BIOCARBON REGISTRY MONITORING REPORT[1]

MONITORING REPORT PROYECTO DE COMPENSACIÓN DE EMSIONES CONSERVACIÓN DEL BOSQUE GALILEA–AMÉ

Document prepared by Fundación AMÉ

Date of issue (Version 2.1 del 27/03/2024)

Monitoring Report Template (Version 1.1)[2]	
Name of project	PROYECTO DE COMPENSACIÓN DE EMISIONES Conservación del bosque Galilea–Amé
BCR Project ID	PCR-CO-FU-14-001
Registration date of the project activity	10/11/2019
Project holder	FUNDACION FUNDAME COL.
Contact	Email: gerencia@fundacioname.org Telephone: 6017424108
Version number of the Project Document applicable to this monitoring report	*V2.1-27/03/2024*
Applied methodology	BCR0002_Quantification of GHG Emission Reductions. REDD+ Projects. Version 3.1

[1] This form is for the monitoring report of projects using the BCR Program.
[2] The instructions in this form are a guide. Do not represent an exhaustive list of the information the preparer shall provide under each section of the template.

Monitoring Report Template (Version 1.1)[2]	
Project location (Country, Region, City)	Colombia, department of Tolima, municipalities of Villarrica, Dolores, Cabrera, Prado and Purificación.
Project starting date	September 01, 2010
Quantification period of GHG reductions/removals	September 01, 2010 to August 31, 2040
Monitoring period number	4th verification
Monitoring period	March 01, 2021 to February 28, 2023
Amount of emission reductions or removals achieved by the project in this monitoring period	Total: 447,198 tCO_2e Deforestation avoided: 208,538 tCO_2e Degradation avoided: 238,660 tCO_2e
Contribution to Sustainable Development Goals	SDG 1: No Poverty SDG 2: Local food production SDG 4: Quality education SDG 5: Gender equality SDG 6: Clean water and sanitation SDG 8: Decent work and economic growth SDG 11: Sustainable cities and communities SDG 12: Responsible consumption and production SDG 13: Climate action SDG 15: Life of terrestrial ecosystems
Special category, related to co-benefits	Orquid Category

Table of contents

1 General description of project

The Galilea - Amé Forest Conservation Emissions Offset Project is a clustered REDD+ project for climate change mitigation that has as its main objective the conservation of native forests in the region. By reducing Greenhouse Gas (GHG) emissions caused by deforestation, the project seeks to preserve and protect the local area through inter-institutional conservation efforts.

It is located in the southeastern area of the department of Tolima in the Eastern Cordillera, in the municipalities of Villarrica, Dolores, Cabrera, Prado and Purificación; comprised of 212 properties owned by multiple owners[3], where the Fundación Amé is making efforts for the conservation of 13,782 hectares of forest and the restoration of 2,144 hectares categorized as non-forest within the areas that are part of the project. From a biophysical perspective, the region where the project is being developed is characterized by the high biological diversity of fauna and flora distributed in different types of ecosystems, as well as the large supply of water resources. Through the development of educational activities, research and sustainable projects with the local community, we promote the reduction of 1,999,650 tCO_2e emissions and strengthen the implementation of conservation strategies in the region's forests, priority areas for the conservation of the Andes and the Amazonian foothills located in the biological corridor that connects the Andean and High Andean forests with the moorlands of the Sumapaz National Natural Park and the Galilea Forest Regional Natural Park[4]; the latter is home to the only relict of primary forest in eastern Tolima and the outcropping of the Negro River, one of the main tributaries of the Hidro Prado dam.[5]

The scenario prior to the implementation of the project activities shows a tendency to change land use due to an increase in cattle ranching and expansion of the agricultural

[3] The project, in its first instance, included 202 properties. However, in subsequent verifications, 10 new areas have been added (nine in the second verification and one in the third verification) in territories located in the expansion area of the project.

[4] An 87% of the project area is located within the Galilea Forest Regional Natural Park, declared as such under agreement 031 of 2019, subsequent to the certification of the second verification of the project that took place on October 11, 2019.

[5] Information obtained from the Environmental Atlas of Tolima 2014.

frontier, so the implementation of the activities will reduce GHG emissions by offering sustainable development alternatives for local stakeholders who, given the economic opportunities they will have, will promote the conservation of the forest through conservation agreements. The project objectives are not only aimed at reducing GHG emissions, since there are other justifications involved in the decision to carry out the project in addition to the reduction of GHG emissions that are equally important, such as Biodiversity Conservation, Community Cobenefits and Gender Equity, therefore also applies to the special category "Orquídea" for the multiple co-benefits demonstrating High Conservation Values in terms of biodiversity found in the project area, the co-benefits to the communities of the surrounding villages and the promotion of gender equity in a direct way through sustainable productive projects.

This project began on September 1, 2010, in its first instance included 202 properties, however, in subsequent verifications have been added 10 new areas (nine in the second verification and one in the third verification) in territories located on the expansion area of the project. This Monitoring Report follows up on what was planned in the new version of the Project Design Document with the updated and revalidated baseline scenario based on the historical reference period 2010-2021.

It is expected to generate benefits associated with the implementation of the project mainly from the socioeconomic context, with the diversification of economic activities from the implementation of sustainable production strategies, which will stop actions related to deforestation and land use change, taking into account that the main drivers of landscape transformation are livestock, agriculture, and extractive activities of timber and mineral products.

This report covers monitoring activities carried out between March 1, 2021 and February 28, 2023 to avoid deforestation, a period in which a total of 447.198 tCO_2e of reduced emissions were obtained as a result of project activities. In terms of deforestation, 208,538 tCO_2e were reduced and 238,660 tCO_2e were reduced due to degradation.

1.1 Sectoral scope and project type

The Emissions Offsetting Project Galilea Forest Conservation - Amé is framed under the AFOLU sector (Agriculture, Forestry and Other Land Uses), more specifically in sectoral scope 14.

Its scope is Reducing Emissions from Deforestation and Forest Degradation.

1.2 Project start date

The project began on September 1, 2010, after the state presence was resumed and security guarantees were provided for landowners to return to the territory. The Universidad del Tolima and ASOPROBOSQUES began the process of administration and governance of the project area, developing field visits, approaches to existing settlers and meetings with the community in general to prevent the expansion of the agricultural frontier in order to protect the territory and to make it known that these lands belong to private owners.

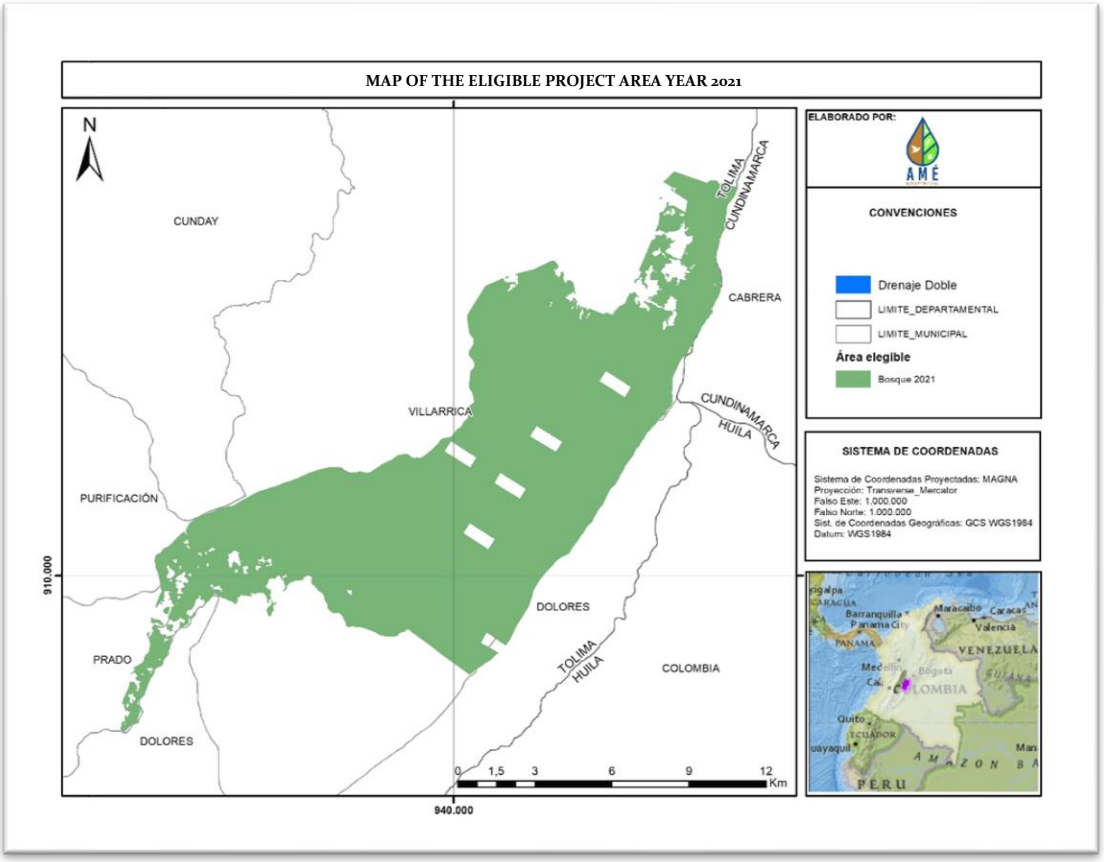
1.3 Project quantification period

The quantification period of the project is 30 years, from September 1, 2010 to August 31, 2040. There is no difference between the start date of the project and the start date of the project crediting period. The project has already completed three (3) certifications. The current monitoring period for deforestation and forest degradation is from March 1, 2021 to February 28, 2023, for an area of 13,782.91 ha.

For the current verification, the project in compliance with the guidelines of the BioCarbon Registry program, adopted the provisions of the AFOLU Sector Methodological Document for the quantification of GHG emission reductions, REDD+ projects BCR0002, in its version 3.1 of September 15, 2022 and addresses a period of time between March 1, 2021 and February 28, 2023.

1.4 Project location and project boundaries

The project is located in the southeastern part of the department of Tolima (see Ilustration 1) in the eastern mountain range of the Colombian Andes, in rural areas of the municipalities of Villarrica, Dolores, Cabrera, Prado and Purificación, between the coordinates 3°40'34.28" - 4°1'21.87" N and 74°30'40.27" - 74°43'58.8" W (WGS84 coordinate system). In total, it is made up of 212 properties with an area of 15,926.67 ha, of which 13,782.91 ha are part of the project area. The current project area is made up of lands administered by the Fundación Amé, the Universidad del Tolima and private individuals, mostly located in the municipality of Villarrica, which is located in the east of the department of Tolima at a distance of approximately 34 km from the nearest major city (Melgar) and 161 km from Ibagué, capital of the department. It is bordered on the north by the municipalities of Cunday and Icononzo, on the east by the department of Cundinamarca, on the west by the municipalities of Cunday, Purificación and Prado, and on the south by the municipality of Dolores.



Ilustration 1. Project location.

The project is located in a border area between the departments of Tolima, Huila, Meta and Cundinamarca. The project's expansion area consists of 29,884 ha of privately-owned and nationally-owned forests in the municipalities of Dolores and Villarrica.

1.5 Summary Description of the Implementation Status of the Project

The quantification period of the project is 30 years, from September 1, 2010 to August 31, 2040. There is no difference between the start date of the project and the start date of the project crediting period. The project has already completed three (3) certifications. The current monitoring period for deforestation and forest degradation is from March 1, 2021 to February 28, 2023, for an area of 13,782.91 ha.

For the current verification, the project in compliance with the guidelines of the BioCarbon Registry program, adopted the provisions of the AFOLU Sector Methodological Document for the quantification of GHG emission reductions, REDD+ projects BCR0002,

in its version 3.1 of September 15, 2022 and addresses a period of time between March 1, 2021 and February 28, 2023.

Taking into account the context of the project and the activities proposed by it, the activities that have presented difficulties to date in their development and implementation are presented below:

- ***Declaration of the PNR Galilea Forest.*** Unfavorable weather conditions have delayed the implementation of plans for beekeeping activities.
- ***Post-conflict situation in the territory.***

According to the above, the activities are conditioned by the determinations of the EMP construction process and by other territorial conditions, therefore, some of the strategic lines that make up the project work plan were reconsidered due to the need to adapt many of the actions and objectives of the work plan in accordance with what was established by the Corporación Autónoma Regional del Tolima (CORTOLIMA), and in response to the reality of the territorial context of conflict and violence that the territories have suffered and the conditions that still currently mediate its development. These adjustments will guarantee the viability of the Galilea Forest Conservation Project - Amé.

2 Title, reference and version of the baseline and monitoring methodology applied to the project.

The scope of the Galilea - Amé Forest Conservation Emissions Offset Project is the reduction of emissions from deforestation and forest degradation. For the current verification, the project in compliance with the guidelines of the BioCarbon Registry program, adopted the provisions of the AFOLU Sector Methodological Document for the quantification of GHG emission reductions, REDD+ projects BCR0002, in its version 3.1 of September 15, 2022. Additionally, in compliance with BCR Standard 3.1 of July 25, 2023 and the methodology, the following tools are applied:

- BCR Tool. Sustainable Development Goals (SDG). Version 1.0 of July 13, 2023.
- Tool to demonstrate compliance with REDD+ safeguards. Version 1.1 of January 26, 2023.
- BCR Tool. Avoiding double counting (ADC). Version 2.0 of February 07, 2023.
- BCR Tool. Monitoring, reporting and verification (MRV). Version 1.0 of February 12, 2023.
- BCR Tool. Permanence and risk management. Version 1.0 of March 07, 2023.
- BCR Guidelines. Baseline and Additionality. Version 1.2 of September 27, 2023.

3 Registry or participation under other GHG Programs/Registries

The REDD+ Galilea - Amé Forest Conservation project implemented the guidelines of the Guide for the Formulation, Validation and Verification of Climate Change Mitigation Forestry Projects and the Colombian Technical Standard (NTC) 6208 of ICONTEC in its first two certifications. For the third certification, the project conducted a methodological gap analysis and adjusted its quantification procedures to comply with the ProClima program guidelines in its version 3.0 of May 13, 2021.

In subsequent certifications, the project will use the methodology of the Biocarbon Registry carbon standard, which is currently called the AFOLU sector Methodological Document "Quantification of GHG Emission Reductions.REDD+ Projects. BCR0002" in its most recent version.

4 Contribution to Sustainable Development Goals (SGD)

According to the 2030 Agenda Transforming Colombia, the fundamental basis for ensuring sustainable development lies in the conservation and sustainable use of natural resources, so environmental sustainability is based not only on reducing damage to ecosystems, but also on the efficient management of ecosystem services that favor human development by increasing economic opportunities and social and ecological resilience. In this sense, the management of ecosystem goods and services is represented in the Sustainable Development Goals (SDGs), associated with water, climate, biodiversity and oceans, and from these, a series of interactions are generated that make it possible to meet other major global goals such as the eradication of hunger, poverty reduction and the quality of health services, among others.

In line with the 2030 Agenda, the fulfillment of the 17 SDGs represents the easiest way to enhance sustainable development at the national level since, as they are constructed in a universal manner, the participation of various stakeholders is guaranteed to achieve their success. Furthermore, these goals place special emphasis on the inclusion of vulnerable and excluded groups, through the pursuit of the fulfillment of human rights and social equality. Finally, by having a transdisciplinary scope, they recognize needs in social, economic and environmental terms and promote human development together with environmentally sustainable practices.

In this sense, in order to achieve the goals outlined under the SDGs, it is important to define their fulfillment through intersectoral, multilevel and participatory public policies, taking a multidimensional approach. In Colombia, the implementation of the SDGs is a

fundamental part of national action plans and policies such as, for example, the National Development Plan (NDP) 2018 - 2022 " Pacto por Colombia, Pacto por la Equidad", which presents the structural and transversal government guidelines to comply with the agreements and commitments adopted under the SDGs, and highlights the goals set at the environmental, social and economic levels.

