

 <p>BioCarbon Registry</p>	<p>Project Design Document Dabucury REDD+ Project</p>
Project Information	
Project Title	REDD+ Dabucury
Version	10
Project Location	<p>Country: Colombia Department: Guaviare Municipality: Miraflores</p>
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Validation and Verification Body	ICONTEC

	<p align="center">Project Design Document Dabucury REDD+ Project</p>
Project Information	
Project Duration	01-January-2019 to 31-December-2048; 30 years
Accreditation Period	01-January-2019 to 31-December-2048; 30 years
Methodology	<p>BCR0002 AFOLU Sector Methodological Document Quantification of GHG Emission Reductions or Removals from REDD+ Projects Version 3.1. Aug 2022</p>
Estimated GHG removal	<p>Deforestation: 455,813 tCO₂e/year 13,674,393 tCO₂e for a 30-year crediting period</p> <p>Degradation: 3,995 tCO₂e/year 119,843 tCO₂e for a 30-year crediting period</p> <p>Total: 459,808 tCO₂e/year 13,794,236 tCO₂e for a 30-year crediting period</p>
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1. Project Description

1.1. Project Summary

The Dabucury project is a REDD+ project grouped by instances. The first instance corresponds to the Vuelta del Alivio Indigenous Reservation, the Yavilla II Indigenous Reservation, and the El Dorado, Lagos del Paso and El Remanso Indigenous Reservation; the second instance includes the Puerto Nare Indigenous Reservation; the third instance involves the Tucano Indigenous Reservation of Barranquillita, all located in the municipality of Miraflores, Guaviare.

The objective of the project is to contribute to the sustainable development of the communities and prevent the deforestation of the forest present in the indigenous territories that are part of the initiative by strengthening territorial governance by the indigenous people (construction and/or updating of the Indigenous Life Plan, construction of the Territorial Planning Plan and strengthening of the community's capacities). the development of sustainable productive activities compatible with nature that contribute to food security and the generation of surpluses, the improvement of the quality and living conditions of community members, forest monitoring and the conservation of biodiversity.

The Lagos El Dorado, Lagos del Paso and El Remanso Indigenous Reservation was legally constituted by Resolution 076 of April 14, 1993. The Yavilla II Indigenous Reservation was established by Resolution 007 of 1998, the Vuelta del Alivio Indigenous Reservation by Resolution 046 of November 30, 1998, the Puerto Nare Reservation was titled by Resolution 022 of 2003; and the Tucano Reservation of Barranquillita was established by Resolution 026 of 1994 and expanded by Resolution 03918 of the same year. These resolutions were issued by the Colombian Institute of Agrarian Reform (INCORA).

The Vuelta del Alivio Indigenous Reservation comprises a titled area of 38,750 hectares, the Lagos El Dorado, Lagos del Paso and El Remanso Indigenous Reservation has a titled area of 43,980 hectares, the Yavilla II Reservation comprises a titled area of approximately 30,000 hectares, the Puerto Nare Reservation has a titled area of

23,367 hectares. of which 115,746.28 hectares are forest eligible for the REDD+ project for the first and second stages of the project.

The territory of the indigenous reserves and the reference region have experienced a reduction in forest cover, mainly due to changes in land use associated with the expansion of the agricultural frontier (especially extensive cattle ranching), timber extraction for self-consumption and commercialization, and colonization processes and the establishment of crops for self-consumption. The project activities are aimed at reducing deforestation and unplanned forest degradation in the territory of indigenous reserves, which is expected to mitigate climate change by reducing greenhouse gas (GHG) emissions.

The project corresponds to a project in the category of Reducing Emissions from Deforestation and Degradation (REDD+) and the REDD+ activities it comprises are the reduction of emissions from deforestation and the reduction of emissions from forest degradation and was developed from version 3.1 of the BCR0002 methodology and version 3.0 of the BCR Standard. The project belongs to the Agriculture, Forestry and Other Land Use (AFOLU) sector, and is expected to generate about 13,794,236 Verified Carbon Credits (CCVs) during the 30-year crediting period (13,674,393 tCO_{2e} for deforestation and 119,843 tCO_{2e} for degradation). Carbon emission reduction certificates will be traded mainly in the domestic market.

