of the GHG initiative are maintained over time, it is concluded that for this second verification period the risk of double counting is the same as reported in the initial verification and validation report.

In addition to the above, VERSA found that the Project Holder as part of the monitoring to avoid the risk of double accounting performed a cross-checking of information from the area of sixteen (16) GHG initiatives present in the Orinoquia region, of different certification standards such as: Colcx, Verra, Cercarbon and BioCarbon Registry (Table 6). As a result of this analysis it was evident that for this verification period there are no overlaps of compatible and not compatible type with other programs or projects in the project area of the initiative CO2Bio P2 according to the requirements of resolution 1447 of 2018 article 18.

Table 6. Review of carbon initiatives located in the Orinoquia region

Project	Location	Project Type	Standard	Link
CO2CERO CASANARE Forestry Project	Municipalities of Villanueva in Casanare and Barranca de Upia in the Meta	AR-ACM0003	Colcx	https://colcx.com/Iniciativas/Detalles?id=17
Alcaraván Orinoquía Forestry Project	Municipalities of Puerto Lleras and Puerto Gaitán in Meta and Cumaribo in Vichada.	BCR0001	BioCarbon Registry	https://app.biocarbonregistry.com/summary-report/53/en
Afforestation of degraded grasslands in Vichada Colombia	Municipalities of Puerto Carreño and La Primavera in the Vichada	ARR	Verra	https://drive.google.com/drive/folders/1TlajZEbYjlV0Vn6DKG_kWk8suhYqV08q
Clustered project of commercial forest plantation initiatives in the department of Vichada	Municipality of Puerto Carreño in the Vichada	ARR	Verra	https://drive.google.com/drive/folders/1ZOyQ2Jr_g0jUwb2x48gorJLdCt3VK8Qz
Reforestation with rubber in degraded lands of Colombia	Municipality of Santa Rosalía in the Vichada	ARR	Verra	https://drive.google.com/drive/folders/13XI5Sns9BQDawvGQHDsM3yvpkDvppyXH
Cumare Carbon Project	Municipality of San Martín in Meta	ARR	Verra	https://drive.google.com/drive/folders/1xVBw_bWUlf

				AoOl1olJegko-nyw4Fl1xl
"Carbono EnBosque"	Carraito, La Delicia, Orqueta and Los Cuatro Amigos land properties in the municipality of Puerto Carreño in Vichada.	AR-ACM0003	Colcx	https://colcx.com/Iniciativas/Detalles?id=4
Vichada nucleus forest project - Meta Co2cero	The municipalities of Mapiripán, Puerto Gaitán and Puerto López in Vichada and Cumaribo, La Primavera and Santa Rosalía in Vichada.	ARR	Colcx	https://colcx.com/Iniciativas/Detalles?id=12
"CO2CERO Caucho PL UNO" Forest Project	Municipality of Puerto López and Puerto Gaitán in the Meta	ARR	Colcx	https://colcx.com/Iniciativas/Detalles?id=14
"Co2cero Vichada" forestry project	Municipality of Puerto Carreño in the Vichada	ARR	Colcx	https://colcx.com/Iniciativas/Detalles?id=16
"Reduction of Emissions from the Global Merchant Grupo García" Mitigation forestry project	Municipality of San Martín in Meta	ARR	Colcx	https://colcx.com/Iniciativas/Detalles?id=37
Forestry project for climate change mitigation "Forestal de La Orinoquia"	Puerto Carreño and La Primavera, in the Vichada department.	AR-ACM0003	Cercarbon	https://www.ecoregistry.io/projects/8

Recovery of degraded soils with the use of financial incentives in central and eastern Colombia	Municipalities of Urrao and Carolina del principe in Antioquia, municipalities of Santa Rosa de Cabal and Marseille in Risaralda, municipalities of Neira and Riosucio de Caldas, municipalities of Puerto Gaitán, Puerto López and Villavicencio del Meta and municipalities of Puerto Carreño, Santa Rosalía and La mavera de Vichada.	AR-ACM0003	Cercarbon	https://www.ecoregistry.io/projects/14
Forestal Vichada Carbon Project "Alianza Fiduciaria S.A."	Galicia and Andalucía land properties, Vereda Matiyure, Municipality of La Primavera in Vichada.	AR - BCR0001	BioCarbon Registry	https://app.biocarbonregistry.com/summary-report/32/en
The Project for Forestry Restoration in Productive and Biological Corridors in the Eastern Plains of Colombia	Municipality of La Primavera in the Vichada	AR-ACM0003	BioCarbon Registry	https://app.biocarbonregistry.com/storage/PCR-CO-261/initiatives/PCR-CO-261-142-001/pdd_file.pdf
The project is located in the municipality of La Primavera (Department of Vichada in the eastern plains of Colombia).	Municipality of La Primavera in the Vichada	AR-ACM0003	BioCarbon Registry	https://app.biocarbonregistry.com/summary-report/17/en

On the other hand, prior to the beginning of the maintenance of the RENARE platform, according to the evidence provided by the Project Holder it was possible to demonstrate that the status of the project on the platform was in the Formulation Phase (detailed design of the initiative) and no information was found that suggests that the initiative presented some kind of overlap at that time.

3.2.4 Baseline Scenario

The project has already been validated and verified before, therefore, this item is not subject to revision for the second verification period of the project.

3.2.5 Project Scenario

The project has already been validated and verified before, therefore, this item iis not subject to revision for the second verification period of the project.

3.2.6 Sources of GHG emissions

It was verified that the emission sources identified and selected in the Monitoring Report are the same that were subject to validation and verification in the project PDD.

3.2.7 Carbon Reservoirs

It was verified that the carbon pools identified and selected in the Monitoring Report are maintained with respect to those reported in the project PDD, which were already subject to a validation and verification process.

3.2.8 Methodological deviations

The VERSA audit team found no evidence that indicates that in the second monitoring report the project owner has made any methodological deviation from the previously validated and verified criteria.

However, the CO2BIO initiative did make several deviations to the Monitoring Plan in order to upgrade the BCR Standard version 2.1 to 3.0 and to include the requirements of the standard tools in the project activities:

- Tool for determining contributions to the fulfillment of the Sustainable Development Goals (SDGs) of Greenhouse Gas (GHG) projects
- Biodiversity toolbox for inland wetlands.
- REDD+ Safeguards Tool
- BCR Tool Damage Avoided and Environmental and Social Safeguards

The adjustments made are related to changes in the number of indicators, goals, monitoring frequencies, risk classification and project activity targets, aspects that were not formulated for the project quantification period (30 years) in the validation process; now with the update of the standard, the TP adopts the tools for the interpretation of SDGs and Safeguards and proposes the adjustments already mentioned, as can be seen below in Table 8.

Table 8. Analysis of the relationship Deviations Made to Version 1.0 of the PDD.

PDD Version 1.0	Monitoring Report V 2.0	VERSA Team Analysis
In the validated Project monitoring plan we found: 1. For wetland ecosystems in activities that prevent	According to the monitoring report, it was adjusted:	The adjustment of the addition of the monitoring period, the indicators in terms of the goals and

land use change in continental wetlands, (5) activities and (10) indicators were defined, with measurable targets at a monitoring frequency level (annual, biannual or five-year). 2. For the forest ecosystem component of the GHG emission reductions activities of REDD+ projects, 6 activities and 9 indicators were defined, with measurable goals at a monitoring frequency level (annual, biannual or quinquennial).	1. In the (5) activities defined for the wetland ecosystem in the activities that prevent land use change in continental wetlands,, the number of indicators was adjusted from (10) to (8), which unify criteria and potentialize some activities according to the need of TP, goals and monitoring frequencies taken to the quantification period of the project. 2. In the (6) activities for the forest ecosystem component in the GHG emission reduction activities of REDD+ Projects, the monitoring plan was adjusted in terms of indicators, from (9) to (7), which correspond to unification of criteria, targets and monitoring frequencies taken into the project quantification period.	monitoring frequencies are adequate and comply with the stipulations of the BCR version 3.0 standard and the BCR Damage Avoided tool and social and environmental safeguards.
In the monitoring plan, the validated Socio-environmental effects chapter of the PDD (Table 39) identified (5)	The monitoring plan needed to be adjusted: at least one project activity, positive and negative	The adjustments to the monitoring plan related to the Socio-environmental Effects identified in the Monitoring Report are

activities defined to evaluate the possible effects that could occur once project implementation begins.	effects, indicators and corrective actions. In addition to the above, the goals, unit, frequency and the Monitoring Report were added, which includes the period, support, overall compliance and the quantification period of the project.	aligned with the requirements of the BCR Standard version 3.0 and the BCR Avoided Harm and Social and Environmental Safeguards tool..
In the validated monitoring plan to demonstrate compliance with REDD+ Safeguards, the interpretation of the (15) safeguards was stipulated, with targets subject to project activities, with monitoring frequencies (annual, biannual or quinquennial).	The monitoring plan was adjusted to the interpretation of the (7) Cancun safeguards listed in the BCR 2022 tool; in that sense, the indicators, goals and monitoring frequencies are adjusted; in addition to this, the quantification period (30 years) of the project is added along with the goals to report.	The adjustments made to the REDD+ Safeguards monitoring plan are aligned with the requirements of the BCR Standard version 3.0 and the BCR Damage Avoided and Social and Environmental Safeguards tool.
Regarding the validated monitoring plan for Permanence Risk, physical, social and economic risks were considered, together with indicators, risk classification and mitigation actions.	The monitoring plan was adjusted with respect to the classification of environmental, financial and social risks, since the validated plan did not classify the direct or indirect category for each risk, as well as the clear mitigation	Adjustments to the monitoring plan for permanence risk are consistent and relevant according to the guidelines in section 11.3 of the BCR version 3.0 standard.