Table 1. National Sustainable Development Goals targets and indicators

SDG	National indicator	NDC Sectoral Targets (Colombia's Nationally Determined Contribution)
1. Zero Hunger	Multidimensional poverty index (%)	Protected areas Environment
2. Zero Hunger	Under-five mortality rate due to malnutrition (per 100,000 children under 5 years of age)	• Health, Agriculture and rural development • Agricultural subsectors. • Agro-climatic technical roundtables
3. Good Health and Well-Being	Maternal mortality rate (per 100,000 live births)	Health
4. Quality Education	Higher education coverage rate (%)	N/A
5. Gender Equity	Women in management positions in the Colombian government (%)	N/A
6. Clean Water and Sanitation	Adequate access to potable water (%)	• Water resources management • Housing, water and basic sanitation • Health • Agriculture and rural development • Environment
7. Affordable and Clean Energy	Electricity coverage (% of households)	• Transportation • Environmental management and control of projects (ANLA) • Mines and Energy
8. Decent Work and Economic Growth	Labor formality rate (% of employed population)	• Mines and Energy • Transportation
9. Industry, Innovation and Infrastructure	Households with Internet access (%)	• Mines and Energy • Transportation • Industry, commerce and tourism
10. Reduced Inequalities	GINI Coefficient	N/A

SDG	National indicator	NDC Sectoral Targets (Colombia's Nationally Determined Contribution)
11. Sustainable Cities and Communities	Urban households with quantitative housing deficit (%)	• Housing, city and territory • Transportation • Environmental management and control of projects (ANLA) • Early warning system monitoring network • Environment
12. Responsible Consumption and Production	Recycling rate and reuse of solid waste (%)	• Industry, commerce and tourism • Transportation • Agricultural subsectors • Agro-climatic technical roundtables • Agriculture and rural development
13. Climate Action	Reduction of total GHG emissions (%)	• Housing, city and territory • Water and basic sanitation • Health • Industry, commerce and tourism • Transportation • Agriculture and rural development • Environment
14. Life Below Water	Thousands of hectares of marine protected areas	• Mines and Energy • Protected Areas • Environment
15. Life on Land	Thousands of hectares of protected areas	• Water resources management • Mining and Energy • Transportation • Moorland delimitation • Protected areas • Environment
16. Peace, Justice and Strong Institutions	Homicide rate (per 100,000 inhabitants)	N/A
17. Partnerships for the Goals	Monitoring scheme for all resources, public and private, national and international, that contribute to the achievement of the proposed goals.	N/A

Source: Prepared based on document CONPES 3918 of 2018 and national targets and indicators regarding the SDGs raised by the National Planning Department from the Technical Secretariat SDG Commission.

Considering the above, the emissions offsetting project Galilea - Amé Forest Conservation has promoted the reduction of climate risks, increased ecosystem protection, improved quality of life and the preservation of ecosystem services such as biodiversity and carbon sequestration, while seeking to contribute as far as possible to meeting the goals proposed

by the Ministry of Environment and Sustainable Development (MADS) for 2030, within the framework of the implementation of the six main activities proposed. The project's commitments with respect to its contribution to the priority activities for sustainable development are summarized in Table 2. The follow-up of the contributions to the different activities is carried out in this monitoring report of the project activities, taking into account the tool "Sustainable development goals (SDG)" of Standard Biocarbon Registry. (12_REPORTE MONITOREO/ODS/BCR TOOL ODS_REDD+ AME.xlsm).

Table 2. Expected achievements and contributions by project scope to the Sustainable Development Goals - SDGs

SDG	Expected achievement of the project	Expected project contribution
1. No Poverty	Generate economic income for families that receive co-benefits from the project, through local agricultural production	Generate economic income through small-scale production of honey from bees, orchards, poultry and fish farming.
2. Zero Hunger	Promote agricultural productivity and incomes of small-scale food producers, particularly women and family farmers, through secure and equitable access to production resources and inputs, knowledge, and thus ensure the greatest possible access to healthy, nutritious and sufficient food.	Promote greater access to healthy, nutritious and sufficient food through small-scale production of honey, vegetable gardens, poultry and fish farming.
4. Quality Education	Encourage research and education as development axes within the framework of the project.	Strengthen the capacities of different research groups and rural inhabitants, as well as support continuing education in the area with the implementation of mobile environmental classrooms with the support and alliance of educational institutions.
5. Gender Equity	Support the involvement of women during the implementation of project activities.	Generate job opportunities in the local environment in a gradual manner, in which women can be involved in the implementation of activities.
6. Clean Water and Sanitation	Promote the care of water sources as a tool to preserve and protect the territory.	Contribute to the conservation of water resources, on the effluents that circulate under the area of influence, avoiding interventions by third parties and monitoring the quality of the resource.
8. Decent Work and Economic Growth	Contribute to the improvement of social dynamics and livelihoods of people close to the project, through the promotion of local employment.	Gradually generate job opportunities in the local environment, with the objective of implementing sustainable conservation and productive activities.
11. Sustainable Cities and Communities	Promote community sustainability through ecotourism and small-scale production of honey from bees, orchards, poultry and fish farming.	Promote community sustainability through ecotourism and small-scale production of honey from bees, orchards, poultry and fish farming.

SDG	Expected achievement of the project	Expected project contribution
12. Responsible Consumption and Production	Promote the conservation and sustainable use of natural resources inside and outside the project area.	Promote responsible production and consumption with the development of ecotourism and sustainable production projects
13. Climate Action	Advance in the recovery and maintenance of forest cover in the territory, especially in areas degraded by natural or anthropic agents, as a measure to mitigate and adapt to climate change.	Achieve a reduction in GHG emissions, gradually contributing to the national target of 20% reduction by 2030, in accordance with the commitments of the Paris Agreement.
15. Life on Land	Strengthen environmental management activities through local governance by managing financial resources for silvopastoral activities, as well as reforestation and forest regeneration.	Protect the region's forest masses over the years and avoid the materialization of a deforestation risk present in the territory.

For the results of SGD monitoring for this period see section 15.4 SDG monitoring.

5 Compliance with Applicable Legislation

The project carried out an evaluation of the applicable regulations and monitored compliance in order to ensure that it did not violate the country's legislation[6]. The activities carried out in the project area during the monitoring period comply with the legal requirements for environmental conservation activities. The project compliance with applicable legislation in the forms describe below:

Table 3. Colombian environmental regulations related to forest and biodiversity conservation.

Regulations	Description	Project compliance
	The Political Constitution of 1991, the maximum normative compendium within the set of national laws. Articles 2, 8, 38, 79, 80 and 95 specify the duty of each member of society to protect the nation's cultural and natural wealth and to ensure	As a constitutional state, Colombia is governed by the laws of a political constitution. In compliance with the aforementioned articles, the Galilea Forest Conservation - Amé REDD+ Project promotes the conservation of forests and their biodiversity and, consequently, ensures the preservation of ecosystem services associated with forest ecosystems that are closely linked

[6] See [11_NORMATIVA LEGAL/Normativa_Colombia.xlsx]

Regulations	Description	Project compliance
Political Constitution of Colombia[7]	the conservation of a healthy environment.	to the provision of water, the improvement of air quality, the maintenance of habitat for native and migratory species, among others. .
National Development Plan 2018-2022 " Pacto por Colombia, Pacto por la Equidad" (Pact for Colombia, Pact for Equity)."[8]	It contains a section entitled "Pact for Sustainability: Producing by conserving and conserving by producing", whose central axis consists of consolidating actions that make possible a balance between conservation and production, so that the country's natural wealth is preserved as a strategic asset of the nation.	The REDD+ project is part of the mitigation actions in the Land Use, Land Use Change and Forestry (USCUSS) sector that are being advanced in the regional and national environment, within the framework of the National Development Plan 2018 - 2022, so that the activities of the present project meet the objectives set out in this.
National Strategy for Reducing Emissions from Deforestation and Forest Degradation REDD+ (ENRED D+)[9] Colombian Low Carbon Development Strategy (EICDGB, by its acronym in Spanish)	The National REDD+ Strategy is part of the actions on Climate Change foreseen in the National Development Plan 2010-2014, by the National Government headed by the Ministry of Environment and Sustainable Development. This seeks to reduce the impacts of climate change caused by deforestation and forest degradation in Colombia. The ECDBC is a program that seeks to decouple national economic growth from the growth of GHG emissions, maximizing the carbon efficiency of the country's economic activity and contributing to national social and economic development. And the	REDD+ projects are a strategy for climate change mitigation through improved forest governance, forest conservation and sustainable management, actions that are carried out in light of international, national and local policies. The Galilea Forest Conservation REDD+ Project - Amé is governed by the National REDD+ Strategy (ENREDD+) and the Colombian Low Carbon Development Strategy (ECDBC), and follows the principles and objectives of the National Climate Change Policy and the National Forestry Policy. The above are derived from international commitments and ratifications signed by the Government of Colombia.

[7] Asamblea Constituyente. Constitución Política de La República de Colombia. Colombia; 1991. http://www.secretariasenado.gov.co/senado/basedoc/constitucion_politica_1991.html.

[8] https://colaboracion.dnp.gov.co/CDT/Prensa/Ley1955-PlanNacionaldeDesarrollo-pacto-por-colombia-pacto-por-la-equidad.pdf

[9] Ministerio de ambiente y desarrollo sostenible, Instituto de Hidrología Meteorología y Estudios Ambientales. Estrategia Integral de Control a La Deforestación y Gestión de Los Bosques. Bogotá D.C.; 2017.

Regulations	Description	Project compliance
Integral Strategy for Deforestation Control and Forest Management (EICDGB, by its acronym in Spanish)	EICDGB is the country's commitment to the reduction of deforestation and forest degradation through sustainable management.	The mitigation project is part of the Comprehensive Strategy for the Control of Deforestation and Forest Management (EICDGB, by its acronym in Spanish), which aims to halt deforestation and forest degradation, addressing the complexity of the causes that generate it and based on the recognition of the representativeness of these strategic ecosystems for the country, due to their socio-cultural, economic and environmental importance, their potential as a development option in the framework of the peace-building process, and their contribution to mitigating and adapting to climate change.
Law 2 of 1959	Whereby regulations on forestry economy of the Nation and conservation of renewable natural resources are issued.	The seven (7) forest reserve areas established by Law 2a of 1959 are oriented towards the development of the forest economy and the protection of soil, water and wildlife. The project aims to conserve the natural forest ecosystem delimited as a AP.
Decree 2811 of 1974	Whereby the National Code of Renewable Natural Resources and the Environment is enacted.	The project is in line with the National Code of Renewable Natural Resources and the Environment through compliance with the National Climate Change Policy, avoiding environmental deterioration of the territory through the conservation of renewable natural resources. Project activities focused on forest research and conservation.
Decree 622 of 1977	About Regional Natural Parks (PNR, by its acronym in Spanish).	Partial overlap with areas under the jurisdiction of the Galilea Forest PNR, therefore, for the execution of some of the project activities, Fundación Amé has been linked to the strategies determined by CORTOLIMA on the Environmental Management Plan (PMA by its acronym in Spanish) of the PNR and is awaiting its formulation for the implementation of the project activities.

Regulations	Description	Project compliance
Law 99 of 1993[10]	Whereby the Ministry of the Environment and the National Environmental System are created. (SINA, by its acronym in Spanish)	The REDD+ project is governed by the guidelines of the national regulations issued by the Presidency of the Republic and the Ministry of the Environment (now the Ministry of the Environment and Sustainable Development), as well as the regulations, guidelines and directives of Corporacion Autonoma Regional del Tolima (CORTOLIMA), which has jurisdiction in the project area.
CONPES[11] No. 2834 de 1996	Whereby the "Forest Policy" is approved, which seeks to achieve the sustainable use of forests, in order to conserve them, consolidate the incorporation of the forestry sector in the national economy and contribute to the improvement of the quality of life of the population.	There is no forest harvesting in the project area. At the time when the productive activities that require harvesting permits are developed, these will be processed through the responsible entities and an update of this table will be presented at each follow-up audit. .
CONPES[12] No. 3582 de 2009	It considers biodiversity as a strategic area and recognizes the need to advance in the knowledge and sustainable use of biodiversity.	Activities during the monitoring period focused on research, beekeeping production and forest conservation, which is in line with CONPES No. 3582 of 2009. .
Decree 2372 de 2010	Regulates the National System of Protected Areas.	The project considers the special management areas delimited within the National System of Protected Areas.
Kyoto Protocol 1997	International treaty adopted in 2012. This protocol commits the industrialized countries to stabilize greenhouse gas emissions and to emissions.	GHG reductions resulting from the reduction of deforestation rates in the project area, contribute to achieving the commitments made by Colombia on April 22, 2016, through the reduction of GHG emissions by 20% with respect to the
Paris Agreement 2015	International treaty adopted in 2015 during the COP21 of the UNFCCC.	

[10] Presidency of the Republic of Colombia. Law 99 of 1993. Colombia; 1993. http://www.secretariasenado.gov.co/senado/basedoc/ley_0099_1993.html

[11] National Council for Economic and Social Policy (Consejo Nacional de Política Económica y Social)

[12] National Council for Economic and Social Policy (Consejo Nacional de Política Económica y Social)

Regulations	Description	Project compliance
	It is a universal and binding agreement that seeks to improve the implementation of the Convention. It aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty. .	projections made until 2030, or 30% if the country has international cooperation.
Resolution 1447 of 2018	Regulates the System for Monitoring, Reporting and Verification of mitigation actions at the national level, the GHG Emissions Reduction and Removal Accounting System, and the operation of the National Registry of Greenhouse Gas Emissions Reduction (RENARE, by its acronym in Spanish). This resolution was published in July 2018 and the platform in September 2020. .	The project evaluates compliance with the criteria established by this resolution and was registered on September 25, 2020.
CONPES[13] No. 3700 de 2011	It considers biodiversity as a strategic area and recognizes the need to advance in the knowledge and sustainable use of biodiversity.	Activities during the monitoring period focused on research, beekeeping production and forest conservation, which is in line with CONPES No. 3582 of 2009. .
Decree 1076 of 2015	Whereby this version incorporates the amendments made to the Sole Regulatory Decree of the Environment and Sustainable Development Sector. .	
Decree 1655 of 2017	Whereby the organization and operation of the National Forest Information System, the National Forest Inventory and the Forest and Carbon Monitoring System, which are part of the Colombian Environmental Information System, are established, and other provisions are enacted.	

[13] National Council for Economic and Social Policy (Consejo Nacional de Política Económica y Social)

Regulations	Description	Project compliance
	.	
Law 1931 of 2018	Whereby guidelines for climate change management are established". Creates the National Climate Change Information System, whose purpose is to provide transparent and consistent data and information over time for decision making related to climate change management. In turn, it seeks to reduce the country's vulnerability to the effects of climate change and promote the transition to a competitive, sustainable economy and Low Carbon Development (LCD or DBC by its Acronym in Spanish).	
Resolution 831 of 2020	Whereby Resolution 1447 of 2018 is amended and other determinations are made.	The project complies with the provisions of the articles of the aforementioned resolution, as follows: Article 1: The OVV in charge of the processes for the present validation and verification of the project, as well as for the next monitoring periods, shall comply with the requirements mentioned in the Article guaranteeing the corresponding accreditation and its scope for the evaluation of the GHG mitigation activities. Article 2: The emission reduction project intends to report and cancel in RENARE the emission reductions generated from the year 2019 onwards, so that the GHG mitigation results guarantee to be no more than 5 years old in accordance with the stipulated. Article 3: The project uses the BCR methodology: AFOLU Sector Methodological Document "Quantification of GHG Emission

Regulations	Description	Project compliance
		Reductions. REDD+ Projects. BCR002" Version 3.1 of September 15, 2022. September 15, 2022 . Article 4: The project was registered on September 25, 2020, and is awaiting the corresponding data update following a regular conduit of the platform for each of the phases, as well as the response times of the entities in charge and the official entry into operation of the same.
Law 2224 of 2023. PND 2022-2026	Article 230°, Amend article 175 of Law 1753 of 2015.	"Any person, natural or legal, public, private or mixed, that intends to obtain payments for results, or similar compensations, including international transfers, or that intends to demonstrate results in the framework of compliance with the national climate change goals established under the United Nations Framework Convention on Climate Change (UNFCCC), as a consequence of mitigation initiatives that generate greenhouse gas (GHG) emissions reductions and removals in the country, must first register in RENARE, in accordance with the regulations issued by the Ministry of Environment and Sustainable Development for such purpose": The project is currently registered in RENARE and the portal is expected to be re-enabled in order to continue updating the platform. The project also complies with the second paragraph of the regulations regarding compliance with social and environmental safeguards.

6 Climate change adaptation

The Intergovernmental Panel on Climate Change ("IPCC") defines adaptation to climate change as "the adjustment of natural or human systems in response to actual or expected climatic incentives or their impacts that reduces the harm caused and enhances beneficial opportunities".

Considering this definition and based on the importance of linking mitigation with adaptation, in conjunction with efforts to reduce GHG emissions, the Project, through its actions to reduce emissions, is able to mitigate current and future impacts derived from climate change and climate variability.

Currently, the project contributes to climate change adaptation in the following ways:

a) The strategic lines proposed in the National Climate Change Policies and/or approaches outlined in the regulations of the country where the project is implemented are:

- Colombia's National Strategy for Reducing Emissions from Deforestation and Forest Degradation-ENREDD+.
- National Climate Change Policy.

b) Improving conditions for the conservation of biodiversity and its ecosystem services in the areas of influence outside the project boundaries through the implementation of sustainable productive projects that generate low-carbon landscapes;

d) Proposing restoration processes in areas of specific environmental importance and enrichment of the forests conserved by the project.

e) Beekeeping as an adaptation strategy based on an ecosystem-based approach

f) Strengthens the local capacities of the Universidad del Tolima and the communities to make informed decisions to anticipate negative effects derived from climate change (recognition of vulnerability conditions), seeking to take advantage of opportunities derived from expected or evidenced changes.