The development of this project involves the active participation of the communities of the proponent indigenous reservations, and with their support and guidance, the foundations were laid for the design and implementation of the activities described in this document and its annexes. Community participation at all stages of development has facilitated the understanding and ownership of the initiative among community members, community leaders and representatives, which is essential to assume the long-term commitment involved in the development and implementation of the project.

1.2. Objectives of the project

The project has the following general objective:

- Reduce deforestation and forest degradation and contribute to the sustainable development of communities in the territories of the Lagos El Dorado, Lagos del Paso and El Remanso Indigenous Reserves, the Vuelta del Alivio Indigenous Reserve, the Yavilla II Indigenous Reservation and the Puerto Nare Indigenous Reservation in the municipality of Miraflores (Guaviare).

The specific objectives of the project are:

- Develop productive systems compatible with nature conservation and community well-being.
- Contribute to improving the living conditions of the communities that live in the indigenous reserves.
- Strengthen territorial planning and mechanisms to ensure the cultural protection of the communities living in the indigenous reserves.
- Contribute to the monitoring and conservation of the biodiversity present in the area of indigenous reserves.

On the other hand, the actions developed within the framework of the project are aligned with the Sustainable Development Goals as presented below:

Table 1. Sustainable Development Goals with which the project's activities are aligned.

Category	Unit of Measurement	Sustainable Development Goal
Reduction of GHG emissions	Estimated net emission reductions in the project area.	SDG 13 – Climate Action
Forest cover and biodiversity	An area of forest that is conserved in indigenous territories.	SDG 15 – Life on Land
Land use	Forest area with improved management practices.	SDG 15 – Life on Land
	Area of agricultural systems with improved management practices.	SDG 2 – Zero Hunger
Capacity building and education	People who benefit from training in the management of production systems, biodiversity monitoring strategies and territorial governance mechanisms.	SDG 4 – Ensure inclusive and equitable quality education