	measures for such classification, in addition to the monitoring frequency and incorporation of the project's quantification period.	
Regarding the report of changes in Biodiversity, the baseline was generated and a monitoring plan was established in which were contemplated (3) stages of implementation, along with indicators, methodology and monitoring frequency.	The monitoring plan was adjusted in terms of the scope of the stages, methodology, monitoring frequencies, relating the quantification period of the project. The TP justifies that this adjustment is given by the validation of field activities (logistics, financial, time, among others), so it is migrated from a conventional monitoring method, to the involvement of tools that allow recording in real time the sounds of different faunal groups, and that may be available to the project beneficiaries.	The adjustments made in the report related to biodiversity monitoring are aligned with the clauses set out in section 19.1 of the BCR version 3.0 Standard.
Regarding the monitoring plan to demonstrate impact with respect to co-benefits under the special category validated Orchid, it included (11) indicators, with goals	The monitoring plan was adjusted in terms of indicators, frequency and goals, in addition to this the quantification period of the	The adjustments made by the project holder to the procedures related to the monitoring of co-benefits for the orchid category are consistent, relevant and meet the criteria defined in

associated with project activities and often monitoring (annual, biannual or quinquennial).	project (30 years) is added. .	item 19 of the BCR Standard version 3.0.
Regarding the monitoring plan to demonstrate compliance with the Sustainable Development Goals prioritized in the validation, it was contemplated with goals subject to the project activities, with monitoring frequencies (annual, biannual or quinquennial) and indicators.	The monitoring plan was adjusted, taking into account BCR's 2022 tool for demonstrating compliance with the SDGs; in that sense, the SDGs, indicators, targets and monitoring frequencies were adjusted; added to this, the quantification period (30 years) of the project is added.	The adjustments made by the project owner to demonstrate compliance with the SDGs are consistent, relevant and meet the criteria set out in the BCR Standard version 3.0, item 17.

Adapted from Cataruben, 2023

3.2.9. Quantification Period

For the second monitoring report of the CO2BIO Project the quantification period was defined as described in Table 7 below.

Table 7. Quantification period of the CO2BIO project

Ecosystem	Activity	Start Date	End Date
Wetland	Activities preventing land use change in wetlands	01/01/2021	31/12/2022
Forest	GHG emission reduction activities of REDD+ projects	01/01/2021	31/12/2021

2.1.10 Quantification of GHG emissions and removals in the baseline scenario

This item was not studied because it was previously validated and verified, therefore, it does not apply.

2.1.11 Quantification of GHG emissions and removals or GHG emission reductions in the project scenario

During the audit process, the monitored parameters were evaluated and their compliance was verified taking into account the criteria defined by:

1. BCR standard in version 3.0
2. Methodological Document AFOLU Sector/Quantification of GHG Emission Reductions of REDD+ Projects BCR0002. Version 3.1.
3. Methodological Document Sector AFOLU/BCR0004 Quantification of GHG Emission Reduction and Removals - Activities Avoiding Land Use Change in Continental Wetlands, v 2.0.

During the audit, VERSA verified 100% of the information and the calculations of the following points:

1. For the Wetlands ecosystem of activities preventing land use change in inland wetlands in the project area:

- Annual changes in land use in the project area: The VERSA verification team confirmed 100% of the estimation of natural coverage of the wetland and found no evidence to suggest that deviations in the calculations were presented, therefore, their results are reliable (Table 9).

Table 9. Monitoring of land use change for the wetland ecosystem area, 2021-2022.

Stratum	CSCNP (ha/year)	t_1	t_2	A_1 (ha)	A_2 (ha)
Herbaceous	260.5	2020	2022	58,061.9	57,541.0
Aquatic	-54.6	2020	2022	3,940.9	4,050.0
Scattered	-41.3	2020	2022	709.3	792.0

Note: CSNCP: change in the area with natural vegetation cover in the project area;*t1: start year of monitoring period; t2: end year of monitoring period; A1: area with natural vegetation cover in the project area at the start of the monitoring period; A2t: area in natural vegetation cover in the project area at the end of the monitoring period.*

Source: Cataruben Foundation.

- Project Emission Monitoring: VERSA's verification team, corroborated 100% of the calculations of annual emissions in the project area for the period 2021-2022 and reported 39,135,53 tCO2e of GHG emissions (Table 10), and found no evidence to suggest that deviations in the calculations were presented, therefore their results are materially correct and meet the criteria of the BCR0004 methodology and the BCR 3.0 Standard.

Table 10. Monitoring of GHG emissions from the wetland ecosystem in the project area, 2021-2022.

Stratum	Period	EAp (tCO2e/ha/year)	CSCNp (ha/year)	CBTeq (tCO2e /ha)	COSeq (tCO2e /ha)
Herbaceous	2021	19,567.76	260.5	24.9	50.3
Aquatic		-9,070.34	-54.6	25.5	140.8
Scattered		-8,316.01	-41.3	136.9	64.2
Herbaceous	2022	19,567.76	260.5	24.9	50.3
Aquatic		-9,070.34	-54.6	25.5	140.8
Scattered		-8,316.01	-41.3	136.9	64.2
TOTAL				**39,135.53 tCO2e**	

Note: EAp: annual emission in the project area; CSCNp: change in the area with natural vegetation cover in the project area; CBFeq: carbon dioxide equivalent contained in total biomass; COSeq: soil carbon equivalent content.

Source: Cataruben Foundation.

- GHG emissions in the period of analysis: The evidence demonstrates that the estimates of GHG emission reductions were made using relevant and technically supported data and information sources. The GHG emission reductions estimated and attributable to land-use change avoidance activities in inland wetlands of the CO2BIO P2 project for the verification period 01/01/2021-31/12/2022 are equivalent to 199,997 tCO2e (Table 11).

Table 11. Monitoring of emission reductions (2021-2022) for the wetlands ecosystem in the project area.

Reducing Emissions					
REpmp(tCO2e)	t1	t2	EAlb(tCO2e/year)	EAp (tCO2e/year)	EAf (tCO2e/year)
100,118.00	2,020	2,021	121,934.25	19,567.76	2,248.85
99,879.00	2,021	2,022	121,695.53	19,567.76	2,248.57
199,997.0	**TOTAL, MONITORING PERIOD**				

Source: Cataruben Foundation.

- Monitoring of changes in biodiversity associated with continental wetlands: During the evaluation process it was verified that the proposed procedure allows obtaining parameters that provide reliable, comparable and consistent information on the richness of species present in the properties.

In addition to the above, for this second monitoring period, areas with rare, threatened or endangered ecosystems were consistently defined and the susceptibility status of the lands with high and medium category conservation values (82) was evaluated using the Red List of ecosystems in Colombia. In this way, the use of the model and data (GBD-SIG) is reliable, coherent and consistent according to the requirements of the BCR 0004 methodology, since it allows an approach to the state and trends of biodiversity change in the area of the CO2BIO Project.

2. For the forest ecosystem of GHG emission reduction quantification activities REDD+ projects:

- Annual deforestation in the project area: VERSA's verification team, corroborated 100% of the deforestation estimation process in the project area and found no evidence to suggest that deviations in the calculations were presented, therefore, their results are reliable (Table 12).

Table 12. Monitoring of annual deforestation in the forest ecosystem in the project area, year 2021.

Area	Annual change in forest area (ha/year)	t1	t2	A1 (ha)	A2 (ha)
Project Area	17.34	2020	2021	19,841.08	19,823.74

Note: *t1*: start year of the monitoring period; *t2*: start year of the monitoring period *A1*: forest area, at the beginning of the monitoring period;A2: forest area, at the end of the monitoring period.

Source: Cataruben Foundation.