The project is currently developing actions or measures to adapt to climate change, related to agricultural, forestry and fishing production systems that are better adapted to high temperatures, droughts or floods, in order to improve competitiveness, income and food security.

7 Carbon ownership and rights

The Fundación Amé -FUNDAME.COL- is the proponent and responsible for the development of the project. The current project area is made up of the lots administered for the project by the Fundación Amé (In Illustration 3, the division of the properties is shown).[14] The certificates of tradition that guarantee the legal tenure of the land are found as supporting documents.[15]

Table 3. Project proponent

Organization name [16]	FUNDACIÓN FUNDAMÉ.COL – Fundación Amé
Representant	Pedro Jazahiel Amaya Medina
Title or Position	Legal Representative
Address	Calle 66 #27-26 Bogotá · Colombia
Telephone	6017424108
Email	gerencia@fundacioname.org
Description	Territory management entity. It is the proponent and responsible for the development of the forest conservation project, as well as for the operation and implementation of activities in the territory[17].

Table 4 presents the information that supports the ownership of the project area[18], which is supported by the respective certificates of tradition and freedom (CTL), documents that legally guarantee the ownership of the land and that, in accordance with articles 656 and

[14] See agreement between the Universidad de Tolima and the Fundación Amé in [01_ACUERDOS & CERTIFICADOS\5_Acuerdo_Fundame_UT.pdf]

[15] The real estate registration certificates can be found in [02_TENENCIA DE LA TIERRA Certificados Tradición & Libertad].

[16] The certificates of Existence and Representation of the bidders can be found in the path: [01_ACUERDOS & CERTIFICADOS]

[17] Universidad del Tolima and the other participants have signed agreements so that Fundación Amé will be the entity in charge of the project. See supports on the route: [01_ACUERDOS & CERTIFICADOS\5_Consentimiento_Fundame_UT.pdf]

669 of the Civil Code of the United States of Colombia (Law 84 of 1873), have rights of use, enjoyment and disposition over this real estate.[19]

Table 4. Ownership of project land

Owner or Administrator	No. of properties	Area (ha)
Fundación Amé [20]	138	9,885.54
Universidad del Tolima	60	2,565.70
Fundación Amé and Universidad del Tolima	14	717.36
Total	**212**	**13,782.91**

Source: Fundación Amé (2023).

Illustration 2 y Illustration 3 present the particularities of land tenure and land administration on the 212 properties.

Illustration 2. Tenure structure of the project

[11] The supporting documents of the real estate title plates of each property can be found on the route: [02_Tenencia de la tierra\ Certificados Tradición & Libertad]

[12] According to Article 656 of Law 82 of 1873, immovables or estates or real estate are those things that cannot be transported from one place to another, such as lands and mines; and those that permanently adhere to them, such as buildings and trees. In addition, plants are real property by adhesion, inasmuch as they adhere to the soil by means of their roots (Art. 657 of the same law).

[13] Under the administration of the properties of the Patrimonio Autónomo de Acción Fiduciaria SA as spokesperson of the Fondo Ambiental Trust Fund

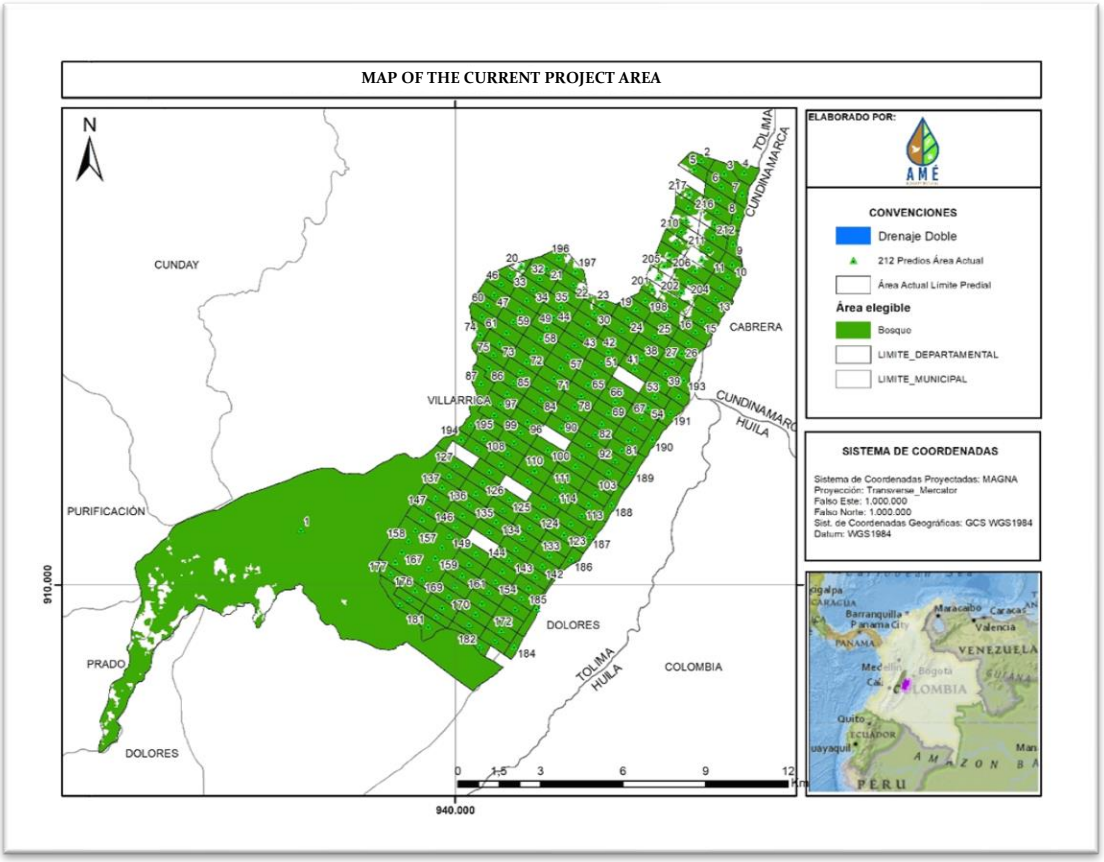


Illustration 3. Property division

8 Environmental Aspects

Following the guidelines of the applicable legislation, specifically resolution 1447 of 2018, an environmental management plan is not required for the development and implementation of REDD+ projects. Therefore, the project proponent does an environmental impact assessment to analyze the probable effects within the project area. By means of an impact evaluation matrix, following the guidelines of the No Net Harm Environmental and Social Safeguards (NNH) tool version 1.0 of March 7, 2023, it was determined that the project do not have environmental impacts, and instead produce positive impacts to the ecosystem; then the balance of the impacts of sustainable production projects in environmental terms is positive. (see 08_PDD/Anexos/NotNetHarm_Tool/Impactos_Ambientales_Sociales_Galilea-AME_v2.xlsx).

8.1 Disturbance events

Although the project have a forest fire reporting form[21] that allows this phenomenon to be monitored, in case of this monitoring report this event or other disturbance events did not occur.

9 Socioeconomic Aspects

Following the guidelines of the applicable legislation, specifically resolution 1447 of 2018, an environmental management plan is not required for the development and implementation of REDD+ projects. Therefore, the project proponent does an environmental impact assessment to analyze the probable effects within the project area. By means of an impact evaluation matrix, following the guidelines of the No Net Harm Environmental and Social Safeguards (NNH) tool version 1.0 of March 7, 2023, it was determined that the project do not have socioeconomic impacts, and instead produce positive impacts to the society; then the balance of the impacts of sustainable production projects in socioeconomic terms is positive. (see 08_PDD/Anexos/NotNetHarm_Tool/Impactos_Ambientales_Sociales_Galilea-AME_v2. xlsx).

10 Stakeholders' Consultation

Stakeholder consultation was carried out considering all the institutions that have an impact on the project area such as the Villarrica municipal mayor's office, the Tolima government, CORTOLIMA, and JAC. Socializing the project and allowing community participation and appropriation of knowledge related to the project (see 08_PDD/Anexos/ Informe EPCAC_REDD Tolima_PO_Anexo and 04_ACTIVIDADES REDD+/06_Socialización_Proyecto_REDD+_AulaAME).

Among the socialization activities that are attached in the annex, mentioned above, the following stand out:

- Conceptualization workshop; vision of the territory (October 24, 2022)
- Alto Lleras socialization workshop (October 3, 2022)

[21] Taken from CORANTIOQUIA (https://www.corantioquia.gov.co/wp-content/uploads/2022/01/reporte.pdf)

- Workshop on climate change and REDD+ projects (February 11, 2023)
- Socialization at the Villarrica sports center with the presence of the community and municipal mayor's office (February 12, 2022)
- Good manufacturing practices workshop (August 14, 2021)
- Theoretical and practical workshop for community park rangers (April 23, 24 and 25, 2021)

11 REDD+ Safeguards

In order to comply with the commitments established by the United Nations Framework Convention on Climate Change (UNFCCC), the Government of Colombia defined the safeguards for REDD+ applicable to its national strategy as part of the adoption of the measures mentioned in paragraph 70 of Decision 1/CP.16[22]. These apply to initiatives to reduce deforestation and forest degradation that are developed in Colombia, whether at the local, regional or national scale, becoming a guide of good practices to prevent potential risks and obtain a greater number of benefits. These guidelines also provide general principles for REDD+ implementation, focusing on how to address transparency, stakeholder participation, protection of biodiversity and ecosystem services, respect for the rights of indigenous and local communities, and leakage, as well as other risks to environmental integrity (Camacho & Guerrero, 2017).

Safeguards are considered measures aimed at preventing the affectation of essential social, economic and environmental rights, and the occurrence of negative impacts due to the design and implementation of REDD+ Measures and Actions. Their compliance implies that the people and institutions involved share the commitment to protect social and environmental values that are not usually fulfilled in the formulation and implementation of programs and projects for the reduction of deforestation. (Camacho & Guerrero, 2017).

The following is the identification of the main instruments available to the project to ensure compliance with the safeguards, following the guidelines of the "Tool for

[22] COP decisions are numbered as follows: the first number corresponds to the decision number. After the slash is the COP at which the decision was taken. In this case, for example, it is decision No. 1 adopted at COP 16.

demonstrating compliance with REDD+ safeguards. Version 1.1" of Biocarbon Registry, based on the participatory and capacity building processes that have been developed to date:

A. ***"The complementarity or compatibility of the measures with the objectives of national forest programs and international conventions and agreements on the subject".***

The project is being developed within the framework of the National REDD+ Strategy (EICDGB) and the National Forestry Development Plan. Its activities are also compatible with the objectives of national forestry programs and international conventions and agreements signed by Colombia for the protection of forests and biodiversity and the fight against climate change, as well as with national policies corresponding to these agreements.

In addition, project activities are developed in accordance with existing forest governance structures that are related to the zoning and management plans of National Forest Reserves and areas associated with the National System of National Parks (SINAP), the environmental determinants defined by departmental and regional environmental authorities, and some formal instances of articulation with the National Government such as the National Climate Change System (SISCLIMA) and the Intersectoral Commission for the Control of Deforestation. This articulation implies knowledge of the norms that support the stages of analysis, formulation and establishment of the Colombian legal framework for climate change and REDD+ projects.

To demonstrate complementarity, a list of all national, regional and local laws, statutes and regulatory frameworks that are relevant to the project activities is detailed in section o For the results of SGD monitoring for this period see section 15.4 SDG monitoring.

Compliance with Applicable Legislation of this document.

B. ***"Transparency and effectiveness of national forest governance structures, taking into account national legislation and sovereignty. Provide transparent and consistent information that is accessible to all stakeholders and regularly updated. Be transparent and flexible to allow improvements over time. Build on existing systems where they exist".***

All information related to the REDD+ project is in the public domain and is duly registered in the BCR program registration platform as well as in the possession of the project proponents, who have appropriate channels and means of information to publicize the

context of the project from its formulation to the implementation of the actions. Additionally, and as part of the compliance with Resolution 1447 of 2018, the project information is duly registered in the RENARE platform for public knowledge.

Within the framework of the execution of the Strategy for Participation, Communication and Appropriation of Knowledge of the Project (EPCAC), different spaces for participation and socialization of the project have been convened with community stakeholders, in these meetings the progress of the project was presented in relation to the implementation of the activities established to date.

C. "Respect for the knowledge and rights of indigenous peoples and members of local communities, taking into consideration relevant international obligations and national circumstances and legislation, and bearing in mind that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples."

Since its inception, the project has ensured that project stakeholders have effectively participated in project formulation decision-making. This has ensured the validation of highly relevant issues such as the prioritization of project activities. Socialization meetings were held as strategies for information, dialogue and joint construction with the communities and territorial stakeholders. At the same time, these meetings made it possible to recognize and articulate the decision-making spaces within the project's organizational structure. There are no ethnic communities present in the project.

As part of the project activities and action mechanisms, respect for traditional knowledge has been established as a basic principle. Thus, cultural traditions will be taken into account in the different phases of project implementation. Likewise, it is clarified that although in the area there are some obligations in terms of legislation, which allow the development or not of certain productive activities according to the zoning and protection figures on land use; to date the project adopts guidelines that were already given by the conservation areas; The project does not transgress or impose restrictions on the main use of the land, provided by higher order legislative guidelines such as the special management figure PNR Bosque de Galilea, and at the same time respects the development of traditional subsistence practices of the rural inhabitants living in the neighboring territories.

In the project area there are different communities and rural inhabitants, through conservation agreements[23] and dialogue spaces, alliances have been established with some of the neighboring families of the Alto Puerto Lleras and La Colonia neighborhoods, as well as with different owners of private properties, with the objective of avoiding the deterioration of the ecosystems in the project area due to pressures such as extensive cattle ranching and agriculture. These agreements seek to guarantee a commitment to conservation, to gradually minimize the pressure on the territory and avoid forest deterioration, while recognizing the economic dependence on the productive activities of the inhabitants and respecting the development of sustainable subsistence activities within the project boundaries, unifying efforts to prevent the expansion of extractive and exploitative economic practices, without affecting the subsistence of those who already live in the territory.

D. "The full and effective participation of stakeholders, in particular indigenous peoples and local communities, in the measures referred to in paragraphs 70 and 72 of this decision".

The effective participation of the project proponents in the preparation phase for project certification has been ensured through socialization, discussion and feedback spaces, which have become strategies for information, dialogue and joint construction of the project with communities and territorial stakeholders. In this way, it is intended that the findings of these approaches can be inputs to complete the project design in future verification periods. In addition, there is a communication channel to receive complaints[24].

E. "The compatibility of the measures with the conservation of natural forests and biological diversity, ensuring that the measures identified in paragraph 70 of this decision are not used for the conversion of natural forests, but instead serve to incentivize the protection and conservation of these forests and their ecosystem services and to enhance other social and environmental benefits".

Since its conception, the REDD+ Galilea - Amé Forest Conservation Project is a financial instrument that will provide measures to promote conservation processes and the maintenance of ecosystem services on a local scale. The activities contemplated by the

[23] See in: [04_ACTIVIDADES REDD+/03_Acuerdos de conservación

[24] See in: [04_ACTIVIDADES REDD+/06_Aula AME/PQRS]

project have the ultimate goal of reducing deforestation in the Galilea Forest, specifically in the properties owned by the private landowners that are part of the mitigation initiative, as well as continued support for the provision of associated ecosystem services by the communities that depend on them. The implementation of the activities will not encourage the replacement of natural forests with plantations or agricultural crops at any time, nor the introduction of exotic species that threaten local biodiversity.

On the other hand, and as a contribution to the SDGs, the project seeks to ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems in the project area, through the administration of strategic areas and ecosystems, exercising control, monitoring and management of natural resources. To ensure the success of the project, forest monitoring and surveillance is carried out by monitoring changes in forest cover in each verification period, so that the effectiveness of the activities carried out can be established and adjustments can be made to their design and implementation based on primary information. At the same time, the research activity in association with institutions seeks to expand the knowledge of the forest and the biodiversity that inhabits it, as well as the maintenance of the ecosystem services it provides.

In addition, it generates the development of joint work with the community present in the project area in order to conserve, protect, restore and take advantage of ecosystem services through sustainable forest management, as demonstrated in the implementation of REDD+ activities that also generate economic and social development in the region.[25].

F. "The adoption of measures to address the risks of reversion".

The mitigation project recognizes and respects the environmental determinants defined by the departmental and regional environmental authorities, and the land management agreements and regulations, namely:

- Galilea Forest Regional Natural Park (PNR)
- Villarrica Land Use Planning Scheme (EOT), 2016.

[25] See in 04_ACTIVIDADES REDD+/07_Registros Fotográficos & Videográficos

The mitigation project was proposed in harmony with the environmental and territorial planning instruments in force in the project area (environmental determinants). This ensures the permanence of the activities.