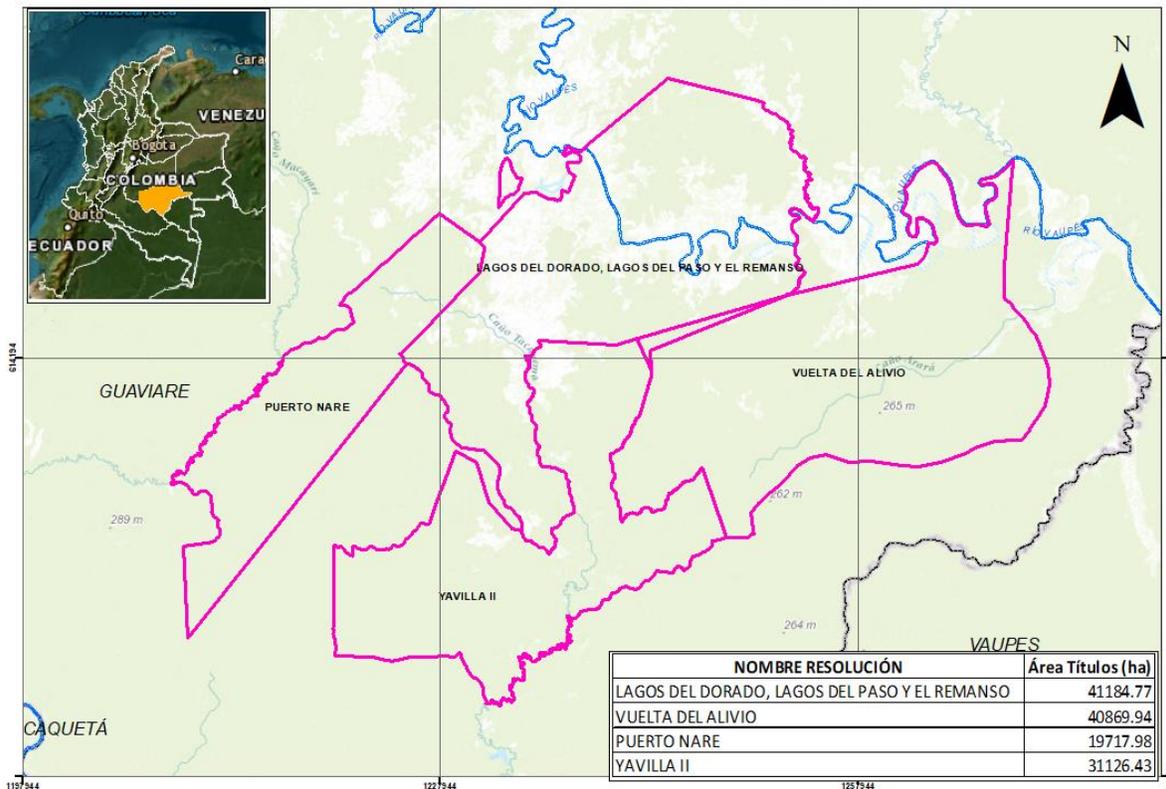
Category	Unit of Measurement	Sustainable Development Goal
	Women who benefit from training in the management of production systems, biodiversity monitoring strategies and territorial governance mechanisms.	SDG 4 – Ensure inclusive and equitable quality education
Employment and livelihoods	Average income of small-scale food producers classified by gender or indigenous status.	SDG 2 – Zero Hunger
Bless you	People who have or improve access to health services as a result of project activities.	SDG 3 – Good health and well-being
	Women who have or improve access to health services as a result of the project's activities.	SDG 3 – Good health and well-being
Water and basic sanitation	People who have access to safe drinking water or improve the quality of the water they consume as a result of project activities.	SDG 6 – Clean Water and Sanitation
Renewable energy	Installed generation capacity from renewable sources per person.	SDG 12 – Sustainable consumption and production

1.3. Location of the project

The first and second stages of the project are being developed in the area of the Vuelta del Alivio Indigenous Reservation, the Yavilla II Indigenous Reservation, the Lagos El Dorado, Lagos del Paso and El Remanso Indigenous Reservations, and the Puerto Nare Indigenous Reservation, hereinafter RI Vuelta del Alivio, RI Yavilla II, RI Lagos El Dorado and RI Pto Nare. respectively, which are located in the Municipality of Miraflores, Department of Guaviare.

The spatial location of the project area is presented below:

**PROYECTO DABUCURY
LOCALIZACIÓN GENERAL
GUAVIARE - COLOMBIA**



Map 1. Location of the Dabucury REDD+ project area. Source: Authors.

1.4. Duration of the project

The start date of the project corresponds to 01-January-2019 and extends over a period of 30 years, indicating that the project will end on 31-December-2048.

1.5. Accreditation period

The accreditation period corresponds to the period between 01-January-2019 and 31-December-2048.

1.6. Title the project

The owners of the project correspond to the proponents of the project, i.e., the Indigenous Reserves, CARBO Sostenible S.A.S. and Terra Commodities S.A.S. The incumbents are

responsible for the formulation, implementation, follow-up and registration of the initiative. Below is the information for each holder:

Name of the organization	Lagos El Dorado, Lagos del Paso and El Remanso Indigenous Reservation
Contact Person	José María Morera Fonseca
Title	Governor
Address	RI Lakes El Dorado, Lagos del Paso and El Remanso, Miraflores, Guaviare
Telephone	+57 313 347 3890
Email	resguardolagosdeldorado@gmail.com
Role	Participatory joint project development Implementation of activities

Name of the organization	Yavilla II Indigenous Reservation
Contact Person	Hernando López Valencia
Title	Governor
Address	RI Yavilla II, Miraflores, Guaviare
Telephone	NA
Email	resgadoindigenayavillall@gmail.com
Role	Participatory joint project development Implementation of activities