- Annual degradation in the project area: VERSA's verification team corroborated 100% of the calculations of annual degradation in the project area for the period of 2021 and reports a primary degradation of 81,520Ha/year (Table 13). The audit did not find evidence to suggest that deviations from the calculations were presented, therefore, their results are materially correct and meet the criteria of the BCR0002 methodology and the BCR 3.0 Standard.

Table 13. Monitoring of annual degradation in the forest ecosystem in the project area, year 2021.

i (Degradation type)	DFi proy, year (ha)	t1	t2	Core,lb (ha)	Core-torque,lb (ha)
Primary	81.520	2020	2021	9,899	9,817.480
Secondary	-26.000	2020	2021	504.000	530.000

Note: DFi proy, year: Annual degradation in the project area; *t1: start year of the monitoring period; t2: end year of the monitoring period;* Core : Project area in core class, in the start year of the monitoring period; core-to-patch: project area changing from core to patch, in the end year of the monitoring period.

Source: Cataruben Foundation.

- GHG emissions in the monitoring period: VERSA's verification team, corroborated 100% of the estimates of GHG emissions attributable to forest deforestation in the project area for the year 2021, in total 12,538,12 tCO2e were reported (Table 14).

During the audit exercise VERSA found no evidence to suggest that deviations in the calculations were presented, therefore their results are materially correct and meet the criteria of the BCR0002 methodology and the BCR 3.0 Standard.

Table 14. Monitoring of annual emissions of the forest ecosystem in the project area, year 2021.

EAREDD+Proy-year (tCO2e)	DEFREED+proy,year (ha)	CTeq (tCO2e/ha)
12,538.12	17.3	723

Notes: EARED+Proy-year: annual emission in the project area; DEFREED+proy,year: annual deforestation in the project area; CTeq: total carbon dioxide equivalent.

Source: Cataruben Foundation.

- Quantification of the project's emission reductions: The evidence demonstrates that the CO2BIO project's estimates of degradation and deforestation were developed with data and relevant and technically supported information sources. The estimated GHG emission reductions attributable to the REDD+ activities of the CO2BIO P2 project for the verification period 01/01/2021-31/12/2021 equals 245,454 tCO2e (Tables 15 and 16).

Table 15. Monitoring of emission reductions by avoided deforestation in the forest ecosystem in the project area, by 2021.

Reducing Emissions from Deforestation					
REDEF,REDD+proy (tCO2e)	T1	T2	EADEF,lb,year	EADEF,REDD+proxy,year	EADEF,f
237,609	2,020	2,021	250,147	12,538.12	-

Source: Cataruben Foundation.

Table 16. Monitoring of emission reduction by avoided degradation in the forest ecosystem in the project area, by 2021.

Reduction of emissions by degradation					
REDEG,REDD+proy (tCO2e)	T1	T2	EADEG,lb,year	EADEG,REDD+proxy,year	EADEG,f,year
7,843	2,020	2,021	23,749	15,907	-

Source: Cataruben Foundation.

According to the above, it can be concluded that the CO2BIO project selected and implemented quantification methodologies that allow reasonably minimizing uncertainty.

Table 17. Emission reduction 2021-2022 monitoring period for forest and wetland ecosystems.

YEAR	Wetlands	REDEF, Proy forest (tCO2e)	REDEG, Proy forest (tCO2e)	RE Total year
2,021	100,118.0	237,609.00	7,843.00	345,570.0
2,022	99,879.0			99,879.0
Totals	**199,997.0**	**237,609.0**	**7,843.0**	**445,449.0**

Source: Cataruben

2.1.12 Leakage

The Project holder managed to demonstrate that it carries out a permanent monitoring of the leak area, as can be evidenced below:

1. For the wetland ecosystem of the activities that prevent land use change in inland wetlands in the project leakage area:

    - Annual changes in land use in the leakage area: during the documentary review by VERSA, 100% of the processes of calculating natural coverage of the wetland ecosystem present in the area of leakage were corroborated and no evidence was found that indicates errors in the development of the formula for the calculations, therefore, its results are reliable (Table 18).

Table 18. Monitoring the change in land use for the Wetlands ecosystem in the area of leaks, period 2021-2022.

Stratum	CSCNF (ha/year)	t_1	t_2	A_1 (ha)	A_2 (ha)
Herbaceous	80	2020	2022	4,458.3	4,299.0
Aquatic	14	2020	2022	352.1	325.0
Scattered	-25	2020	2022	47.7	97.0

Note: CSNCf: change in the area with natural vegetation cover in the leakage area; *t1*: year of start of the monitoring period; *t2*: end year of the monitoring period; *A1: area with natural vegetation cover in the leakage area at the beginning of the monitoring period; A2: area with natural vegetation cover in the leakage area at the end of the monitoring period.*

Source: Cataruben Foundation.

- GHG emissions in the analysis period in the leakage area: VERSA's verification team, corroborated 100% of annual emissions calculations for the ecosystem of Wetlands in leakage area for the period 2021-2022 and reported an emission reduction of 4,497.42 tCO2e of GHG (Table 19), there is no evidence to suggest that deviations in the calculations were presented, therefore, their results are materially correct and meet the criteria of the BCR0004 methodology and the BCR Standard v 3.0.

Table 19. Monitoring of GHG emissions in the Wetlands ecosystem in the area of leaks, 2021-2022.

Stratum	Period	EAp (tCO2e/ha/year)	CSCNp (ha/year)	CBTeq (tCO2e /ha)	COSeq (tCO2e /ha)	EAf_LB
Herbaceous	2021	-3,026.72	80	25	50	9,011
Aquatic		2,248.85	14	25	141	4.19
Scattered		-5,512.97	-25	137	64	555
Herbaceous	2022	-2,955.62	80	25	50	8,940
Aquatic		2,248.57	14	25	141	4.47
Scattered		-5,512.97	-25	137	64	555

Note: EAf: annual emission in the leakage area; CSCNp: change in the area with natural vegetation cover in the leakage area; CBFeq: carbon dioxide equivalent contained in total biomass; COSeq: soil carbon equivalent content.

Source: Cataruben Foundation.

2. For the forest ecosystem for activities to quantify GHG emission reductions REDD+ projects:

- Annual deforestation in the leakage area: The VERSA verification team, corroborated 100% of the deforestation estimation process in the leakage area of 7.0 Ha/year and found no evidence to suggest that deviations in the calculations were presented, therefore, their results are reliable (Table 20).

Table 20. Monitoring of annual deforestation in the forest ecosystem in the leakage area, year 2021.

Area	Annual change in forest area (ha/year)	t1	t2	A1 (ha)	A2 (ha)
Project Area	7.00	2020	2021	3545.0	3538

Note: t1: start year of the monitoring period; t2: end year of the monitoring period *A1: area in forest, at the beginning of the monitoring period; A2: area in forest, at the end of the monitoring period.*

Source: Cataruben Foundation.

- Annual degradation in the area of leakage: The VERSA verification team corroborated 100% of the annual degradation calculations in area of leakage in the forest ecosystem for the period 2021 (Table 21), and found no evidence to suggest that deviations in the calculations were presented, therefore, their results are materially correct and meet the criteria of the BCR0002 methodology.

Table 21. Monitoring the annual degradation of the forest ecosystem in the leakage area, year 2021.

i (Degradation type)	DFi f,year (ha)	t1	t2	Core,f (ha)	Core-pair,f (ha)
Primary	-34.880	2020	2021	1,219	1,254
Secondary	-14,000	2020	2021	144.000	158.000

Note: DFi f, year: Annual degradation in the leakage area; t1: start year of the monitoring period; t2: end year of the monitoring period; Core: Leakage area in core class, in the start year of the monitoring period; Anucleo-patch: Leakage area changing from core to patch, in the end year of the monitoring period.

Source: Cataruben Foundation.

- GHG emissions in the monitoring period: The VERSA verification team, corroborated 100% of calculations of GHG emissions emitted by forest deforestation in the project

area for the period 2021, in total, no emissions are reported above what is established in the baseline, so its value is negative in this monitoring period (Table 22), and found no evidence to suggest that deviations in the calculations were presented, therefore, their results are materially correct and meet the criteria of the BCR0002 methodology.

Table 22. Monitoring of annual emissions in the project area, year 2021.

EAf,year (tCO2e)	DEFf,year (ha)	TC02eq (tCO2e/ha)	EAlb,f,year (tCO2e)
- 17,974	7.0	723	23,035

Notes: EARED+Proy-year: annual emission in the project area; DEFREED+proy,year: annual deforestation in the project area; CTeq: total carbon dioxide equivalent.

Source: Cataruben Foundation.