Likewise, it is clarified that the activities to avoid deforestation in the forest area of the project are framed to avoid the risks of reversion. In other words, the measures are intended to be sustainable and not temporary, seeking long-term sustainability in the interventions. For this reason, an active participation and involvement of the area's inhabitants and territorial entities in the activities is planned, reducing the risks of reversion.

In addition, a risk management plan is generated by assessing the risks related to the implementation of REDD+ activities in the environmental (Section 8 Environmental Aspects), financial and social (Section 0 Although the project have a forest fire reporting form that allows this phenomenon to be monitored, in case of this monitoring report this event or other disturbance events did not occur.

Socioeconomic Aspects) dimensions according to the guidelines described in the tools "Permanence and Risk Management. Version 1.0" and BCR's "No Net Harm Environmental and Social Safeguards (NNH). Version 1.0" of BCR to subsequently establish mitigation measures within the framework of adaptive management. This evaluation will be carried out at each verification, rating the risks and including their monitoring indicators in order to prevent project reversion. Additionally, a discount of 20% of the total GHG reductions generated is generated to be held in reserve in accordance with the guidelines described in BCR's "Permanence and Risk Management. Version 1.0" of BCR.

G. "The adoption of measures to reduce the displacement of emissions".

The mitigation project provides for forest monitoring and surveillance by monitoring changes in forest cover during each verification period in order to prevent the displacement of productive activities or deforestation agents. In fact, as part of the project activities, community surveillance and monitoring actions are proposed and implemented in the territory through the forest ranger program.[26].

[26] See in: [04_ACTIVIDADES REDD+/05_Programa de guardabosques]

These activities contribute to strengthening the exercise of governance in the territory and support the identification of alternatives that put an end to the pressures associated with deforestation in the local environment.[27]

12 Special categories, related to co-benefits

Understanding that the project applies to the special category " Orquídea" of the Biocarbon Registry standard, we present below for each component, the monitoring of the indicators that endorse the project's compliance with each of the requirements established for this category.

12.1 Biodiversity conservation

A. Development of effective actions and measures to halt the loss of biological diversity by enabling ecosystems to continue to provide essential services.

Indicator	Records of fauna and flora species in some category of threat in the project area.
Type	Impact
Goal	Increased sightings per monitoring period.
Unit of measurement	Number of records
Monitoring methodology	Photo trapping of biodiversity.
Monitoring frequency	Semiannual
Responsible for measurement	Professional biologist
Results	• Herpetofauna (23 sp.) • Mastofauna (32 sp.) • Vascular flora (39 sp.)
Supports	Vascular Flora and Vertebrate Fauna Report

[27] See in: [12_REPORTE MONITOREO\ Salvaguardas Ambientales y Sociales\ Anexo I_Monitoreo de las salvaguardas ambientales y sociales REDD+.pdf]

Indicator	Records of endemic fauna and flora species in the project area.
Type	Impact
Goal	Increased sightings per monitoring period
Unit of measurement	Number of records
Monitoring methodology	Photo trapping of biodiversity.
Monitoring frequency	Semiannual
Responsible for measurement	Professional biologist
Results	• Herpetofauna (23 sp.) • Mastofauna (32 sp.) • Vascular flora (39 sp.)
Supports	Vascular flora and vertebrate fauna report.

Indicator	Area of forest core extent from forest fragmentation analysis.
Type	Result
Goal	Maintain connectivity during the life of the project.
Unit of measurement	Size of core or forest patch
Monitoring methodology	Landscape fragmentation analysis
Monitoring frequency	Annual
Responsible for measurement	GIS Expert
Results	7.247,45 ha
Supports	GDB

B. No invasive species have been introduced due to project activities.

Indicator	List of species used in project activities.
Type	Impact
Goal	Avoid the introduction of invasive species due to project activities.
Unit of measurement	Number of invasive species introduced as a result of project activities

Monitoring methodology	Documentary review.
Monitoring frequency	Semiannual
Responsible for measurement	Forestry professional
Results	No invasive species have been introduced as part of the project activities.
Supports	Vascular flora and vertebrate fauna report.

12.2 Benefits on communities

A. Identifies and strengthens mechanisms for social and community participation at the local and regional levels.

Indicator	Promotion of local and regional participation
Type	Impact
Goal	Increase community participation at the local and regional level.
Unit of measurement	Spaces for local and regional participation.
Monitoring methodology	Follow-up of participation spaces.
Monitoring frequency	Annual
Responsible for measurement	Social professional
Results	Workshops, socialization and training.
Supports	• See 04_ACTIVIDADES REDD+ • Participation, Communication and Knowledge Appropriation Strategy Document (EPCAC by its Spanish acronym) AME Classroom

B. The project generates short and long-term benefits to small-scale productive projects with members of the communities in the project area.

Indicator	Generated jobs.
Type	Product
Goal	Increasing jobs

Unit of measurement	Number of working days.
Monitoring methodology	Documentary review.
Monitoring frequency	Semiannual
Responsible for measurement	Forestry professional
Results	Staff involved in project activities.
Supports	• See 04_ACTIVIDADES REDD+

Indicator	Conservation incentives
Type	Product
Goal	Maintain the number of beneficiary families
Unit of measurement	Number of families benefited
Monitoring methodology	Documentary review
Monitoring frequency	Annual
Responsible for measurement	Forestry professional
Results	25 conservation agreements signed.
Supports	Conservation agreements

Indicator	Families linked to productive projects.
Type	Impact
Goal	Increase the quality of life of the families involved in the project.
Unit of measurement	Number of families involved in productive projects.
Monitoring methodology	Documentary review
Monitoring frequency	Annual
Responsible for measurement	Forestry professional

Results	25 conservation agreements signed
Supports	Conservation agreements

12.3 Gender equity

A. Consider determinations set forth in the normative framework related to gender.

Indicator	Promotion of the appropriation of the normative framework for gender equity.
Type	Impact
Goal	Strengthen community knowledge of the normative framework for gender equity.
Unit of measurement	Number of training sessions focused on gender equity
Monitoring methodology	Follow-up of training opportunities.
Monitoring frequency	Annual
Responsible for measurement	Social professional / Project manager
Results	2 Workshops with a gender focus.
Supports	Participation, Communication and Knowledge Appropriation Strategy Document (EPCAC by its Spanish acronym) AME Classroom

B. Ensures women's full and effective participation and equal opportunity for leadership at all levels of decision-making at the project level

Indicator	Promoting women's participation in project activities.
Type	Impact
Goal	Ensure the participation of women at all levels of the project.
Unit of measurement	Number of women participating in the implementation of activities.
Monitoring methodology	Documentary review.
Monitoring frequency	Annual

Responsible for measurement	Social professional / Project manager
Results	Workshops, socialization and training.
Supports	• Participation, Communication and Knowledge Appropriation Strategy Document (EPCAC by its Spanish acronym) AME Classroom • See 04_ACTIVIDADES REDD+

13 Grouped Projects

The Galilea - Amé Forest Conservation REDD+ Project is developed as a grouped project, allowing according to the BCR Standard, version 3.1, the addition of new areas after the validation of the GHG Project, without the need for a new validation of the Project description.

No new areas are added to the project for this monitoring report.

14 Implementation of the project

The current status of the Project implementation is presented below.

14.1 Implementation status of the project

Taking into account the context of the project and the activities proposed by it, the activities that have presented difficulties to date in their development and implementation are presented below:

- ***Declaration of the Galilea Forest National Park.*** Unfavorable weather conditions have delayed the implementation of plans for beekeeping activities.
- ***Post-conflict situation in the territory.***

In accordance with the above, the activities are conditioned by the determinations of the PMA (environmental management plan) construction process and by other territorial conditions, therefore, some of the strategic lines that make up the project's work plan were reconsidered due to the need to adapt many of the actions and objectives of the work plan in accordance with what was established by the Corporación Autónoma Regional of Tolima (CORTOLIMA), and in response to the reality of the territorial context of conflict and violence that the territories have suffered and the conditions that still currently

mediate their development. These adjustments will guarantee the viability of the Galilea - Amé Forest Conservation project.

Fundación Amé hopes to articulate sustainable productive processes mediated by environmental education and research, with innovative and sustainable proposals and ideas to reduce the activities that lead to deforestation and forest degradation, and thus promote rural development projects in the rural communities of the Galilea Forest.

Fundación Amé is actively participating with the Corporación Autónoma Regional of Tolima on the activities and their execution, so as soon as there is clarity on the provisions of the PMA (by its Spanish acronym), the implementation schedule will be updated with the new projected lines of action.

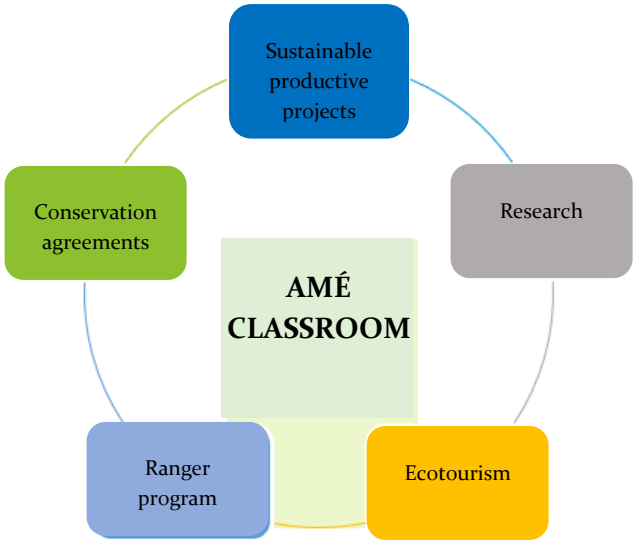


Illustration 4. REDD+ Project Activities

14.2 Revision of monitoring plan

Not applicable, since the same monitoring parameters defined in the Project Design Document (PDD) are maintained.

14.3 Request for deviation applied to this monitoring period

The REDD+ Galilea - Amé Forest Conservation Project has no deviations applied.

14.4 Notification or request of approval of changes

Not Applicable, no notification or request for approval of changes was made during this monitoring period.

15 Monitoring system

The following is the monitoring system used in the development of the REDD+ Galilea Forest Conservation - Amé.

15.1 Description of the monitoring plan

The monitoring plan during this monitoring period is unchanged from that presented in the Project Design Document.

15.1.1 Data and parameters monitored

This section presents the data and parameters monitored during the quantification period of the Project.

Data / Parameter	Project área at February 28, 2023
Unit	Hectares (ha)
Source	Information on Colombia's forest area and changes in it, provided by IDEAM through the SMByC and satellite images.
Applied value	13,763.51 ha
Justification for the choice of the parameter or description of the measurement methods or procedures applied.	The boundaries of the project area were defined based on cartographic information obtained through the processing and analysis of satellite images and the use of secondary information, combining the collection of remote sensing images (optical and radar) in order to categorize the information that in the satellite images was considered lost (without information) due to the presence of clouds; as well as inputs from the Forest/Non Forest layers generated by the Forest and Carbon Monitoring System (SMByC) of the Institute of Hydrology, Meteorology and Environmental Studies (IDEAM).[28] The processing of the information sources and the cartographic cross-referencing of the different years have obtained the areas of stable forest for the

[28] The layers were downloaded from the Colombian Environmental Information System (Sistema de Información Ambiental de Colombia) (SIAC). Available in: http://www.siac.gov.co/catalogo-de-mapas

	emissions reduction project and the monitoring of the loss of cover. The area was calculated based on the MAGNA coordinate system of Colombia.
Purpose	• Estimated emission reductions in the baseline scenario and the project scenario. • Projected deforestation and degradation in the project area in the baseline scenario.
Comments	-

Data / Parameter	Reference area
Unit	Hectares (ha)
Source	Information on Colombia's forest area and changes in it, provided by IDEAM through the SMByC and satellite images.
Applied value	547,189.95 ha
Justification for the choice of the parameter or description of the measurement methods or procedures applied.	he boundaries of the reference area were defined based on cartographic information obtained through the processing and analysis of satellite images and the use of secondary information, combining the collection of remote sensing images (optical and radar) in order to categorize the information that in the satellite images was considered lost (without information) due to the presence of clouds; as well as inputs from the Forest/Non Forest layers generated by the Forest and Carbon Monitoring System (SMByC) of the Institute of Hydrology, Meteorology and Environmental Studies (IDEAM).
Purpose	• Baseline scenario estimation • Estimation of reductions in the project scenario. • Projected deforestation and degradation in the project area in the baseline scenario
Comments	-

Data / Parameter	Areas deforested in the baseline within the reference region during the historical period.
Unit	Hectares (ha)
Source	Calculation within the historical period of the project
Applied value	3,570.52 ha
Justification	From multi-temporal analyses of the project region during the baseline revalidation period. (2010-2021)
Purpose	Estimate of the project baseline taking into account the 2010-2021 period.
Comments	-

Data / Parameter	Emission Factor
Unit	Tons of carbon dioxide equivalent per hectare (tCO_2e/ha)
Source	Forest Reference Emission Level (FREL) for the Andean biome
Applied value	347.80 tCO_2e/ha

Justification	Corresponds to the forest emission factor in the Andes biome within which the project area is located.
Purpose	Estimated emission reductions in the baseline scenario and the project scenario (Ex-ante and Ex-post).)
Comments	-

Data / Parameter	Carbon dioxide equivalent in total biomass difference per hectare for primary and secondary degradation.
Unit	Tons of carbon dioxide equivalent per hectare (tCO_2e/ha)
Source	Biomass Map 2010 prepared by IDEAM and established an average carbon value according to ecosystem type and transitions of primary degradation and secondary degradation.
Applied value	$DBT_{iCO"eq} = DBTix\ (\frac{44}{12})\ tCO2e/ha$ Primary degradation (Core - patch): 77,00 tCO_2e/ha Secondary degradation (Patch - drilled): 120,28 tCO_2e/ha
Justification	Corresponds to the forest emission factor of the 2010 Biomass map for ecosystems and transitions Primary Degradation (Core - patch and Secondary Degradation (Patch - drilled).
Purpose	Estimate emissions from primary and secondary degradation in the baseline and project scenarios.
Comments	

15.1.1.1 Deforestation and forest degradation monitoring

The results of these monitoring indicators are presented in detail in sections Monitoring of project areas y Quantification of GHG emission reduction / removals.

Data / Parameter	Annual change in the area covered by forest in the leakage area and the project area.
Unit	PA: 2.09 (ha/year). LB: 1.83 (ha/year).
Source	It is calculated from the Forest/Non- Forest layers provided by IDEAM through the SMByC, available for each verification period or under supervised classification processes of satellite images, when IDEAM information is not available.
Monitoring equipment or instrument	Remote sensing data (provided by IDEAM) GIS software.
Justification and Purpose	Estimated emission reduction during each monitoring period
Comments	-

Data / Parameter	Annual primary and secondary degradation in the leakage area and in the project area
Unit	Primary degradation: PA: 0.105 (ha/year). LB: 27.25 (ha/year). Secondary degradation: PA: 0.00 (ha/year). LB: 20.665 (ha/year).
Source	It comes from the processing and analysis of forest cover change maps generated by the Forest and Carbon Monitoring System (SMByC), resulting from forest cover monitoring through fragmentation (Landscape Fragmentation Tool). For the years where the aforementioned inputs are not available, a cartographic processing is carried out for the classification of satellite images according to the availability of remote sensing sources.
Monitoring equipment or instrument	Remote sensing data (provided by IDEAM) - Landscape Fragmentation Tool - GIS Software.
Justification and Purpose	Estimated emission reduction during each monitoring period
Comments	-

Data / Parameter	Presence or absence of fires
Unit	Not forest fires occur during this monitoring period
Source	It comes from forest fires format report and the measurement come from the processing and analysis of forest cover change maps generated by the Forest and Carbon Monitoring System (SMByC). For the years where the aforementioned inputs are not available, a cartographic processing is carried out for the classification of satellite images according to the availability of remote sensing sources.
Monitoring equipment or instrument	It comes from forest fires format report and the measurement come from remote sensing data (provided by IDEAM) - Landscape Fragmentation Tool - GIS Software
Justification and Purpose	Estimated emission reduction during each monitoring period
Comments	In case of fires presence is necessary to measure and report the emissions associated with all GHG.

15.2 Monitoring the execution of activities

The following is the status of execution of each of the activities proposed by the project.

15.2.1 Sustainable productive projects

15.2.1.1 Beekeeping

Fundación Amé has established eight (8) apiaries, distributed inside and outside the project area, thus achieving the establishment of 45 beehives and 21 nucleus holders distributed in the 8 apiaries. At the same time, families of the inhabitants of the territory have been hired between 2021 and 2023, for the development of the activities and maintenance of the productive system.