Name of the organization	Vuelta del Alivio Indigenous Reservation
Contact Person	Martha Lucia Pedroza Amaya
Title	Governor
Address	RI Vuelta del Alivio, Miraflores, Guaviare
Telephone	NA
Email	NA
Role	Participatory joint project development Implementation of activities

Name of the organization	Puerto Nare Indigenous Reservation
Contact Person	Faiver Giovanni Marín Jiménez
Title	Governor
Address	RI Puerto Nare, Miraflores, Guaviare
Telephone	3237171767

Email	NA
Role	Participatory joint project development Implementation of activities

Name of the organization	CARBO Sostenible SAS
Contact Person	Juan Andrés López
Title	Legal Representative
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Email	jlopezsilva@carbostenible.com
Role	Development of the project Support in the implementation of activities Carbon Credit Trading Financing of activities

Name of the organization	Terra Commodities SAS
Contact Person	Federico Ortiz
Title	Director
Address	CALLE 70 No. 6-55 AP2 Bogota, Colombia
Telephone	+57 310 223 5070 +351 913608709
Email	fortiz@terra.commodities.net
Role	Development of the project Support in the implementation of activities Carbon Credit Trading Financing of activities

1.7. Land tenure

The territory that comprises the project area corresponds to the territory titled in favor of the communities of the Vuelta del Alivio Indigenous Reservation, the Puerto Nare Indigenous Reservation, the Yavilla II Indigenous Reservation, the Lagos El Dorado, Lagos del Paso and El Remanso Indigenous Reservation, and the Barranquillita Indigenous Reservation.

The figure of the Indigenous Reservation is a special legal and socio-political entity made up of indigenous communities that hold collective property titles and

administer the territories in accordance with the indigenous organizational structure, and their cultural patterns and traditions. In this way, the indigenous reserves that make up the project constitute the materialization and fulfillment of the provisions of article 14 of Law 21 of 1991, which recognizes the right of indigenous peoples to the ownership and possession of the lands they have occupied ancestrally.

The following are the administrative acts that grant the titles of Indigenous Reservation to the proponents of the project (the supports are presented in the *Land Tenure folder*):

Table 2. Ownership of Indigenous Reservations.

Instance	Indigenous Reservation	Administrative Act Conferring the Title of Indigenous Reservation
First instance	RI Lagos El Dorado	INCORA Resolution 076 of April 14, 1993
	RI Yavilla II	INCORA Resolution 007 of 1998
	RI Return of Relief	INCORA Resolution 046 of November 30, 1998
Second Instance	RI Puerto Nare	INCORA Resolution 022 of 2003
	RI Return of Relief	INCORA Resolution 046 of November 30, 1998
Third Instance	RI Barranquillita	INCORA Resolution 026 of 1994 Extended by INCORA Resolution 03918 of 1994

1.8. Adaptation to Climate Change

The project considers climate change mitigation and adaptation actions, with the aim of reducing GHG emissions and increasing resilience to current and future impacts associated with climate change and climate variability. To this end, the project will:

- It considers the National Climate Change Policy, under the following strategic lines:
 - i) Strategy: Territorial Strategies
 - Line of action 1: Promote production systems more adapted to high temperatures, droughts or floods, to improve competitiveness, incomes and food security, especially in vulnerable areas.
 - Line of action 3: Promote comprehensive actions on farms, in the chagras or communities that help the efficient use of the land, and where the conservation of the existing natural covers on the farms, the restoration of degraded areas, the implementation of agroforestry systems, family