2.1.13 Removals and/or net reductions of GHG emissions

The verification activities used as a basis for the evaluation of the second monitoring period (01/01/2021-31/12/2022) allow concluding that the evaluation of the GHG declaration of the project and the information of historical nature vs. controls, data, GHG information (Tables 23 and 24) and the criteria to apply to the non-causation of the carbon tax according to Decree 926 of 2017 and compliance with paragraph 3 of Article 17 of Resolution 1447, are within the 5% materiality, defined at the beginning of the verification and complying with the criteria of numeral 14 in the Methodological Document AFOLU Sector / Quantification of GHG Emission Reductions of REDD+ Projects BCR0002. Version 3.1 and numeral 19 of the Methodological Document AFOLU Sector / BCR0004 Quantification of GHG Emission Reductions and Removals - Activities that avoid land use change in inland wetlands. Version 2.0 of 23 June 2022, the previously validated PDD and ISO14064-2:2019.

Table 23. PROJECTED EMISSIONS REDUCTION PERIOD 2018-2045 Forest Ecosystem for GHG emission reduction quantification activities REDD+ projects

PERIOD	YEAR	REDEF,REDD+proj tCO2e	REDEG,REDD+proj	REDD total year
1	2018	109,747	33,991	143,738
2	2019	116,728	29,660	146,388
3	2020	121,997	25,799	147,796
4	2021	126,151	22,500	148,651
5	2022	129,096	19,631	148,728
6	2023	128,033	17,119	145,152
7	2024	126,950	14,913	141,862
8	2025	125,874	12,972	138,846
9	2026	124,805	11,265	136,070
10	2027	123,744	9,764	133,508
11	2028	122,690	8,442	131,132
12	2029	121,644	7,279	128,923
13	2030	120,606	6,256	126,861
14	2031	119,574	5,355	124,929
15	2032	118,550	4,562	123,113
16	2033	117,534	3,865	121,399
17	2034	116,524	3,251	119,775
18	2035	115,522	2,711	118,233
19	2036	114,526	2,236	116,762
20	2037	113,538	1,818	115,355
21	2038	112,556	1,450	114,006
22	2039	111,582	1,126	112,708
23	2040	110,614	841	111,455
24	2041	109,654	590	110,244
25	2042	108,700	369	109,069
26	2043	107,753	175	107,928
27	2044	106,812	4	106,816
28	2045	105,878	- 146	105,732
TOTAL		**3,287,382.5**	**247,796.6**	**3,535,179.1**

Source: Cataruben

Table 24. PROJECTED EMISSIONS REDUCTION PERIOD 2018-2045 for the Forest ecosystem for activities preventing land use change in inland wetlands in the project area

Period	Year	Reducing Emissions
1	2016	82,446.6
2	2017	123,590.4
3	2018	123,524.4
4	2019	123,472.8
5	2020	123,436.5
6	2021	123,416.4
7	2022	123,413.5
8	2023	123,429.0
9	2024	123,463.9
10	2025	123,519.5
11	2026	123,597.1
12	2027	123,698.1
13	2028	123,823.9
14	2029	123,976.3
15	2030	124,156.8
16	2031	124,367.2
17	2032	124,609.5
18	2033	124,885.8
19	2034	125,198.1
20	2035	125,548.9
21	2036	125,940.6
22	2037	126,375.8
23	2038	126,857.5
24	2039	127,388.5
25	2040	127,972.2
26	2041	128,611.8
27	2042	129,311.1
28	2043	130,074.0
29	2044	130,904.6
30	2045	131,807.2
TOTAL		**3,722,817.7**

Source: Cataruben

Based on the evidence collected and analyzed, it is concluded that for this verification period there are no changes in the criteria and procedures that the Project Holder developed to quantify GHG emissions and removals or GHG emission reductions for previously validated and verified GHG emission sources in the project scenario (ex post for verification).

2.1.14 Natural disturbances and other events

The Monitoring Report indicates that there were fires, which were identified as part of the Heat Point Monitoring activities, however, for the period of analysis there were no fires in the eligible areas or in the leak belt, therefore, they did not alter what was proposed in the Monitoring Report.

2.1.15 Non-permanence

The initiative was able to demonstrate in the Monitoring Report that it carries out continuous monitoring, since it has defined strategies to manage the risks of not permanence and it does not present modifications with respect to the first validation and verification.

4. Legal aspects

4.1 Legal requirements

VERSA confirmed the ability to comply with the applicable legal requirements for the GHG mitigation project established. By identifying the standard, law or resolution and its implementation context, VERSA as a validation and verification body trusts that the information provided by the project holder is transparent, consistent and traceable (Table 23).

Table 23. Legislation applicable to the CO2Bio P2 project.

Project activities	Enforcement	Compatibility with national policies, programs, strategies and plans	Compatibility with international conventions	Analysis of the VERSA Team
Strengthening processes based on cycles of training courses	Within the framework of the project operation, the purpose is to strengthen the knowledge, skills, aptitudes and competencies of the project participants through virtual and on-site training on topics related to the conservation of biodiversity, wetlands, forests, forest legality, agricultural production, livestock and sustainable tourism, mitigation and adaptation to climate change, carbon market, legal aspects (land tenure), financial and tax aspects, among others. It has been demonstrated that the development of new skills and capacities of landowners through training strengthens the governance of their areas. All of the above is compatible with national policies, programs, strategies and plans, as well as international agreements on climate change and combating deforestation, as listed in the following columns.	1. Forest Policy. 2. National Biodiversity Policy. 3. National Plan for the Prevention and Control of Forest Fires and Restoration of Affected Areas. National Policy for Inland Wetlands of Colombia. 4. National Environmental Education Policy. 5. National Action Plan to Combat Desertification and Drought in Colombia. 6. General Forestry Law. 7. National Policy for the Comprehensive Management of Water Resources. 8. National Forest Prevention, Control, Monitoring and Surveillance Strategy. 9. National Policy on Sustainable Production and Consumption. 10. Institutional Strategy for the Coordination of Policies and Actions on Climate Change in Colombia.	1. Convention on Wetlands of International Importance, Especially as Waterfowl Habitat (RAMSAR). 2. United Nations Framework Convention on Climate Change (UNFCCC). 3. Convention to Combat Desertification and Drought (UNCCD) 4. Convention on Biological Diversity.	Versa corroborated 100% of the documentary support provided by the project holder according to current national regulations, the objectives of national forestry programs, conventions and international agreements on the subject. And it found that these are aligned and compatible with the objectives of the postulates of policies, programs, strategies, national plans and with international conventions. In addition to the above during interviews with landowners during the field visit, the audit

		11. National Policy for the Comprehensive Management of Biodiversity and its Ecosystem Services. 12. Policy for Sustainable Soil Management. 13. National Policy for Integral Solid Waste Management. 14. National Climate Change Policy. 15. Strategy for the Implementation of the Sustainable Development Goals (SDGs) in Colombia. 16. Green Growth Policy. 17. National Policy for Deforestation Control and Sustainable Forest Management. 18. Public policy to reduce disaster risk conditions and adapt to climate variability phenomena. 19. Environmental Policy for the Comprehensive Management of Hazardous Waste. 20. Policy to Boost Agricultural Competitiveness. 21. Law 2169 of 2021 - Climate action. 22. Decree 446 of 2020 - GHG verifying bodies.		team found that the overall impact of these activities has been very good. The topics developed have been easy to understand, novel, interesting and have promoted the development of conservation activities and implementation of sustainable production models in different farms associated with the project. It was also found that the project has had positive impacts on the legalization of land and the updating of the economic activity records of the project participants before the DIAN.
Strengthening governance structures	The conservation actions of the forest and wetland ecosystems of the Orinoquia chart a common horizon towards the Social Appropriation of Local Conservation through the convergence and participation of the owners of the land, as			Versa verified that the actions described in the Monitoring Report to ensure the dissemination of all information related to the

	managers of the ecosystems, the strategic ally and the Cataruben Foundation as owner of the CO2Bio initiative. To achieve this, participatory, dialogic and inclusive governance strategy is designed and implemented, promoting respect for stakeholders and a focus on ecosystem conservation. Governance is represented by people, policies and processes that provide the framework for making decisions and adopting measures to optimize the management of the project, therefore the actions carried out around the strengthening of governance structures are related and compatible with national legislation, policies, programs, strategies and plans, as well as international conventions applicable to the implementation of the project.	23. Law 1931 of 2018 - Climate change management. 24. Resolution 1447 of 2018 - Regulates the system for monitoring, reporting and verification of mitigation actions at the national level. 25. Law 1844 of 2017 - Approves the Paris Agreement. 26. Decree 926 of 2017 - Regulates the national carbon tax. 27. Law 1819 of 2016 - Tax reform, carbon tax. 28. Conpes 3700 of 2011 - Coordination of Climate Change Policies and Actions in Colombia. 29. Act No. 629 of 2000 - the Kyoto Protocol is adopted. 30. Strategic Plan for Ecological Restoration and Forestry Establishment in Colombia - (Plan Verde, 1998). 31. Decree No. 2811 of 1974 - National Code on Renewable Natural Resources and Environmental Protection. 32. Act No. 2 of 1959. - Forestry Reserves.		actions of the project were complete, transparent and easily accessible. In addition to the above, during interviews with the owners during the field visit, the audit team found that they state that the owner of the project has provided them clearly and assertively through workshops, documents and forums all the information about the project. They also stated that these activities have strengthened communication channels between neighbors and institutions present in the territory.
Implementation of conservation actions and participatory property planning	The accompaniment in the implementation of conservation actions is key in environmental terms for the project, in this sense, and based on land planning, the beneficiaries are accompanied in processes of declaration of			During the audit activities, the compatibility of the measures proposed by the CO2BIO project for the conservation of