Illustration 5. Beekeeping in the project area

As a result of the project's expansion strategy, families from other villages in the area of influence have been involved in the socialization and training processes, in order to increase the installed capacity and the number of responsible inhabitants in the next verifications. It should be noted that the development of this activity has been limited by the environmental conditions of the territory, which has caused delays in the coupling and conditioning of the hives.

In total, the apiaries have produced 730 kilograms of honey, which is subsequently marketed, and strategies have been developed to create visual advertising material to sell the products obtained from this activity. Although there is a large production, Fundación Amé is strengthening the productive and community level technically so that once the consolidation and strengthening of the beekeeping project is achieved, the construction

of the collection center can be carried out. In January and February there was summer and we had one of the best harvests of the year with 470 kg of honey, we see that the beekeeping activity has been getting stronger; despite the winter the bees are becoming more resistant and adapted, the community is very happy with the growth of the hives.

Table 5. Apiaries and beehives of the honey production project

Apiary	Location	Family in charge	Coordinate	No. Hives	No. Core Holder	Total
1	Galilea Forest	Parra	N. 03°47.429 W. 074°41.810	11	1	12
2	Galilea Forest	Parra	N. 03°47.071 W. 074°41.633	6	3	9
3	Galilea Forest	Parra	N. 03°47.666 W. 074°41.374	9	2	11
4	Galilea Forest	Parra	N. 03°47.192 W. 074°41.896	5	4	9
5	V. Puerto Lleras	Parra	N. 03°49.897 W. 074°41.547	6	5	11
6	V. Puerto Lleras	Rodríguez	N. 03°49.297 W. 074°42.386	4	1	5
7	V. La Colonia	Diaz	N. 03°48.925 W. 074°42.257	2	1	3
8	V. Puerto Lleras	Rubio	N. 03°49.106 W. 074°42.064	2	4	6
TOTAL				**45**	**21**	**66**

Table 6. Honey production

No. of honey harvests	Date	Production kg	Number of hives producing honey
1	06/05/2021	200	14
2	12/11/2022	60	14
3	30/01/2023	350	17
TOTAL		**610**	**45**

Table 7. Propolis production

No. of honey harvests	Date	Production kg	Number of hives producing honey
1	17/05/2022	13	55
2	17/05/2022	2	55
TOTAL		**15**	**55**

The supports of the execution of the activities correspond to the management files prepared periodically, which describe the different actions, findings, approaches to the community and others, are presented as supports to this document.

Beekeeping Indicators

Type	Product
Goal	To build 40 technified hive boxes by 2023 supporting the extraction of bee products in order to improve productivity and sustainability of beekeeping activities based on work with the community.
Unit of measurement	Number of boxes built
Monitoring methodology	Periodic field visits were made to supervise the construction of the boxes and photographic records were taken of the process
Monitoring frequency	Annual
Responsible for measurement	• Community beekeeping leader • Forestry professional • General management
Results	The project currently has: • 80 boxes built. • 20 Complete beehive brood boxes • 20 Pollen catcher boxes.
Supports	• Hive box construction report.
Remarks	The construction of the hive boxes planned for the beekeeping project was achieved even with some obstacles due to weather conditions. The technical decisions have been successful for the community beekeeping proposal developed and presented in the current monitoring period (2021 - 2023).

Indicator	Hive maintenance
Type	Result
Goal	Strengthen the conditions of the hives installed in the field in order to improve the productivity and sustainability of the beekeeping activity.
Unit of measurement	Number of hives inspected.
Monitoring methodology	Permanent activities of supervision, revision and feeding of the established hives.
Monitoring frequency	Monthly

Responsible for measurement	• Community beekeeping leader • Forestry professional • General management
Results	45 hives inspected and fed.
Supports	Activity report.
Remarks	Climatic conditions (rainy periods) condition the activity. The hives were inspected when the conditions allowed it.

Indicator	Beekeeping production
Type	Product
Goal	To have by 2023 a stable production of honey (400 kg), propolis (5 lt) and pollen (3 kg) with potential for commercialization.
Unit of measurement	• Kilograms (kg) of honey produced • Liters (l) of propolis produced • Kilograms (kg) of pollen produced
Monitoring methodology	Permanent activities were carried out to supervise, review and record honey production for each of the apiaries. A report was also prepared showing the information resulting from the activity.
Monitoring frequency	Annual
Responsible for measurement	• Community beekeeping leader • Forestry professional • General management
Results	To date, 1,532 kg of honey have been produced for subsequent sale. For the current monitoring report, 370 kg of honey and 13 kg of propolis were produced.
Supports	Activity report.
Remarks	The quantities of honey, propolis and pollen produced depend on the climatic conditions in the region.

Indicator	Permanently and temporarily employed personnel.
Type	Impact
Goal	Generate direct and indirect employment for farming families in and around the project area in beekeeping activities.
Unit of measurement	Number of direct and indirect jobs generated.
Monitoring methodology	Review of contracts and personnel employed related to the activity.

Monitoring frequency	Semiannual
Responsible for measurement	• Forestry professional • General management
Results	During the monitoring period, the contracts of three (3) permanent employees in the beekeeping activity were renewed; in addition, personnel were hired through the daily wage payment mechanism to carry out activities such as capturing beehives, feeding, transporting beehives, maintaining pastures, feeding and caring for transport animals, and miscellaneous trades.
Supports	Contracting documents.
Remarks	The rural employment activity is transversal to the REDD+ project, starting with the beekeeping activity. The type of contracting and hiring of personnel varies depending on the social and economic dynamics of the region, as well as cultural and religious aspects.

Indicator	Technical and community beekeeping training
Type	Result
Goal	Conduct four (4) technical training sessions for individuals and families linked to the Amé community beekeeping project.
Unit of measurement	Number of trainings conducted
Monitoring methodology	Review of training sessions conducted in the community. The training sessions were carried out through theoretical and practical sessions, supported by educational and didactic material.
Monitoring frequency	Annual
Responsible for measurement	• Forestry professional • General management
Results	Four (4) introductory trainings on basic beekeeping were conducted.
Supports	• Training reports • Audiovisual record.
Remarks	

Indicator	Sales of honey, propolis and pollen produced by the community.
Type	Result
Goal	To market the products produced by the beekeeping community.

Unit of measurement	Number of products sold
Monitoring methodology	Registration and review of product sales.
Monitoring frequency	Annual
Responsible for measurement	General Management
Results	220 Bottles of honey sold
Supports	Sales invoices.
Remarks	

15.2.1.2 Poultry farming " Gallinas felices" (Happy Hens)

For the current monitoring period, the sustainable productive project "Happy Hens" was consolidated through technical assistance activities based on the recognition of mothers as managers of productive projects in the management of laying hens (hy line Brown) under minimum biosecurity conditions to ensure optimal conditions.

Illustration 6. Poultry farming in the project area

Poultry indicators

Indicator	Shed construction.
Type	Impact
Goal	Generate direct and indirect employment for farming families in and around the project area in poultry farming activities.
Unit of measurement	Number of sheds built and in operation.
Monitoring methodology	Review of contracts and personnel employed related to the activity.
Monitoring frequency	Semiannual
Responsible for measurement	• Forestry professional • General management
Results	8 sheds built with 30 laying hens each.
Supports	• Photographic record. • Management report
Remarks	The rural employment activity is transversal to the REDD+ project. The type of contracting and hiring of personnel varies depending

	on the social and economic dynamics of the region, as well as cultural and religious aspects.

Indicator	Technical and community poultry training
Type	Result
Goal	Conduct technical training for individuals and families involved in the community project.
Unit of measurement	Number of trainings conducted.
Monitoring methodology	Review of training sessions conducted in the community. The training sessions were carried out through theoretical and practical sessions, supported by educational and didactic material.
Monitoring frequency	Annual
Responsible for measurement	• Forestry professional • General management
Results	One (1) technical training visit was made.
Supports	• Photographic record. • Management report.
Remarks	

15.2.1.3 Fish farming

For the current monitoring period, the sustainable productive fish farming project was consolidated through technical assistance activities based on the recognition of the inhabitants of the project area as leaders in the productive proposals in the management of ichthyofauna for their cultivation under minimum biosafety conditions, guaranteeing optimal conditions.

Illustration 7. Fish farming in the project area

Fish farming indicators

Indicator	Pool construction.
Type	Impact
Goal	Generate direct and indirect employment for farming families in and around the project area in fish farming activities.
Unit of measurement	Number of pools built and operating.
Monitoring methodology	Review of contracts and personnel employed related to the activity.
Monitoring frequency	Semiannual
Responsible for measurement	• Forestry professional • General management
Results	4 pools built.
Supports	• Photographic record. • Management report.

Remarks	The rural employment activity is transversal to the REDD+ project. The type of recruitment and hiring of personnel varies depending on the social and economic dynamics of the region, as well as cultural and religious aspects.

Indicator	Technical and community trainings
Type	Result
Goal	Conduct technical training for individuals and families involved in the community project.
Unit of measurement	Number of trainings conducted.
Monitoring methodology	Review of training sessions conducted in the community. The training sessions were carried out through theoretical and practical sessions, supported by educational and didactic material.
Monitoring frequency	Annual
Responsible for measurement	• Forestry professional • General management
Results	One (24) training session was conducted.
Supports	• Photographic record. • Management report.
Remarks	

15.2.1.4 Orchards and nursery

During the current monitoring period, the sustainable production project focused on home gardens and the establishment of nurseries for fruit and native trees in the Galilea Forest was consolidated. Along with the "Bosque Mágico" (Magical Forest) strategy promoted by Seratta and Fundación Amé, the planting of different fruit and native species was carried out in a pilot demonstration plot.

Illustration 8. Photographic record of orchards and nursery

Indicators Orchards and nursery

Indicator	Nursery construction.
Type	Impact
Goal	Generate direct and indirect employment for farming families in and around the project area in the activities.
Unit of measurement	Number of nurseries built and operating.
Monitoring methodology	Review of contracts and personnel employed in relation to the activity.
Monitoring frequency	Semiannual

Responsible for measurement	• Forestry professional • General management
Supports	1 nursery built. La Cabaña.
Supports	• Photographic record. • Management report.
Remarks	The rural employment activity is transversal to the REDD+ project. The type of contracting and hiring of personnel varies depending on the social and economic dynamics of the region, as well as cultural and religious aspects.

Indicator	Technical and community trainings
Type	Result
Goal	Conduct technical training for individuals and families involved in the community project.
Unit of measurement	Number of trainings conducted.
Monitoring methodology	Review of training sessions conducted in the community. The training sessions were carried out through theoretical and practical sessions, supported by educational and didactic material.
Monitoring frequency	Annual
Responsible for measurement	• Forestry professional • General management
Results	One (24) training session was conducted.
Supports	• Photographic record. • Management report.
Remarks	

Indicator	Commercialization
Type	Impact
Goal	Generate impact on reforestation and conservation actions through alliances between institutions.
Unit of measurement	Number of actions generated.
Monitoring methodology	Recording and review of visualized actions.
Monitoring frequency	Annual

Responsible for measurement	General Management
Results	"Bosque Mágico" strategy Seratta and Fundación Amé.
Supports	• Published video. • Demonstration plot.
Remarks	

15.1.1.1.1 Community and scientific research

Conservation through research has been the main activity of the project proponent and will continue throughout the life of the initiative.

Illustration 8. Research in the project area

15.2.2 Community and scientific research indicators

Indicator	Research products generated.
Type	Result
Goal	Generate knowledge of the biological diversity (fauna and flora) of the Galilea Forest and the importance of its ecosystem services.
Unit of measurement	Number of research products generated.

Monitoring methodology	Review of research products generated by the Faculty of Forestry Engineering of the Universidad del Tolima with support from the Fundación Amé were quantified and listed in the current reporting period.
Monitoring frequency	Annual
Responsible for measurement	• Forestry professional • General management

Results	• World Forest Congress Korea 2022 participation.
	  ○ 1 Abstract approved.
	  ○ 1 Poster presented.
	  ○ 1 Video presented.
	• Vertebrate fauna and vascular flora baseline.

Supports	• Summary presentation. • Poster. • Video "Galilea: A forest to rediscover and redefine together". • Technical report.
Remarks	Participation in the event was shared with the Universidad del Tolima.

Indicator	Academic products generated.
Type	Product
Goal	Generate knowledge of the biological diversity (fauna and flora) of the Galilea Forest and the importance of its ecosystem services.
Unit of measurement	Number of graduate work, internships, scientific reports and/or publications.
Monitoring methodology	Review of academic products generated by the Faculty of Forestry Engineering of the Universidad del Tolima with the support of the Fundación Amé, were quantified and related in the current reporting period.
Monitoring frequency	Annual
Responsible for measurement	Forestry professional
Results	Participation as collaborator in the "Guide for the identification of the avifauna of the Regional Natural Park of Galilea Forest".
Supports	Technical document of the guide.
Remarks	Fundación Amé is currently supporting the consolidation of the document along with the Universidad del Tolima.

15.2.3 Conservation agreements

For the current monitoring period, 25 conservation agreements were signed, in which the families surrounding the project area express their commitment as forest rangers of this important natural ecosystem and agree to be part of the conservation process of the Galilea Forest, participating voluntarily in the activities proposed by the Fundación Amé aimed at environmental preservation and community development of families in the region.

Illustration 9. Conservation agreements signed with the families surrounding the project area

Conservation agreements Indicators

Indicator	Conservation agreements
Type	Impact
Goal	Broaden the participation of stakeholders in the project area and encourage the conservation of the forest and the territory.

Unit of measurement	Number of Amé conservation agreements signed
Monitoring methodology	Socialization of conservation agreements and registration of people involved in the activity.
Monitoring frequency	Semiannual
Responsible for measurement	• General Management • Field work team
Results	25 conservation agreements signed
Supports	Conservation agreements signed.
Remarks	For this activity, a conservation commitment agreement is defined that families and settlers sign on a voluntary basis. This agreement is transversal to the REDD+ activities proposed and developed by the Fundación Amé

15.2.4 Ecotourism

This activity is conditioned by the determinations specified by the PNR from the PMA, and given that this instrument is under construction and that the Regional Autonomous Corporation of Tolima has recommended to the Fundación Amé not to develop any type of productive activity on the polygon of the special management area; the implementation and development of the projected actions are stopped and awaiting the area management plan that allows to clearly instruct and make viable the activities that are established, but that depend largely on the progress of those responsible for this process. Even so, the Fundación Amé plans to advance in the integral study of the ecotourism proposal and link its field of action with the Tolima Regional Autonomous Corporation (CORTOLIMA) to support the construction of the PMA. Thus, it is clear that the general progress of this activity has been subject to the Environmental Management Plan that the environmental authority must define, and in which we will participate in its construction.

Although the trail adaptation activity is also limited by the construction of the PMA for the special management area, progress has been made in training community personnel. It should be noted that this activity has been adjusted since the second monitoring period of the project, so there are currently no plans to adapt the historic trail; instead, several trails will be adapted to serve for ecotourism activities and jointly improve access routes for the different communities located in the project areas.

Ecotourism Indicators

Indicator	Ecotourism
Type	Impact
Goal	Promote ecotourism as a scheme for environmental education in the territory.
Unit of measurement	Number of actions aimed at building a community model for ecotourism and care of protected areas.
Monitoring methodology	General activity and training reports.
Monitoring frequency	Semiannual
Responsible for measurement	• Forestry Professional • Social Professional
Results	• Community trainings were conducted. • Agrotourism experience "Finca La Riviera".
Supports	• Training reports "Introduction to the design of tourist trails". • Visit report. • Photographic records. • Audiovisual records.
Remarks	

Indicator	Adequacy of trails
Type	Impact
Goal	Restore and adapt the trails to allow for guided visits and the optimal development of ranger tours.
Unit of measurement	Number of actions aimed at the recovery and adaptation of ecological trails.
Monitoring methodology	Supervision and review of activity-focused activities.
Monitoring frequency	Semiannual
Responsible for measurement	• Forestry Professional • Social Professional
Results	Sections of access roads and trails were recovered from the trails in the project area.
Supports	Management reports.
Remarks	This activity is subject to the Environmental Management Plan formulation process, led by CORTOLIMA and the UTP.

15.2.5 *Ranger program*

As part of the control and surveillance work of the forest ranger program, different patrols have been carried out with the inhabitants of the Puerto Lleras area, with the objective of going around and bordering some water sources for monitoring, verification points on properties in which some settlers carry out land reclamation, finding pleasant places for the ecotourism project and identifying possible deforestation points, in addition to creating awareness in the communities about the importance of the cloud forest, and a recognition of the existence of a private area with a conservation interest.

In 2021, agreements were signed with the families involved in honey production activities, so that they would also play the role of forest rangers. The secondary activity of monitoring the forest coverage with drones has been proposed since the design of the project with the purpose of identifying changes in specific points of the forest coverage, where the territory was subject to degradation and deforestation processes, disturbance events due to forest fires and encroachment into the territory. Currently, control and surveillance activities have been reported by a group of forest rangers and training sessions on the work of the anger as a conservation figure and the use of drones with some inhabitants of the territory, who participate in the activity as forest rangers.

Illustration 10. Photographic record of the forest ranger program

Ranger program indicators

Indicator	Rangers
Type	Impact
Goal	Train the local community around the project area as forest guards, through forest ranger training, cover monitoring with drones, and control and surveillance tours.
Unit of measurement	• Number of trainings conducted. • Number of control and surveillance tours.
Monitoring methodology	Records of the tours, monitoring of coverage with drone, photographic records.
Monitoring frequency	Semiannual
Responsible for measurement	• Social professional • Forestry professional
Results	Forest rangers were trained and control and surveillance patrols were conducted.
Supports	• General report of the activity, register of people trained, minutes of activities. • Training of forest rangers.
Remarks	

Indicator	Drone coverage monitoring
Type	Result
Goal	Identify changes in specific points of the forest coverage subject to degradation and deforestation processes that are only observable from the sky, with high spatial resolution remote sensing images.
Unit of measurement	• Number of drone monitoring flights
Monitoring methodology	Records of surveys, monitoring of forest cover, identification of deforestation points.
Monitoring frequency	Semiannual
Responsible for measurement	Fundación Amé
Results	Flights were conducted to monitor forest coverage and identify deforestation hotspots.

Supports	Activity report, audiovisual record, geodatabase with tracks and points of interest for the activity. Attached is the ranger's report with the respective monitoring activity with drone.
Remarks	

15.2.6 AME environmental classroom

Indicators Environmental classroom AME

The project will bring social benefits to the communities surrounding the project area, mainly by generating opportunities and diversifying economic activities in the area, as well as biodiversity benefits and ecosystem services related to the physical environment through soil improvement.

Indicator	Education process from a territorial approach
Type	Result
Goal	Appropriation of scientific and traditional knowledge about the Galilea Forest as an educational strategy that allows for the adaptation of information (from the local context) for learning and teaching environmental, social and economic knowledge and skills that influence the forest and the communities.
Unit of measurement	• Number of education activities from a territorial approach.
Monitoring methodology	General report of the activity, record of people trained, minutes of activities, audiovisual material.
Monitoring frequency	Semiannual
Responsible for measurement	• Social professional • Forestry professional
Results	Tres de actividades de educación desde un enfoque territorial.
Supports	Three education activities from a territorial approach. Documents of training and activities in the Drive: Folder 06_Socialización_Proyecto_REDD+_Aula AME
Remarks	

Stakeholders	Local communities in the project area
Action	Generation of opportunities and improvement of living conditions.

Type of benefit, cost or risk	Direct benefit generated to the communities through improvements in living conditions due to the employment opportunity and the profits received from the sale of the products of the beekeeping activities implemented by the Fundación Amé, which generates an economic dynamic in the area. The benefit is positive as it contributes to the economic stability of the workers. For its part, the Foundation has contributed to improving the quality of life of some of the people involved in the initiative by donating materials and labor to improve their homes.
Type of Indicator	Result
Monitoring and indicator	Number of families participating in the project under conservation agreements: 6 families.

Stakeholders	Local communities in the project area
Action	Diversification of economic activities
Type of benefit, cost or risk	Direct benefit to the communities through the transformation of agricultural production practices.
Type of Indicator	Result
Monitoring and indicator	The benefit is positive as it contributes to the generation of jobs in the region.

15.3 Monitoring of REDD+ Safeguards

As described in the methodology BCR 0002 version 3.1 and the Tool for demonstrating compliance with REDD+ safeguards version 1.1 of Biocarbon Registry. Below is the monitoring plan designed for each safeguard in compliance with national legislation and the territorial dynamics present in the project area.

A. "The complementarity or compatibility of the measures with the objectives of national forest programs and international conventions and agreements on the subject".

ID Safeguard	SA
ID indicator	1SA
Indicator name	Complementarity analysis
Type	Result
Goal	Perform complementarity and compatibility analysis by monitoring period.
Unit of measure	No. of complementarity and compatibility analyses performed during the monitoring period
Monitoring methodology	Documentary review of strategies for meeting the objectives and goals of national forest policies or those adopted by international conventions and agreements.
Monitoring frequency	Biannual
Responsible for measurement	Forestry Engineer
Indicator result in the reporting period	A complementarity analysis conducted during the current monitoring period.
Documents to support the information	Compliance with Applicable Legislation
Remarks	To demonstrate complementarity, the section lists all national, regional and local laws, statutes and regulatory frameworks that are relevant to the project activities.

B. "Transparency and effectiveness of national forest governance structures, taking into account national legislation and sovereignty. Provide transparent and consistent information that is accessible to all stakeholders and regularly updated. Be transparent and flexible to allow for improvements over time. Build on existing systems where they exist".

ID Safeguard	SB
ID indicator	2SB
Indicator name	Outreach tools implemented
Type	Result
Goal	Implement tools to ensure effective, transparent and efficient disclosure of information.
Unit of measure	N° of dissemination tools implemented in the monitoring period
Monitoring methodology	Review of communication media such as internet, radio, face-to-face, virtual or mixed workshops, training and education on topics related to the project, dissemination through local authorities, among others.
Monitoring frequency	Semiannual
Responsible for measurement	Social professional
Indicator result in the reporting period	Appropriate information channels and media are in place to publicize the context of the project from its formulation to the

	implementation of actions. In addition, the project information is registered in the RENARE platform. In addition, different spaces for participation and socialization of the project have been convened with community stakeholders.
Documents to support the information	The communication channels are e-mail, telephone and chat through the community leader. (See Driver: 08_PDD/Anexos/SOCIALIZACION PARTES INTERESADAS/Informe EPCAC_REDD Tolima_PO.pdf) Biocarbon Registry activity report, audiovisual record, claims mechanism and public consultation.
Remarks	

C. "Respect for the knowledge and rights of indigenous peoples and members of local communities, taking into consideration relevant international obligations and national circumstances and legislation, and bearing in mind that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples."

ID Safeguard	SC
ID indicator	1SC
Indicator name	Recognition and respect for the rights of the communities present in the territory.
Type	Result
Goal	Diagnosis of the local communities belonging to the project.

Unit of measure	N° of inhabitants belonging to the project, broken down by sex and age
Monitoring methodology	Development of a population census in the project boundaries.
Monitoring frequency	Biannual
Responsible for measurement	Social Professional
Indicator result in the reporting period	Different communities and rural inhabitants have been identified in the project area, with whom conservation agreements and opportunities for dialogue have been established. In addition, a socioeconomic characterization was conducted for the reference area. See Driver: 08_PDD/Anexos/SOCIALIZACION PARTES INTERESADAS/Informe EPCAC_REDD Tolima_PO.pdf
Documents to support the information	PD section **¡Error! No se encuentra el origen de la referencia.**
Remarks	

ID Safeguard	SC
ID indicator	2SC
Indicator name	Work tables developed

Type	Result
Goal	Formation of a permanent working group to define the route of activities for the Galilea forests.
Unit of measure	N° of working groups held during the life of the project
Monitoring methodology	Conduct working groups and record their results through minutes, audio or video recordings, documents or any other means that guarantees that they were carried out.
Monitoring frequency	Biannual
Responsible for measurement	Social Professional
Indicator result in the reporting period	Fundación Amé and the Universidad del Tolima have attended three working tables
Documents to support the information	See Driver: 08_PDD/Anexos/SOCIALIZACION PARTES INTERESADAS/CORTOLIMA radicado 18750 del 2021-signed.pdf
Remarks	This roundtable is made up of members of CORTOLIMA, Universidad del Tolima and the Fundación Amé as representative of the forest owners.

ID Safeguard	SC
ID indicator	3SC

Indicator name	Limitation of activities carried out by the communities
Type	Result
Goal	Reach conservation agreements with the communities present in the territory.
Unit of measure	N°. of conservation agreements signed with the communities present in the territory
Monitoring methodology	Dialogue, community acceptance and signing of conservation agreements with the legal representatives of the territory, keeping a full copy and the negotiation process.
Monitoring frequency	Biannual
Responsible for measurement	Social Professional
Indicator result in the reporting period	Different communities and rural inhabitants have been identified in the project area, with whom conservation agreements[29] and opportunities for dialogue have been established. 25 conservation agreements signed with participants.

[29] See in: [04_ACTIVIDADES REDD+/03_Acuerdos de conservación]

Documents to support the information	See in: [04_ACTIVIDADES REDD+/03_Acuerdos de conservación]
Remarks	

D. "The full and effective participation of stakeholders, in particular indigenous peoples and local communities, in the measures referred to in paragraphs 70 and 72 of this decision".

ID Safeguard	SD
ID indicator	1SD
Indicator name	Outreach tools implemented
Type	Result
Goal	Implement tools to ensure effective, transparent and efficient disclosure of information.
Unit of measure	N° of outreach tools implemented during the monitoring period
Monitoring methodology	Review of communication media such as internet, radio, face-to-face, virtual or mixed workshops, training and education on topics related to the project, dissemination through local authorities, among others.
Monitoring frequency	Semiannual
Responsible for measurement	Social professional

Indicator result in the reporting period	Appropriate information channels and media are in place to publicize the context of the project from its formulation to the implementation of actions. In addition, the project information is registered in the RENARE platform. In addition, different spaces for participation and socialization of the project have been convened with community stakeholders.
Documents to support the information	The communication channels are e-mail, telephone and chat through the community leader. (See Driver: 08_PDD/Anexos/SOCIALIZACION PARTES INTERESADAS/Informe EPCAC_REDD Tolima_PO.pdf) Biocarbon Registry activity report, audiovisual record, claims mechanism [30] and public consultation.
Remarks	

E. "The compatibility of the measures with the conservation of natural forests and biological diversity, ensuring that the measures identified in paragraph 70 of this decision are not used for the conversion of natural forests, but instead serve to incentivize the protection and conservation of these forests

[30] See in: [04_ACTIVIDADES REDD+/06_Aula AME/PQRS]

and their ecosystem services and to enhance other social and environmental benefits."

ID Safeguard	SE
ID indicator	1SE
Indicator name	Promotion of local and regional participation
Type	Impact
Goal	Increasing community participation at the local and regional level
Unit of measure	N° of local and regional participation spaces
Monitoring methodology	Follow-up of participation spaces
Monitoring frequency	Annual
Responsible for measurement	Social Professional
Indicator result in the reporting period	Workshops, socialization and training.
Documents to support the information	• See 04_ACTIVIDADES REDD+ • Participation, Communication and Knowledge Appropriation Strategy Document (EPCAC) Aula AME
Remarks	

ID Safeguard	SE

ID indicator	2SE
Indicator name	Area of forest core extent based on forest fragmentation analysis.
Type	Result
Goal	Maintain connectivity throughout the life of the project
Unit of measure	Core or forest patch size
Monitoring methodology	Landscape fragmentation analysis
Monitoring frequency	Annual
Responsible for measurement	GIS Expert
Indicator result in the reporting period	7.247,45 ha
Documents to support the information	GDB
Remarks	

F. "The adoption of measures to address the risks of reversion".

ID Safeguard	SF
ID indicator	1SF
Indicator name	Reversion risk analysis
Type	Result

Goal	Prepare an analysis of the risks of reversion faced by the project.
Unit of measure	N° of risk analyses with their mitigation measures and indicators
Monitoring methodology	Generation of a risk management plan through an assessment of risks related to the implementation of REDD+ activities in the environmental, financial and social dimensions.
Monitoring frequency	According to the identified risk
Responsible for measurement	Social Professional and Forestry Engineer
Indicator result in the reporting period	Identification of potential environmental and social risks for the project with their description, measures and indicators for their management.
Documents to support the information	See in: [08_PDD/Anexos/ Impactos_Ambientales_Sociales_Galilea-AME_v2.xlsx] Table 8. Permanency risk monitoring
Remarks	

ID Safeguard	SF
ID indicator	2SF

Indicator name	Contracts with clauses focused on project duration
Type	Result
Goal	To ensure that all agreements/contracts include different clauses focused on mitigating the risk of reversion.
Unit of measure	N° of contracts with clauses focused on project duration/Total number of contracts
Monitoring methodology	Review and monitoring of compliance with the contracts signed between the parties
Monitoring frequency	Social Professional
Responsible for measurement	All contracts have defined project duration and non-performance clauses.
Indicator result in the reporting period	See in: [01_ACUERDO&CERTIFICADOS]
Documents to support the information	
Remarks	

G. "Adopting measures to reduce the displacement of emissions".

To identify leaks and their causes, strategies are designed to ensure their monitoring and control through the monitoring plan in the area of leaks as shown in section 15.1 Description of the monitoring plan. In addition, as part of the project activities,

community surveillance and monitoring actions are proposed and implemented in the territory through the forest ranger program.[31]

15.4 SDG monitoring

Taking into account the SDG targets and indicators, the Galilea-Amé Forest conservation project has promoted the reduction of climate risks, the conservation of forest masses in the region, the improvement of quality of life and the preservation of ecosystem services such as biodiversity and carbon storage. In the local environment, it contributes to progress in meeting the 2030 targets for local food production (SDG2), quality education (SDG 4), gender equality (SDG 5), clean water and sanitation (SDG 6), decent work and economic growth (SDG 8), climate action (SDG 13) and life of terrestrial ecosystems (SDG 15). Below is the monitoring for the different SDGs that are applicable to the project.

15.4.1 No Poverty

Associated Goal	1.1 Ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources
Indicator	Number of jobs generated in the monitoring period (2021 - 2023)
Contribution	Three (3) permanent employees have been hired as part of the beekeeping activity, in addition to personnel paid on a daily basis.

15.4.2 Zero Hunger

Associated Goal	2.1 Ensure access to healthy, nutritious and sufficient food for all people, particularly the poor and people in vulnerable situations, including infant
Indicator	Quantity of local food sources promoted
Contribution	Small-scale production of honey, vegetable gardens, poultry and fish farming.

[31] See in: [04_ACTIVIDADES REDD+/05_Programa de guardabosques]

15.4.3 *Quality education*

Associated Goal	4.7 - Global Citizenship Education: To ensure that all students acquire the knowledge and skills necessary to promote sustainable development, through education for sustainable development and sustainable lifestyles, among others.
Indicator	Number of training opportunities on topics related to conservation, knowledge of diversity and development of sustainable production practices.
Contribution	• Different trainings have been carried out. • Numerous capacity building workshops with communities. • Scientific publications. Participation in the WFC Korea 2021 (Poster and abstract).

15.4.4 *Gender equality*

Meta Asociada	5.5 Igualdad de Oportunidades y Participación en posiciones de Liderazgo: Asegurar la participación plena y efectiva de las mujeres y la igualdad de oportunidades de liderazgo a todos los niveles decisorios en la vida política, económica y pública
Indicador	5.5.2. Número de mujeres que ocupan un cargo directivo en el proyecto.
Aporte	El equipo cuenta con profesionales (mujeres) que se desenvuelven en cargos directivos, de ingeniería forestal, de biología, de sociología. Igualmente, cuenta con mujeres de las comunidades que participan activamente en los espacios de capacitación de las actividades del proyecto.

15.4.5 *Clean water and sanitation*

Associated Goal	6.6 Protect and restore freshwater water ecosystems: Protect and restore water-related ecosystems, including forests, mountains, wetlands, rivers, aquifers, and lakes.

Indicator	Actions focused on the knowledge of the hydrography over which the project area has influence.
Contribution	The water network that runs through the municipality of Villarrica belongs to the basins of the Cuinde Negro River, whose watershed covers more than 50% of the municipality, the Negro River, 35%, and the Riachón River, 10%. The Negro River is of special interest for the program and its area of influence, since its waters originate in the upper zone of the current program area, crossing a large part of its territory and supplying the Prado reservoir, as well as the Negro River, the Cunday river and the Prado River also drain the reservoir.

15.4.6 Decent work and economic growth

Associated Goal	8.5 Decent work and equal pay: Full and productive employment and decent work for all women and men, including youth and persons with disabilities, and equal pay for equivalent work of equal value.
Indicator	Number of jobs generated in the monitoring period (2021 - 2023)
Contribution	Three (3) permanent employees have been hired as part of the beekeeping activity, in addition to personnel paid on a daily basis.

15.4.7 Sustainalbe Cities and Communities

Associated Goal	11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning
Indicator	Quantity of local food sources promoted

Contribution	Small-scale production of honey, vegetable gardens, poultry and fish farming. Within these products, honey is purchased in the urban area of Bogota, promoting the economic, social and environmental connection between rural and urban areas.

15.4.8 Responsible Consumption and Production

Associated Goal	12.1 Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns.
Indicator	Responsible local food sources promoted, mainly for local consumption
Contribution	Small-scale production of honey, vegetable gardens, poultry and fish farming.