	private conservation figures (Natural Reserve of the Civil Society); identification, delimitation and marking of strategic ecosystems, and participatory monitoring of biodiversity; which implies a strengthening and vision of sustainable management of natural resources. The above is compatible and complies with national policies, programs, strategies and plans, as well as international agreements on climate change and combating deforestation, as listed in the following columns.			forests, wetlands and biological diversity with the objectives set forth in current national regulations, national forestry programs, conventions and international agreements related to the subject were reviewed. During the field visit, the owners of the properties associated with the project demonstrated their approval and interest in their participation in the implementation of these measures and the importance of these in the conservation of ecosystems and biodiversity present in their lands. In accordance with the above, VERSA considers that the initiatives raised by the CO2BIO project encourage the interest of

				associated owners in the protection and conservation of ecosystems and the environmental services associated with them present in the eligible areas of the project
Monitoring and mitigation of eligible area loss disturbance events.	During the drought and flooding seasons in the project area, monitoring is carried out for disturbance events in order to mitigate risks of deforestation, degradation and/or transformation in land use, with the purpose of avoiding leaks and reversals that could compromise the loss of the areas. In this sense, it is compatible with national policies, programs, strategies and plans, as well as international agreements on climate change and combating deforestation, as listed in the following columns.			The measures contemplated for monitoring the events identified by the project as a disturbance to the loss of eligible areas are aligned with current national regulations, national forestry programs, conventions and international agreements on the subject. It is evident that by monitoring these events on a daily basis and alerting landowners about the presence of these events on their properties, activities such as burning and logging are discouraged and

				the loss of natural cover present in the eligible areas of the project is prevented, as well as the loss of services derived from their ecosystems and the enhancement of other social and environmental benefits.

Source: adapted from Cataruben Foundation.

5. Stakeholder consultation

This item was not studied because it was previously validated and verified, therefore, it does not apply.

6. Safeguards

It was found that the holder of the initiative presented evidence on compliance with monitoring of REDD+ safeguards according to the guidelines of the BCR Standard tool, in addition to the above, it was found that there are no changes about the objectives contemplated in the PDD that was previously validated and verified.

It is evident in the Monitoring Report that the project met the indicators to monitor the safeguards.

7. Risks, uncertainty and non-permanence

The mitigation initiative managed to demonstrate in the Monitoring Report that GHG removals are maintained during this validation period (2021-2022), since it has defined strategies to manage the risks identified for environmental (floods and heat

points-thermal variations), financial (non-profitability, low market demand and contractual non-compliance), social (carbon ownership) and reversal risk (contract termination) activities.

The holder provided adequate, accurate and objective evidence that shows that he performed an analysis to classify the identified risks according to their level of criticality, probability of occurrence, impact and direct or indirect impact to the project, to be able to design measures to be able to manage risks in an assertive way.

After the document review and on-site audit process, it is considered that the information expressed in relation to the safeguards complies with the general principle for interpretation of the Safeguards Compliance Document according to the REDD+ Safeguards Demonstration Tool.

8. Grouped Project

This project is grouped, it was found that for this verification period the same areas and processes defined in the previously validated and verified PDD are maintained. Nor was there any evidence to suggest that the project linked new sites during the monitoring period.

9. Project Monitoring

9.1 Monitoring Plan

As the objective of this exercise is limited to the Validation of the CO2BIO P2 project, below is an analysis of the evidence related to the Monitoring Report and not to the monitoring plan contemplated in the PDD which was already subject to validation and verification.

According to the above, during the audit process, it was verified that the Monitoring Report periodically monitors the main components defined in the PDD project, which

ensures that it has real control over the variables associated with carbon. It was found that data-related information for carbon estimates was established according to commonly accepted principles and practices for the management of REDD+ activities.

The Monitoring Report of the REDD+ initiative meets the requirements of the AFOLU Sector Methodology document / quantification of GHG Emission Reductions from REDD+ Projects BCR0002. Version 3.1 of September 15, 2022 and the Methodological document AFOLU Sector / BCR0004 quantification of GHG Emission Reductions and Removals - Activities that avoid land use change in inland wetlands. Version 2.0 of June 23, 2022.

9.2 Responsible for project monitoring

The Cataruben Foundation is responsible for the activities carried out in the Monitoring Plan.

9.3 Monitoring Report

It was confirmed that the Monitoring Report is aligned with the monitoring plan contemplated in the PDD. The information provided meets the criteria for accuracy and/or completeness.

In monitoring the Sustainable Development Goals, it was found that according to the review of the evidence provided by Cataruben and during the field visit, it was identified that the CO2BIO P2 project has been demonstrating with the definition of relevant criteria and indicators, that from the beginning of the initiative, contributions to the Sustainable Development Goals (SDGs 5, 6, 13 and 15 defined by the project) applicable to both components (Humidity and REDD+) are generated.

Also, it was verified that the Project Holder to demonstrate compliance with the validated and previously verified SDGs used the Tool for determining contributions to compliance with the SDGs.

In the monitoring of special categories related to co-benefits, it was verified that the project presents the procedures related to the monitoring of co-benefits for the special category Orchid:

Biodiversity conservation: ample and sufficient evidence was found that shows that the initiative has been carrying out activities so that the lands can be declared under some form of conservation and also, an evaluation of the Areas of Importance for Biodiversity (KBA) associated with the lands was carried out, with the aim of elucidating what would be the contribution of each land to conservation and thus prioritizing its importance in this process.

Benefits over communities: It was found that the project has had an impact on the articulation of municipal systems and the project community around the effective management of barren areas and net increase in the income of the beneficiaries.

Gender Equity: it is concluded that the project has ample and sufficient evidence that demonstrates the impact of the activities on the leadership and valuation of women's work.

In the monitoring of the socio-environmental effects of the project, it was identified that the CO2BIO P2 project was able to demonstrate that the activities implemented have generated positive impacts on the community of landowners, productive systems and biodiversity.

Therefore, the activities that support the fulfillment of the activities of the socio-environmental effects of the project, for this stage of verification were corroborated during the field visit and have ample and sufficient evidence.

10. Information Management

During the visit to the Cataruben Foundation's facilities and in the documentary review phase, the project holder was able to demonstrate that it has developed and implemented quality control and assurance procedures, such as: manuals, guides and formats. These are relevant, adequate, sufficient and consistent according to the criteria established by the BCR v3.0 Standard and the BCR0002 v3.1 and BCR0004v2.0 methodologies.

11. Conclusion of verification

11.1. Resolution of findings

Finding No.:	1	Type of finding:	CAR	X	CL	
Description:	Not all information related to chapter 3.3 CARBON OWNERSHIP AND RIGHTS of the monitoring report is recorded and documented in accordance with the transparency principle A 2.6; ISO 14064-02:2019, paragraph 6.10; and document BCR0004 v 2.0, paragraph 18.4 Monitoring project permanence.					
Objective Evidence	Section 3.3 OWNERSHIP AND CARBON RIGHTS does not mention why modifications, corrections and/or additions of information were made to 13 properties, by means of an "addendum"(otrosi). According to ISO 14064-2:2019, it is necessary that the project leader clearly identify all changes in the documentation, where it is necessary to explain[2] and justify[3] why it was necessary to make an “other” to these particular contracts.					
Action Plan Round 1:	The project owner considered making "addendum" taking into account the need to modify certain clauses of the original contract. The "addendum" allowed us to make specific changes without having to draft a completely new contract. The changes included adjustments to the eligible areas, date of execution of the contract, names of the beneficiary's attorneys-in-fact, among others, but did not result in changes to the object of the original contract. On the other hand, in the case of the assignment of contracts, the assignment was made because the original parties to the contract transferred their rights and obligations to another entity or individual.					

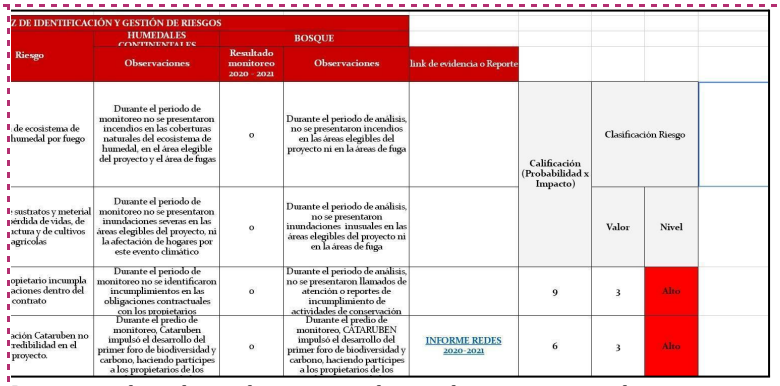
[2]The explanation usually includes: a) how the approaches were used or how decisions were made; b) why these approaches were chosen or how these decisions were made (ISO 14064-2:2019, 0.3).

[3]The justification has two other criteria: (c) to explain why alternative approaches were not chosen; (d) to provide supporting data or analysis (ISO 14064-2:2019, 03).

	The choice of using the "addendum" or the assignment of the contract was made based on the specific needs of the parties involved in the contract. In the case of the "addendum", this was the first option since only minor changes to the original contract were required. On the other hand, the assignment of the contract was the best option to continue with full transparency of the rights and obligations of the contract, the assignment of the contract was the best option. There are other options for modifying contracts or transferring rights and obligations, such as drafting an entirely new contract, terminating the original contract and establishing a new one, or simply negotiating the terms with another party involved. However, these alternative approaches may be more costly or delayed than using "addendum" or leasing contracts. The data and media vary according to the circumstances of the contract in question. 1. To support the "addendum" we can go to the link Relationship of prices with Otrosí - Sheet 1 and the folder where with the updated documents Documents Otrosí. 2. To support "contract assignments" we can go to the folder where the contract assignment documents are located. Link Contract Disposals.
OVV assessment:	**Round 1:** 1. According to the evidence provided by the project owner, it is clear that most of the addendum are related to changes in the identification of the area preliminarily estimated for the development of conservation and mitigation activities of climate change. However, it is not clear if these changes in the area of the land generated a variation in the estimate of the total area of the project, therefore, it is necessary to provide an additional analysis to support this finding. 2. On the other hand, the other documents provided by the project owner mention the existence of a confidentiality agreement. Therefore, it is not clear whether the Monitoring Report will include the link to the Addendum Documents for public consultation and whether this agreement is not being complied with. **Round 2:** The nonconformity was successfully resolved.
Round 2 Action Plan:	1. An additional review of the related contracts was carried out, and after detecting typing errors regarding the total area of the property and in some cases in the typing of the eligible areas, further clarifications and corrections were made. However, it is important to note that these corrections did not affect the validated and verified area for the 2016-2020 period in the same way as the 2021-2022 reporting and monitoring area estimated for the project, as shown in the following table: Price relationship with other sites. 2. It is important to clarify that, in the monitoring report, only the adjustments made are mentioned, but there will be no link (access link) to these documents supported by the RM, in order to protect the confidentiality of the TP information.

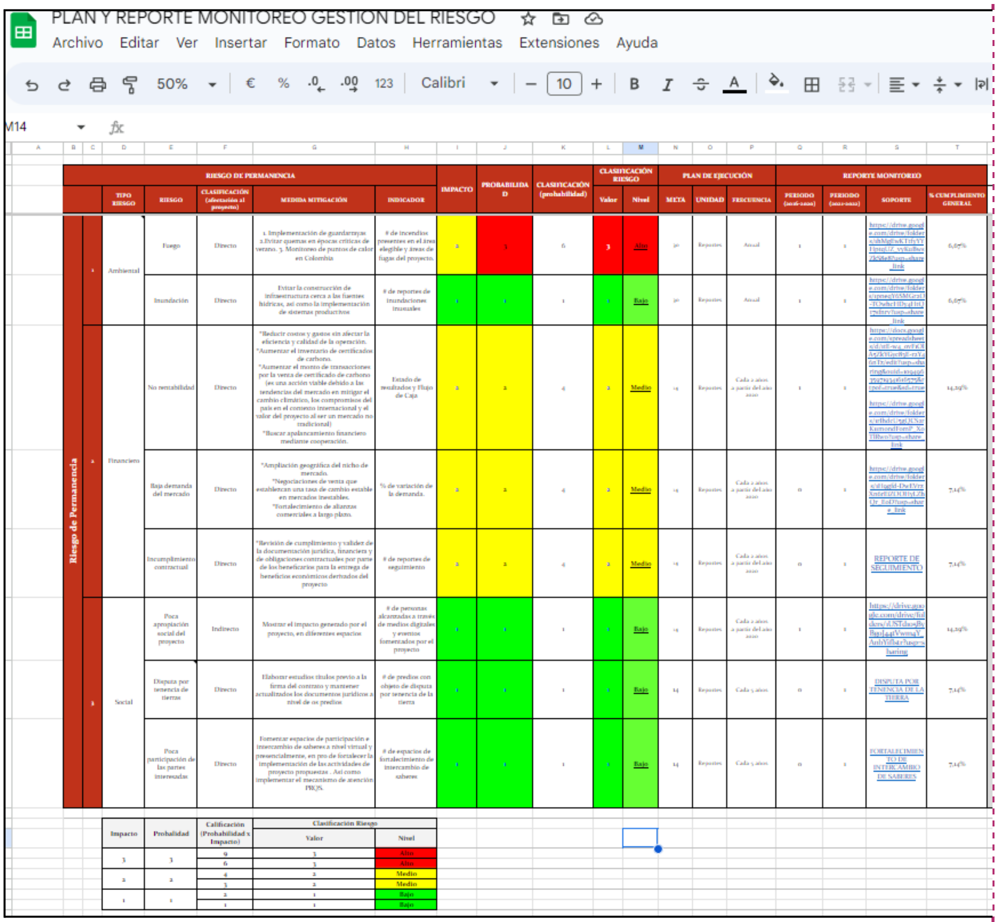
Conclusion:	Close find	x	Maintain finding				

Finding No.:	2	Type of finding:	CAR		CL		X

Description:	It is not clear how the project establishes and maintains a monitoring plan that includes procedures for qualifying risks in the plan and monitoring matrix to comply with ISO 14064-2:2019 number 6.10
Objective Evidence	 It is not clear how the matrix plan and monitoring risk management identifies the rating (Probability x Impact) and classification Risk (value and level) of the activities: 1 fire and 2 floods.
Action Plan Round 1:	For the compliance of the permanence risk monitoring plan within the CO2Bio P2 project, 8 indicators were established for the 3 types of risks (environmental, financial and social), within which the following aspects can be identified for the validated areas. Mitigation measures are proposed to avoid the impact and probability of negative reports on the project, such as floods, fires, and cash flow. Goals are established to be executed during the duration of the project, and their status will be evaluated periodically through monitoring reports. The classification of the risk levels of the project are classified in 3 levels: Low, medium and high where we must prioritize according to the classification to mitigate the effects. When calculating the risk, if we have chosen to make the quantitative analysis, we will calculate by multiplying the probability and impact factors: RISK = PROBABILITY x IMPACT. This information is included in the risk management monitoring report plan table in sheet No. 2 called "ADJUSTED MONITORING PLAN AND REPORT", as shown below Link Plan and Risk Management Monitoring Report

Z DE IDENTIFICACIÓN Y GESTIÓN DE RIESGOS

Riesgo	HUMEDALES CONTINENTALES Observaciones	Resultado monitoreo 2020 - 2021	BOSQUE Observaciones	link de evidencia o Reporte	Calificación (Probabilidad x Impacto)	Clasificación Riesgo	
						Valor	Nivel
de ecosistema de humedal por fuego	Durante el periodo de monitoreo no se presentaron incendios en las coberturas naturales del ecosistema de humedal, en el área elegible del proyecto y el área de fugas	0	Durante el periodo de análisis, no se presentaron incendios en las áreas elegibles del proyecto ni en la áreas de fuga				
sustratos y meterial erdida de vidas, de ctua y de cultivos agrícolas	Durante el periodo de monitoreo no se presentaron inundaciones severas en las áreas elegibles del proyecto, ni la afectación de hogares por este evento climático	0	Durante el periodo de análisis, no se presentaron inundaciones inusuales en las áreas elegibles del proyecto ni en la áreas de fuga				
opietario incumpla aciones dentro del contiato	Durante el periodo de monitoreo no se identificaron incumplimientos en las obligaciones contractuales con los propietarios	0	Durante el periodo de análisis, no se presentaron llamados de atención o reportes de incumplimiento de actividades de conservación		9	3	Alto
ación Cataruben no redibilidad en el proyecto.	Durante el predio de monitoreo, Cataruben impulsó el desarrollo del primer foro de biodiversidad y carbono, haciendo partícipes a los propietarios de los	0	Durante el predio de monitoreo, CATARUBEN impulsó el desarrollo del primer foro de biodiversidad y carbono, haciendo partícipes a los propietarios de los	INFORME REDES 2020-2021	6	3	Alto