15.4.9 Climate action

Associated Goal	13.2 Integrate climate change measures: Incorporate climate change measures into national policies, strategies and plans.
Indicator	Actions implemented to avoid emissions from deforestation and forest degradation.
Contribution	The activities validated in the project, such as sustainable productive projects, research, conservation agreements, ecotourism and the forest ranger program, are actions that have reduced GHG emissions due to deforestation and forest degradation in the project area. Thus, as part of the measures to adapt to climate change, the project has focused its efforts on maintaining the ecosystems present in the area through research activities as part of the generation of knowledge on biological diversity and conservation of the forest's ecosystem services.

15.4.10 Life on land

Associated Goal	15.1 Conserve and Restore Terrestrial and Freshwater Ecosystems: Ensure the conservation, restoration, and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains, and drylands, consistent with obligations under international agreements. 15.2 Manage all forests sustainably: Promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests, and significantly increase afforestation and reforestation globally. 15.3 Halt desertification and restore degraded land: Combat desertification, rehabilitate degraded land and soils, including land affected by desertification, drought and floods, and strive for a land degradation-neutral world. 15.A Increase Financial Resources to Conserve and Sustainably Use the Ecosystem and Biodiversity:
Indicator	Number of hectares whose deforestation has been avoided. 15.2.1 Progress in sustainable forest management. Initiatives to monitor forest degradation. 15.a.1.a Research assistance supported through resources for the knowledge of forest biological diversity and ecosystem services.
Contribution	The project conserves 13,782.91 ha of forest. Conservation activities (forest rangers) and ecological knowledge (sustainable production projects, research, conservation agreements and ecotourism) contribute to the maintenance of the strategic ecosystems of the Andean Forest, wetlands that are located within and in proximity to the project, and whose interrelationship allows the generation of ecosystem services of benefit to the communities in the project's area of reference.

	Through its participation as an important player in the implementation of the Environmental Management Plan of the PNR Galilea Forest, the Fundación Amé has demonstrated through the implementation of its activities the sustainable management of natural resources. Through the project's activities, it seeks to reduce the factors that cause degradation, such as logging, fires, and the extension of affected areas. Likewise, reforestation activities are aimed at recovering some of the soil's properties and, in the future, generating vegetation cover in degraded areas. Financial resources have been mobilized to implement project activities in order to conserve and sustainably use biodiversity and ecosystems.

15.5 Monitoring of project areas

15.5.1 Deforestation

Based on the monitoring carried out during the period covered by this certification, the following deforested areas are evident in the project area and the leakage belt (see Table 9).

Table 9. Deforested areas during the monitoring period

Year	Forest Area (ha)		Deforestation (ha)			
	Project Area	Leakage belt	Project Area		Leakage belt	
			Total	Accumulated	Total	Accumulated
2021	13,767.69	8,783.70	0.0	0.0	0.0	0.0
2022	13,765.3	8,783.70	2.39	2.39	0.0	0.0
2023	13,763.51	8,780.04	1.79	4.18	3.66	3.66

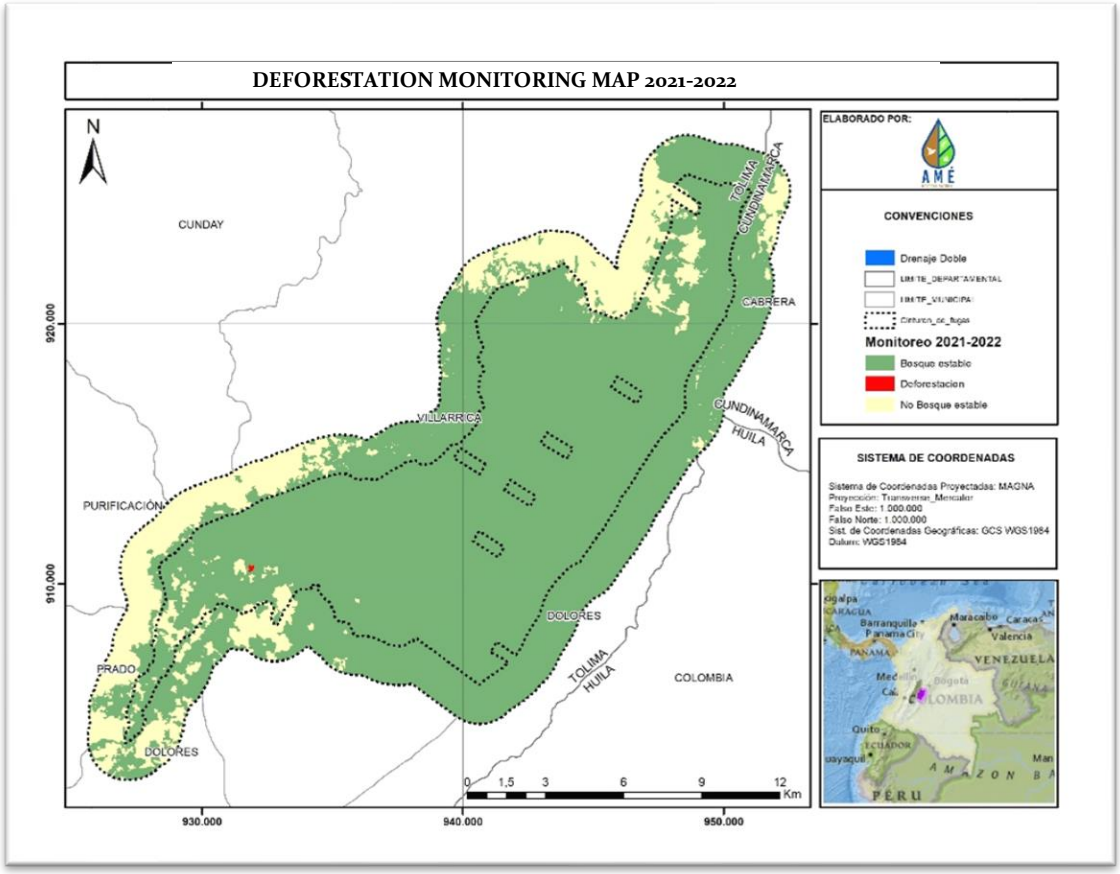


Illustration 11. Deforestation map monitoring 2021-2022

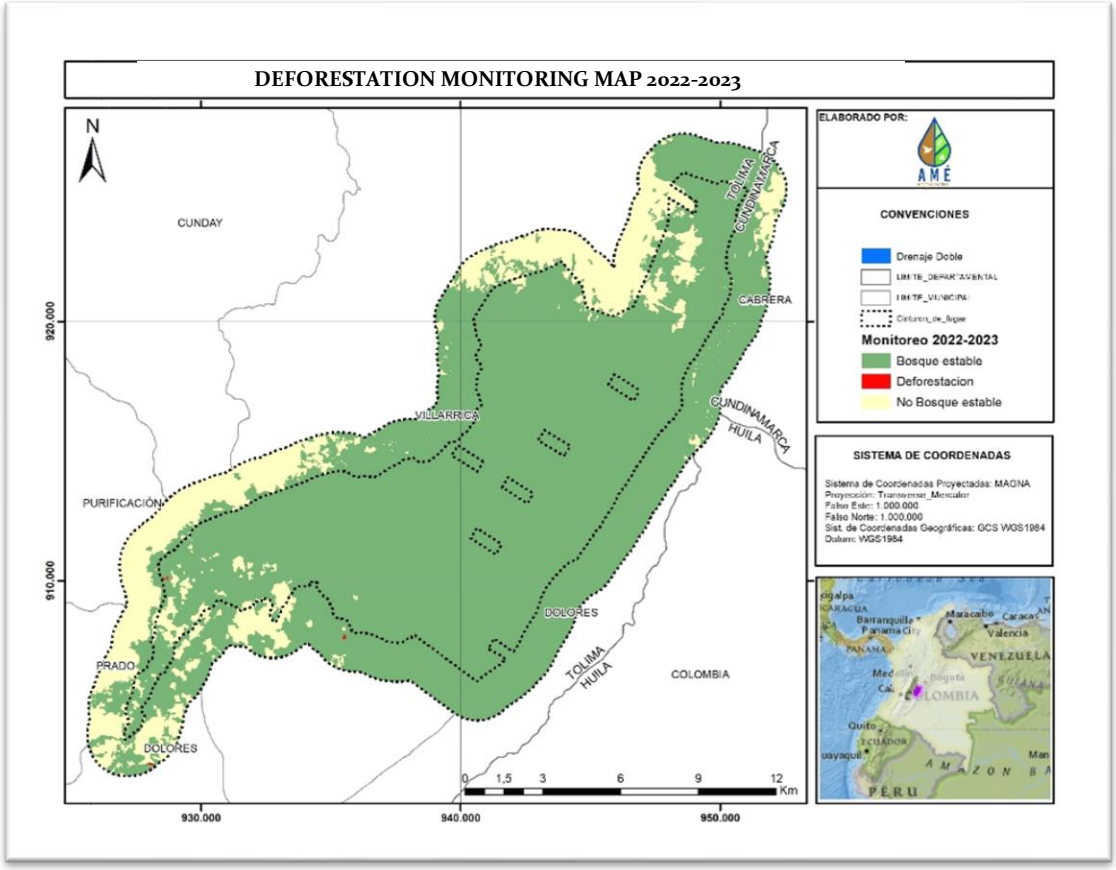


Illustration 12. Deforestation map monitoring 2022-2023

15.5.2 Degradation

The monitoring conducted during the period covered by this certification revealed the following degraded areas in the project area and the leakage belt (see Table 10).

Table 10. Degraded areas during the monitoring period

Year	Type of degradation	Degradation (ha)			
		Project Area		Leakage belt	
		Total	Accumulated	Total	Accumulated
28Feb2021-31Dic2021	Primary	0.12	0.12	53.92	53.92
	Secondary	0.00	0.12	41.33	41.33
31Dic2021-31Dic2022	Primary	0.00	0.12	0.58	54.50
	Secondary	0.00	0.12	0.00	41.33

Year	Type of degradation	Degradation (ha)			
		Project Area		Leakage belt	
		Total	Accumulated	Total	Accumulated
31Dic2022-28Feb2023	Primary	0.09	0.21	0.00	54.50
	Secondary	0.00	0.21	0.00	41.33

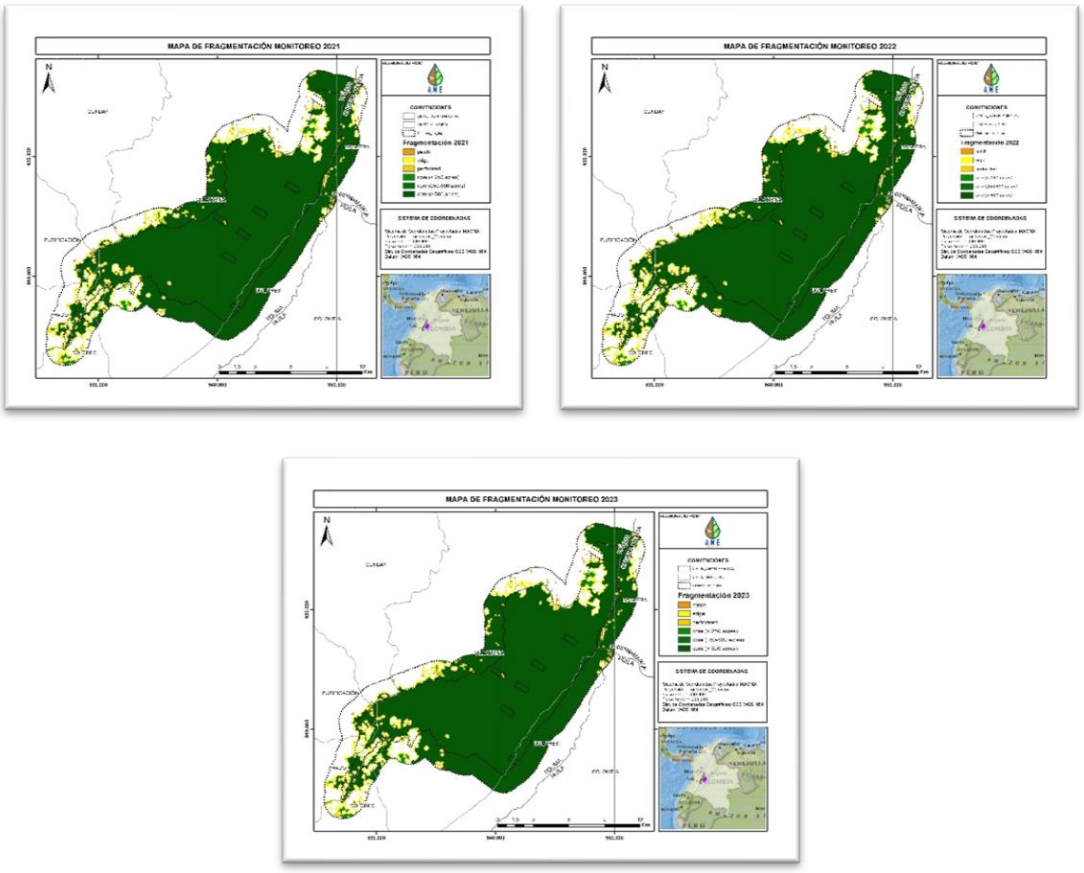


Illustration 13. Fragmentation monitoring maps 2021 to 2023

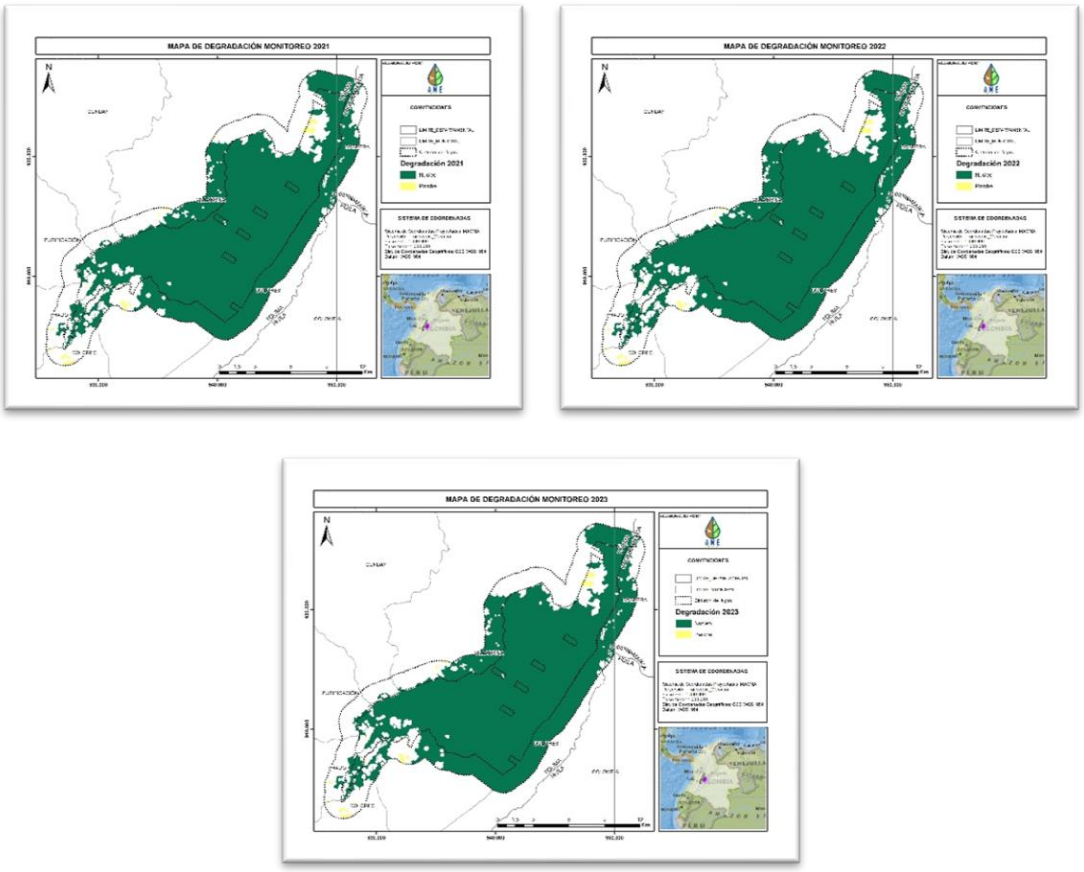


Illustration 14. Forest degradation monitoring maps 2021 to 2023.

15.6 Project permanence

Taking into account the guidelines of the BCR002 methodology, the project presents below the monitoring of the risks associated with the permanence of the project. Also taking into account the reversal risk management, the project achieved a net emissions reduction of 447,198 tCO_2e, of which 89,439 tCO_2e correspond to the risk buffer reserve (20%), then the marketable VCCs are 357,758 tCO_2e.