RIESGO DE PERMANENCIA		TIPO RIESGO	RIESGO	CLASIFICACIÓN (afectación al proyecto)	MEDIDA MITIGACIÓN	INDICADOR	IMPACTO	PROBABILIDAD	CLASIFICACIÓN (probabilidad)	CLASIFICACIÓN RIESGO Valor	CLASIFICACIÓN RIESGO Nivel	PLAN DE EJECUCIÓN META	PLAN DE EJECUCIÓN UNIDAD	PLAN DE EJECUCIÓN FRECUENCIA	REPORTE MONITOREO PERIODO (2016-2020)	REPORTE MONITOREO PERIODO (2021-2022)	REPORTE MONITOREO SOPORTE	REPORTE MONITOREO % CUMPLIMIENTO GENERAL
Riesgo de Permanencia	1	Ambiental	Fuego	Directo	1. Implementación de guardarrayas 2.Evitar quemas en épocas críticas de verano. 3. Monitoreo de puntos de calor en Colombia	# de incendios presentes en el área elegible y áreas de fugas del proyecto.	2	3	6	3	Alto	30	Reportes	Anual	1	1	[illegible]	6,67%
			Inundación	Directo	Evitar la construcción de infraestructura cerca a las fuentes hídricas, así como la implementación de sistemas productivos	# de reportes de inundaciones inusuales	1	1	1	1	Bajo	30	Reportes	Anual	1	1	[illegible]	6,67%
	2	Financiero	No rentabilidad	Directo	*Reducir costos y gastos sin afectar la eficiencia y calidad de la operación. *Aumentar el inventario de certificados de carbono. *Aumentar el monto de transacciones por la venta de certificado de carbono (es una acción viable debido a las tendencias del mercado en mitigar el cambio climático, los compromisos del país en el contexto internacional y el valor del proyecto al ser un mercado no tradicional) *Buscar apalancamiento financiero mediante cooperación.	Estado de resultados y Flujo de Caja	2	2	4	2	Medio	14	Reportes	Cada 2 años a partir del año 2020	1	1	[illegible]	14,29%
			Baja demanda del mercado	Directo	*Ampliación geográfica del nicho de mercado. *Negociaciones de venta que establezcan una tasa de cambio estable en mercados inestables. *Fortalecimiento de alianzas comerciales a largo plazo.	% de variación de la demanda.	2	2	4	2	Medio	14	Reportes	Cada 2 años a partir del año 2020	0	1	[illegible]	7,14%
			Incumplimiento contractual	Directo	*Revisión de cumplimiento y validez de la documentación jurídica, financiera y de obligaciones contractuales por parte de los beneficarios para la entrega de beneficios económicos derivados del proyecto	# de reportes de seguimiento	2	2	4	2	Medio	14	Reportes	Cada 2 años a partir del año 2020	0	1	REPORTE DE SEGUIMIENTO	7,14%
	3	Social	Poca apropiación social del proyecto	Indirecto	Mostrar el impacto generado por el proyecto, en diferentes espacios	# de personas alcanzadas a través de medios digitales y eventos fomentados por el proyecto	1	1	1	1	Bajo	14	Reportes	Cada 2 años a partir del año 2020	1	1	[illegible]	14,29%
			Disputa por tenencia de tierras	Directo	Elaborar estudios títulos previo a la firma del contrato y mantener actualizados los documentos jurídicos a nivel de os predios	# de predios con objeto de disputa por tenencia de la tierra	1	1	1	1	Bajo	14	Reportes	Cada 5 años	0	1	DISPUTA POR TENENCIA DE LA TIERRA	7,14%
			Poca participación de las partes interesadas	Directo	Fomentar espacios de participación e intercambio de saberes a nivel virtual y presencialmente, en pro de fortalecer la implementación de las actividades de proyecto propuestas . Así como implementar el mecanismo de atención PRQS.	# de espacios de fortalecimiento de intercambio de saberes	1	1	1	1	Bajo	14	Reportes	Cada 5 años	0	1	FORTALECIMIENTO DE INTERCAMBIO DE SABERES	7,14%

Impacto	Probalidad	Calificación (Probabilidad x Impacto)	Clasificación Riesgo Valor	Clasificación Riesgo Nivel
3	3	9	3	Alto
		6	3	Alto
2	2	4	2	Medio
		3	2	Medio
1	1	2	1	Bajo
		1	1	Bajo

OVV assessment:

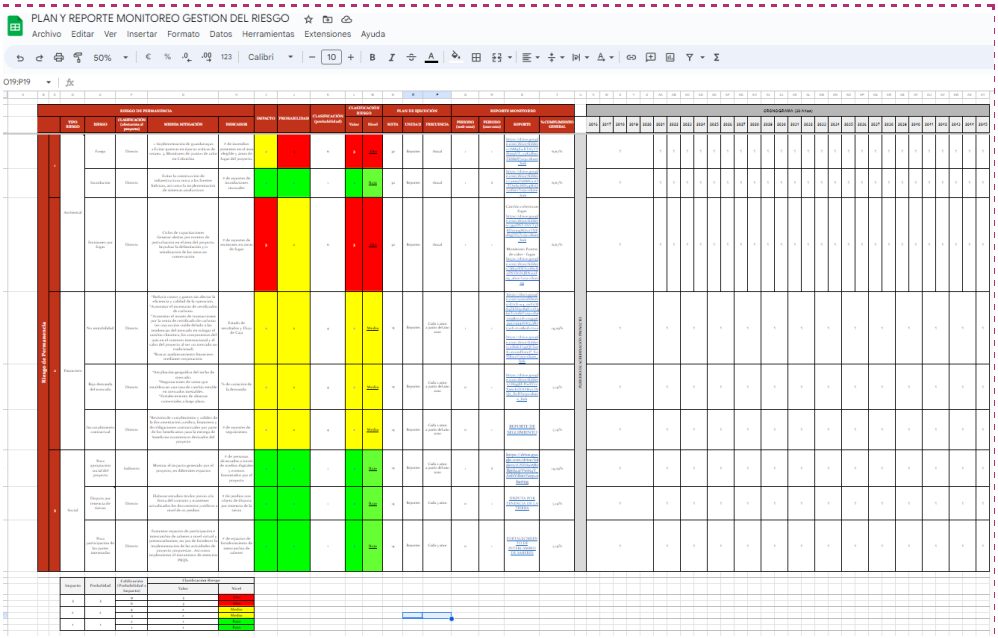
Round 1:

Within the proposed action plan to address this finding there is no evidence related to how the project addresses the risk management of all possible emissions that could occur outside the project boundaries, attributable to GHG project activities (Leakage), to comply with the provisions of the BCR Standard document, version 2.1, numeral 21 index c).

Round 2:

The nonconformity was successfully resolved.

Round 2 Action Plan:	To demonstrate compliance with the monitoring plan of permanence risk within the project CO2Bio P2, we annex within the environmental risks the emission of leaks for the management of possible emissions that may occur within and outside the limits of the project, complying with the provisions of the Standard BCR, version 2.1, number 21 index c. This information is based on the risk management monitoring report in sheet No. 2 called "PLAN AND REPORT ADJUSTED MONITORING", as shown below. Link Plan and report on Risk monitoring. The monitoring of leakage "Displacement of emissions" in the change of natural vegetation cover for the REDD+ component shows a decrease of 7.13 hectares of forest. Of which 3.24 hectares are associated with forest degradation due to the generation of clearings and edge effect due to subsistence crops, also called "pan cognac". Degradation is a gradual loss of capacity to provide ecosystem services, due to understory and shrub and herbaceous stratum removal decreasing the criterion of "minimum canopy of 30%" and thus affecting the interpretation of satellite images, maps generated by SMByC. The remaining 3.89 hectares are linked to illegal logging mainly due to the proximity of the identified lands to the indigenous reservations and agricultural sectors. While for the component Wetlands, a total of 137 hectares were identified in the area of leaks, of which 41.8% are associated with drivers "Agricola" and "Pastos", the remaining 58.2% are part of change of stratum by ecological succession The monitoring of leakage "Emission displacement" by heat points, according to the analysis there is no evidence of presence of fires in the areas of leakage of the REDD + component and wetlands. In addition, it is important to mention that during the period 2021-2022, Cataruben Foundation influenced the strengthening of the Municipal System of Protected Areas of San Luis de Palenque and Trinidad (SIMAP), as well as those of the Regional System of Protected Areas of the Orinoquia (SIRAP), instances in which different processes are articulated such as sustainable production, environmental education, good environmental practices with communities for the effective management of strategic areas. Strengthening of governance structures in the territory.



Conclusion:	Close find		x	Maintain finding	

Finding No.:	3	Type of finding:	CAR	X	CL	
Description:	The Monitoring Plan is not aligned with Resolution 1447 of 2018, Section 2, Art. 45, Chapter 2, Art. 14 and Chapter 3, Art. 54.					
Objective Evidence	1. In the documentary review, no evidence was found on how the project will comply with the guidelines related to the status of the initiative, updating and reporting of information to RENARE. 2. In addition to the foregoing, it was not found that the person responsible for the project will report to RENARE information regarding compliance with environmental and social safeguards, especially regarding project participants, conditions of ownership and land tenure in the area of intervention, consent of owners, owners or occupants of the lands in which the initiative is located, compatibility with planning instruments and territorial planning.					
Action Plan:	1. The CO2Bio P2 initiative is currently registered in the National Greenhouse Gas Emission Reduction Register (RENARE in spanish), a platform created by Resolution 1447 of 2018, for the management of GHG mitigation initiatives at the national level, which aim to qualify for payments for results or compensation, that contribute to the fulfillment of national climate change goals established under the United Nations Framework Convention on Climate Change (UNFCCC). 2. The CO2Bio P2 project is registered under the REDD+ project initiative. It is currently in the formulation phase, since July 2022 the report was made on the RENARE platform of basic data, emission sources and project activities, however the process of updating and reporting information should continue (see RENARE log).					

	Since August 9, 2022 and until today, the platform has been temporarily closed as evidenced in Support maintenance platform RENARE, and, it has not been possible to continue with the periodic reports; from the organization, the Ministry of Environment is expected to complete the maintenance of the application, and as soon as there is feasibility proceed with the report of the relevant information of the project, which is organized for due reporting and to be able to provide due updates as required by national regulations. This information is listed in the Monitoring Report version 1.1 under 3.4 *RENARE REPORT*.					
OVV assessment:	According to the evidence provided, it is clear that the incumbent has made the periodic reports of the initiative before RENARE, until July 2022. And that this process has not been able to continue because the platform is in a temporarily closed state since August 9, 2022. Therefore, this finding remains as a future action (FAR).					
Conclusion:	Close find		X	Maintain finding		

Finding No.:	4	Type of finding:	CAR		X	CL	
Description:	The Monitoring Plan is not consistent with Resolution 1447 of 2018, Art. 39. Use of Methodologies for the formulation and implementation of REDD+ Projects.						
Objective Evidence	During the document review process, it was not found how the REDD+ project holderexplains in the Monitoring Report the mechanisms defined for managing uncertainty in the quantification of mitigation results.						
Action Plan:	Uncertainty management is determined by the accuracy of the maps used to estimate emissions calculations and the use of information reported in the field. For the REDD+ component it is not necessary because the maps used are of national origin, i.e. official maps generated by the IDEAM (in spanish), especially the Forest and Carbon Monitoring System - SMByC. For the Wetland component, the map of natural vegetation cover generated from the Corine Land Cover methodology for the year 2022 uses Landsat images 8 and 9. Accuracy assessment is done through the AcATaMa (*sort for Accuracy Assessment of Thematic Maps*) plug-in in QGIS software. Control points are field observations and higher resolution images such as Sentinel 2AB. The accuracy determined for the generated map is 96%. The methodology indicates that for accuracy must be above 90 '% complying with the methodology. In this sense, each time that wetlands are monitored, the consistency of interpretation of coverage with AcATaMa must be executed. AcATaMa result. This document is called Monitoring Report CO2Bio P2 V1.1 section **4.1 Monitoring Project boundaries Wetlands** and **Section 5.1. Monitoring Limits of the REDD+ project.**						
OVV assessment:	Non-compliance resolved satisfactorily						
Conclusion:	Close find		X	Maintain finding			

Finding No.:	5	Type of finding:	CAR		CL		X
Description:	The Monitoring Plan is not aligned with the safeguarding of C6 Free, Prior and Informed Consent (FPIC)						
Objective Evidence	During the documentary review phase, no evidence was found regarding the handling of the application to the Ministry of the Interior on the appropriateness of prior consultation or free, prior and informed consent.						

Action Plan:	In the Monitoring Report Document version 1.1, Safeguards Monitoring, in the number *5.3.1 Consultation of origin*, resolution ST- 0003 DE 05 JAN 2022 is listed, which resolves that: "Prior consultation with indigenous communities, black communities and ROM communities is not appropriate for the project: "CO2BIO P2 PROJECT 2: IS A BIODIVERSITY CONSERVATION STRATEGY THAT IS LEVERAGED IN THE IMPLEMENTATION OF ECONOMIC INCENTIVES BY CAPTURE CARBON TO MITIGATE THE THREAT OF HABITAT LOSS ASSOCIATED WITH FORESTS AND WETLANDS ON PRIVATE LAND IN THE DEPARTMENTS OF CASANARE, ARAUCA, META AND VICHADA "Resolution of non-origin of the previous consultation				
OVV assessment:	Non-compliance resolved satisfactorily.				
Conclusion:	Close find		X	Maintain finding	

11.2. Validation and Verification Opinion

The verification team has carried out the independent verification of the "PROJECT CO2Bio Project 2", in accordance with the requirements of the BCR Standard in version 3.0, the Sector AFOLU/BCR0004 Methodological Document Quantification of the Reduction of Emissions and Removals of GHG - Activities that prevent land use change in inland wetlands. Version 2.0 of 23 June 2022 and Methodological Document Sector AFOLU/BCR0002 Quantifying GHG Emission Reductions from REDD+ Projects. Version 3.0. of February 16, 2022. In addition to ISO 14064-2:2019, Decree 926 of 2017 and Resolutions 1447 of 2018 and 831 of 2020.

It is confirmed that all activities defined in the verification process have been completed and that the GHG declaration is free of material and substantial discrepancy, providing a 95% assurance level in accordance with Resolution 1447 of 2018.

The mitigation project manager demonstrates that GHG removals are real, according to the Monitoring Report for Wetland Ecosystems of Activities Avoiding Land Use Change in Inland Wetlands for the verification period from 01 January 2021 to 31 December 2022 and for Forest Ecosystems of GHG emission reductions from REDD+ projects for the verification period from 01 January 2021 to 31 December 2021.

The project has a projection of 30 years, in turn, the carbon bonds will be valid until the end of the duration of the project, according to the number of carbon bonds certified, through audits carried out by the validation and verification body (OVV) and with the document issued by the certifying body.

Table 23. EMISSIONS REDUCTION MONITORING PERIOD 2021-2022

YEAR	Wetlands	REDEF,REDD+proj (tCO2e)	REDEG,REDD+proy (tCO2e)	RE Total year
2,021	100,118.0	237,609.00	7,843.00	345,570.0
2,022	99,879.0			99,879.0
Totals	**199,997.0**	**237,609.0**	**7,843.0**	**445,449.0**

445,449.0 tCO2e can be traded in the voluntary or regulated market, and meet the requirements to apply to the non-causation of the carbon tax according to Decree 926 of 2017.

11.3 Validation and Verification Report History

Version	Date	Comments or Changes
1.0	04.04.2023	Initial release.
2.0	05/05/2023	1. Updating the document in general to the latest version of the BCR 3.0 Standard. 2. Alignment of the document in general with validated activities: Land-use change avoidance activities in inland wetlands and GHG emission reductions from REDD+ projects. 3. Match the description of the actions taken to ensure that the project does not have double counting. 4. Adjustment to the description of the actions taken to conclude the relevance of the deviations

		to the monitoring plan reported by the initiative holder. 5. Change from the term 'crediting period' to the term 'quantification periods'. 6. Adjustment of section 3.2.11 to ensure that emission quantification was performed in compliance with the requirements of section 14.5 (BCR0002, v3.1) and section 19 (BCR0004 v2.0). 7. Correction of section 4 of the verification report with the activities undertaken to verify that the project complies with applicable legislation during the monitoring period. 8. Adjustment of section 10 of the verification report of activities undertaken to verify compliance with quality control and assurance procedures. 9. Change of section 11 of the activities performed verification report to verify the activities implemented by the project according to the guidelines of the validated Project Document. 10. Adjustment of section 11.2 of the monitoring period for each of the verified activities. 11. Setting monitoring period dates for each ecosystem.