Table 11. Permanency risk monitoring

Risks	Category	Risk monitoring indicator	Mitigation measure	Reporting procedure	Resultado
Communities	Participation of local communities in project activities.	Community activities in the project area.	Local hiring and daily wages. Community training. Conservation partnerships with communities. Socioeconomic benefits from the activities developed by the community.	Documentary review. • Contracts and wages. Training. • Conservation agreements. • Project activity reports. • Audiovisual record.	No risk.
Socials	Conflict between stakeholders in the region where the project is developed.	Number of conflicts identified.	To be mediators of dialogue and consultation processes between the community and institutions.	Record, review, address and accompany identified conflicts. • Initiatives supported by the Amé Foundation, the community and institutions. • Audiovisual record.	No risk
	Public order problems	Security alerts limiting entry into the territory.	Promote spaces for dialogue, conciliation and strengthening of the social fabric through Amé Classroom. Involve the communities as much as possible in the development of project activities. Include social leaders in project activities.	Record, review and monitor the spaces created in the Amé Classroom. • Reports on activities to strengthen the social fabric through the Amé Classroom. • Respond to security alerts from the community.	No risk

Risks	Category	Risk monitoring indicator	Mitigation measure	Reporting procedure	Resultado
			Attention to security alerts and adjust the timing of project activities according to the limitations of entering the territory.	• Respond to communications issued by the local mayor's office and institutional entities.	
Socials	Land tenure	Documents proving the legal ownership of the properties.	To have property taxes in good standing.	Documentary review • Certificates of Tradition and Freedom up to date. • Good standing of the property.	No risk.
	Non-ownership of project activities.	Activities implemented in the project.	Conservation partnerships with the community.	Documentary review	No risk.
	Governance deficit	Status of compliance with governance instruments.	Compliance with laws and statutes	Documentary review	No risk
Natural and anthropic	Rains	Status of the apiaries and hives of the honey production project.	The rainy season associated with the imbalance between phenology and bee dynamics.	Record and review beekeeping activity reports for appropriate decision making.	Risk. Beekeeping management report.

Risks	Category	Risk monitoring indicator	Mitigation measure	Reporting procedure	Resultado
				Adjust the timing and activities related to beekeeping according to the rainy season. • Audiovisual recording. • Beekeeping reports.	
		Number of tours conducted by the forester program.	• Provision of equipment for forest rangers during the rainy season. • Adequacy of trails.	Adjust the timing of ranger program activities according to rainy seasons. • Audiovisual recording. • Ranger reports.	Control and surveillance tours by the forest ranger program.
	Flooding	Number of stream/river overflows reported by ranger program	• Environmental education and risk prevention workshops. • Follow-up on ranger program reports.	• Review reports and alert warnings by rangers for timely decision making. • Ranger training. • Audiovisual recording.	No risk.
Natural and anthropic	Fires caused by anthropogenic sources.	Number of anthropogenic fire outbreaks identified.	• Promote awareness of the risks of burning for land preparation. • Control and monitor through the "Forest Ranger Program". • Monitoring of coverage with drones.	• Review ranger reports and warning reports for appropriate decision making. • Ranger reports. • Monitoring of coverage with drones.	No risk
Financial	Cash flow.	Funds available to carry out project activities.	The project holder currently guarantees that it has 40% of the funds necessary for the	• Review and evaluate the financial management and permanence of funds for the development of activities.	No risk.

Risks	Category	Risk monitoring indicator	Mitigation measure	Reporting procedure	Resultado
			development of the project activities.	• Certification of budget availability.	

16 Quantification of GHG emission reduction / removals

16.1 Baseline emissions

The estimation of the Ex-Ante emission reduction expected by the project due to the reduction of deforestation was made based on the projection of a percentage decrease due to the implementation of the project activities.

Table 11. Ex-ante Deforestation reductions

Year	tCO_2e			
	$EA_{,lb,año}$	$EA_{REDD+proy,año}$	$EA_{,f,año}$	$RE_{DEF,REDD+proy(ex\ ante)}$
2021	106,387	2,394	0	103,993
2022	109,180	2,457	0	106,723
2023	71,105	1,600	0	69,505

Understanding that degradation is considered the first phase of deforestation according to criteria developed by IDEAM (2018), it is understood that the decrease in degradation is correlated with the effectiveness of the implementation of actions to avoid deforestation. According to the result of the monitoring carried out by the project, it has been estimated that this effectiveness is higher than 95%. Hence, the Projection of the decrease in degradation due to the implementation of REDD+ activities (%DFP) will be conservatively determined at 5%.

Table 12. Ex-ante Degradación reductions

Year	**tCO_2e**			
	$EA_{DEG,lb,año}$	**$EA_{DEG,REDD+proy,año}$**	**$EA_{DEG,f,año}$**	**$EA_{DEG,REDD+proy}$**
2021	124,562	6,228	56,227	62,057
2022	127,834	6,392	56,227	65,165
2023	83,252	4,163	56,227	22,812

16.1.1 Deforestation

Annual historical deforestation in the region of reference

The estimation of annual historical deforestation in the reference region is estimated by applying the equation:

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

Where:

$CSBaño$ = Annual change in the area covered by forest in the region of reference; ha

$t2$ = Year-end of reporting period; year

$t1$ = Year of beginning of reference period; year

$A1$ = Area of forest in the reference region, at the initial time; ha

$A2$ = Area of forest in the reference region, at the final point in time; ha

The CSB corresponds to the historical average deforestation of the project area and will be the value used to represent the expected forest loss in the baseline scenario.

Projected annual deforestation in the scenario with REDD+ Project

Projected annual deforestation in the REDD+ project scenario is calculated using the equation:

$$CSB_{proy,año} = CSB_{lb,año}\ x\ (1 - \%DD)$$

Where:

$CSBproy,año$[32] = Annual change in area covered by forest under the project scenario; ha

$CSBlb,año$ = Annual change in the area covered by forest in the without-project scenario; ha

%DD = Projected decrease in deforestation due to the implementation of REDD+ activities.

Annual historical deforestation in the leakage area

The annual historical deforestation in the leakage area is calculated with the following equation:

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

Where:

$CSBf,año$ = Annual change in the area covered by forest in the leakage area, in the without-project scenario; ha

$t2$ = Year end of reporting period; year

$t1$ = Year of beginning of reference period; year

$A1,f$ = Forested area of the leakage area at the start of the reference period; ha

$A2,f$ = Forested area of the leakage area at the end of the reference period; ha

Projected annual deforestation in the leakage area in the with-project scenario (Ex ante)

Projected annual deforestation in the leakage area in the REDD+ project scenario is estimated using the equation:

32 If applicable, the project holder may adjust the value of $CSSBim$ following the guidelines for estimating the adjustment for national circumstances.

$$CSB_{REDD+proy,f\text{año}} = CSB_{f,lb}\ x\ (1 + \%E_f)$$

Where:

$CSBREDD+proy,f,año$ = Annual change in the area covered by forest in the leakage area, in the scenario with project; ha

$CSBf,lb$ = Annual change in the area covered by forest in the leakage area, in the without-project scenario; ha

$\%Ef$ = Percentage increase in emissions in the leakage area due to the implementation of REDD+ activities. The use of a default value of 10% is accepted in this methodology.

Carbon emission factor in total biomass

Total biomass (BT) is estimated from the sum of aboveground biomass (BA) and belowground biomass (BS). The carbon content of total biomass (CBF) is the product of the BT and the carbon fraction of dry matter (FC). Total biomass carbon dioxide equivalent (CBFeq) is the product of CBF and the molecular ratio constant between carbon (C) and carbon dioxide (CO_2). The estimation of CBFeq is calculated according to the equation:

$$CBFeq = BT\ x\ FC\ x\ \frac{44}{12}$$

Where:

$CBFeq$ = Carbon dioxide equivalent contained in total biomass; tCO_2e ha-1

BT = Total biomass; t ha-1

FC = Carbon fraction of dry matter (0.47)

According to the IPCC, it is assumed that all carbon contained in aboveground and belowground biomass is emitted in the same year that the deforestation event occurs.

Soil carbon emission factor

In the case of estimating emissions from deforestation in the soil, a gross emission is assumed in which the soil carbon content (COS) is emitted in equal proportions during 20 years once the deforestation event occurs. For this, the annual rate of soil carbon

emitted in 20 years (COS20años) is calculated by dividing the COS by 20, according to the following equation.

$$COSeq = \frac{COS}{20} x \frac{44}{12}$$

Where:

$COSeq$ = Carbon dioxide equivalent contained in soils; tCO_2e ha-1

COS = Soil carbon content; tC ha-1

Total carbon emission factor

The total carbon emission factor includes the carbon dioxide equivalent emission per hectare deforested, including the biomass and soil carbon compartment according to the following equation.

$$CTeq = CBTeq + COSeq$$

Where:

$CTeq$ = Total carbon dioxide equivalent; tCO_2e ha-1

$CBTeq$ = Carbon dioxide equivalent contained in total biomass; tCO_2e ha-1

$COSeq$ = Carbon dioxide equivalent contained in soils; tCO_2e ha-1

16.1.2 Degradation

Annual historical degradation in the project area at baseline

The estimate of the annual historical degradation in the baseline is estimated with the equation:

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

Where:

$DFPlb,año$ = Annual historical primary degradation in baseline; ha

t_1 = Year of beginning of reference period; year

t_2 = Year end of reporting period; year

$Anúcleo,lb$ = Area of the reference region in core class year of the start of the reference period; ha

$Anuc–par,lb$ = Area of the reference region going from core to patch in the final year of the reporting period; ha

And,

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

Where:

$DFSlb,año$ = Historical annual secondary degradation in the without-project scenario; ha

t_1 = Year of beginning of reference period; year

t_2 = Year end of reporting period; year

$Aperforado,lb$ = Area in the reference region in class drilled year of start of the reference period; ha

$Aper–par,lb$ = Area in the reference region that changes from drilled to patch in the final year of the reference period; ha

Annual historical degradation in leakage area in baseline scenario

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

Where:

$DFPlb,f,año$ = Annual primary degradation in the leakage area; ha

t_1 = Year of beginning of reference period; year

$t2$ = Year end of reporting period; year

$Anúcleo,lb,f$ = Leakage area in core class year of start of reporting period; ha

$Anuc–par,lb,f$ = Leakage area moving from core to patch in the final year of the reporting period; ha

And,

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

Where:

$DFSlb,f,año$ = Annual secondary degradation in leakage area; ha

$t1$ = Year of beginning of reference period; year

$t2$ = Year end of reporting period; year

$Aperforado,lb,f$ = Área de fugas en clase perforado año de inicio del periodo de referencia; ha

$Aper–par,lb,f$ =Area of leakage from drilling to patching in the final year of the reporting period; ha

Projected annual degradation in the project area in the REDD+ project scenario (Ex ante)

The estimate of projected degradation in the project area is estimated with the equation:

$$DFP_{REDD+proy,año} = DFP_{lb}\ x\ (1 - \%DFP)$$

Where:

$DFPREDD+proy,año$ = Annual primary degradation of the project area in the with-project scenario; ha

$DFPlb$ = Annual historical primary degradation in the without-project scenario; ha

%DFP =Projected decrease in degradation due to implementation of REDD+ activities

And,

$$DFS_{REDD+proy,año} = DFS_{lb}\ x\ (1 - \%DFS)$$

Where:

$DFSREDD{+}proy,año$ = Secondary degradation in the scenario with project; ha

$DFSlb$ =Historical annual secondary degradation in the without-project scenario; ha

%DFS = Projected decrease in degradation due to implementation of REDD+ activities

Projected annual degradation in the leakage area in the scenario with REDD+ project (Ex ante)

The estimate of the projected degradation in the leakage area is estimated with the equation:

$$DFP_{f,año} = DFP_f \; x \; (1 + \%E_f)$$

Where:

$DFPf,año$ = Annual primary degradation of the leakage area in the project scenario; ha

$DFPf$ = Annual historical primary degradation of the leakage area in the without-project scenario; ha

$\%Ef$ = Percentage increase in emissions in the leakage area due to the implementation of REDD+ activities. The use of a default value of 10% is accepted in this methodology.

And,

$$DFS_{f,año} = DFS_f \; x \; (1 + \%E_f)$$

Where:

$DFSf,año$ = Annual secondary degradation of the leakage area in the scenario with project; ha

$DFSf$ = Annual historical secondary degradation of the leakage area in the without-project scenario; ha

$\%Ef$= Percentage increase in emissions in the leakage area due to the implementation of REDD+ activities. The use of a default value of 10% is accepted in this methodology.

Emission factors

Total forest biomass is the sum of aboveground forest biomass and belowground forest biomass. To obtain the total biomass by fragmentation class transition, the forest must be stratified by ecological zone.

$$DBTi = DBA\ x\ (1 + R)$$

Where:

$DBTi$ = Difference total biomass transition i; t ha-1

DBA = Average difference in aboveground biomass transition i (tC ha-1)

R = Belowground/aboveground biomass ratio (Difference of aboveground biomass by type of fragmentation); (ton d.m.)-1

i = Type of degradation; 1-primary degradation, 2-secondary degradation

The carbon contained in total biomass is the product of total biomass and its carbon fraction, according to the following equation:

$$DCBTi = DBTi\ x\ FC$$

Where:

$DCBTi$ = Carbon content difference in total biomass; tC ha-1

$DBTi$ = Total biomass difference; t ha-1

FC = Carbon fraction; 0.47

i = Type of degradation; 1-primary degradation, 2-secondary degradation

16.2 Project emissions/removals

Ex-post emission reductions for the current monitoring period are as follows:

Table 13. Ex-post Deforestation Reductions

Year	tCO_2e			
	$EA_{,lb,año}$	$EA_{REDD+proy,año}$	$EA_{,f,año}$	$RE_{DEF,REDD+proy(expost)}$
Year 2021 (28-02-2021--31-12-2021)	88,656	0	0	88,656
Year 2022 (01-01-2022--31-12-2022)	109,180	833	0	108,347
Year 2023 (01-01-2022--28-02-2023)	13,429	622	1,272	11,535

Understanding that degradation is considered the first phase of deforestation according to criteria developed by IDEAM (2018), it is understood that the decrease in degradation is correlated with the effectiveness of the implementation of actions to avoid deforestation. According to the result of the monitoring carried out by the project, it has been estimated that this effectiveness is higher than 95%. Hence, the Projection of the decrease in degradation due to the implementation of REDD+ activities (%DFP) will be conservatively determined at 5%.

Table 14. Ex-post removals Degradation

Year	**tCO_2e**			
	$EA_{DEG,lb,año}$	**$EA_{DEG,REDD+proy,año}$**	**$EA_{DEG,f,año}$**	**$EA_{DEG,REDD+proy}$**
Year 2021 (28-02-2021--31-12-2021)	105,163	9	8,158	96,996
Year 2022 (01-01-2022--31-12-2022)	127,834	0	44	127,790
Year 2023 (01-01-2022--28-02-2023)	13,881	7	0	13,874

Table 15. Total Ex-post removals in this monitoring period

Year	Baseline emissions (tCO2e)	Project emissions (tCO2e)	Leakage emissions (tCO2e)	Net GHG emission reductions (tCO2e)
Year 2021 (28-02-2021-to-31-12-2021)	193,819	9	8,158	185,652
Year 2022 (01-01-2022-to-31-12-2022)	237,014	833	44	236,137
Year 2023 (01-01-2022-to-28-02-2023)	27,310	629	1,272	25,409
Total	458,143	1471	9,474	447,198

As a result of REDD+ activities, the project achieved a net emissions reduction of 447,198 tCO2e, of which 89,439 tCO2e correspond to the risk buffer reserve (20%), then the marketable VCCs are 357,758 tCO2e. It is concluded that the activities to reduce emissions are more effective than those foreseen in the *Ex-ante* scenario, reaching a 137% reduction in emissions in the *Ex-post* scenario, in relation to the emissions estimated in the *Ex-ante* scenario. The success of the project is confirmed, achieving its climate, social and environmental objectives.

16.3 Comparison of actual emission reductions with estimates in the project document

The comparison between the *ex-ante* estimated reduced emissions and the values of reduced emissions achieved during the present monitoring period is presented below.

Table 16. Comparison of actual emission reductions with estimates in the project document

Year	Ex ante emission reductions (tCO2e)	Ex post emission reductions (tCO2e)
Year 2021 (28-02-2021-to-31-12-2021)	*138,375*	185,652

Year 2022 (01-01-2022-to-31-12-2022)	*171,888*	236,137
Year 2023 (01-01-2022-to-28-02-2023)	*15,386*	25,409
Total	325,649	447,198

The project achieved 137% emissions reductions in the monitored period, compared to ex ante estimates. This is the result of the success of the project implementation activities, reducing deforestation and degradation more effectively than projected.

16.4 Remarks on difference from estimated value in the registered project document

The difference from estimated value in the registered project document are 121,549 tCO2e, or 37% more than projected. The implementation activities allowed us to go from a projected deforestation of 18.55 hectares to 4.18 hectares for the monitored period, and a projected degradation from 219.1 hectares to 0.21 hectares for the monitored period.