- farming, the reduction of deforestation and the restoration of degraded areas are privileged. and agricultural technology assistance that increases competitiveness and decreases vulnerability to climate change.
- Line of action 4: In the post-conflict scenario, provide productive alternatives in areas with processes of occupation of wastelands, illegal mining, illicit crops or occupation of forest reserves, which promote the maintenance or increase of forest carbon stocks, the closure of the agricultural frontier, and the use of climate-resilient agricultural and forestry production systems, in accordance with the vocation and agro-ecological conditions of the aforementioned areas.
 - ii) Strategy: Management and Conservation of Ecosystems and Their Ecosystem Services for Low-Carbon and Climate Change-Resilient Development
 - Line of action 1: Promote the conservation and restoration of terrestrial ecosystems that provide environmental services that strengthen the adaptation of socio-economic systems to climate change.
 - Line of action 3: Incorporate actions for the management and conservation of ecosystems and their services in territorial planning, considering their role in reducing emissions and increasing territorial adaptation.
 - Action Line 4: Strengthen forest governance to prevent deforestation and forest degradation.
 - It considers the 2016 National Plan for Adaptation to Climate Change, designed to reduce the country's vulnerability and improve the response to the threats and impacts of climate change. Objectives defined for adaptation to climate change include: (i) Managing knowledge about climate change and its potential impacts; (ii) Incorporate adaptation to climate change into environmental, territorial and sectoral planning; (iii) Promote the transformation of development for climate change resilience.(DNP, MinAmbiente, IDEAM, UNGRD, PNN, Insituyo Alexander Von Humboldt, 2016)

The Dabucury REDD+ project contributes to the fulfilment of the objectives defined in this plan in the following ways:

- i) Objective 1: Manage knowledge about climate change and its potential impacts.
Strategy 1B: Education, training, communication and public awareness on climate change.
 - It develops spaces for socialization, dissemination and appropriation of knowledge on impacts associated with climate change.
 - It promotes training and awareness-raising processes on climate change adaptation in formal, non-formal and informal education programmes.
 - ii) Objective 2: Incorporate adaptation to climate change into environmental, territorial and sectoral planning.
Strategy 2A: Incorporating climate variability and change into state planning instruments.
 - It incorporates guidelines and actions for adaptation to climate change in environmental and territorial planning instruments (through the implementation of the IRs' Indigenous Life Plans).
 - iii) Goal 3: Promote the transformation of development for climate change resilience.
 - Biodiversity and its ecosystem services:
Development of actions aimed at reducing the loss of tropical forests and their biodiversity – conservation of the project area.
 - Food Security and Agricultural Production:
Recovery of traditional knowledge production systems that tend to increase and/or maintain resilience to climate change.
- It improves the conditions for the conservation of biodiversity and its ecosystem services, considering that it allows the conservation of natural forest cover and, therefore, of biological corridors in an area of high biodiversity.
 - It integrates actions focused on the improvement of territorial planning, seeking the conservation of existing natural covers.
 - It strengthens the capacities of communities to make decisions that allow them to anticipate the negative effects of climate change.

- It includes the development of passive restoration processes in areas of environmental importance due to their ecosystem connectivity.

It develops comprehensive actions that contribute to the efficient use of the land through the conservation of existing natural covers and the strengthening of family farming.

2. Applicability of the methodology

The methodology applied corresponds to BCR0002, version 3.1 of 2022. The following are the criteria for applicability and their compliance:

Table 3. Conditions for the applicability of the methodology and its compliance.

Condition of applicability	Compliance
a) The areas in the geographical boundaries of the project correspond to the forest category at the beginning of the project activities and ten years before the start date of the project.	Complies. According to the cartographic analysis carried out, it can be determined that the project area corresponds to stable forest that was present ten years before the date of commencement of the activities.
b) The causes of deforestation identified include: expansion of the agricultural frontier, mining, timber extraction, and infrastructure expansion.	Complies. The expansion of the agricultural frontier and the extraction of timber for self-consumption and sale were identified as causes of deforestation in the project area.
c) Causes of degradation include: selective logging, firewood extraction, forest fires, forest grazing, and expansion of the agricultural frontier – illicit crops.	Complies. In the project area, selective logging, forest grazing and the expansion of the agricultural frontier - illicit crops - were identified as causes of forest degradation as causes of degradation.
d) Reduction in deforestation or degradation is not expected to occur in the absence of the project.	Complies. The trend of deforestation and degradation has historically continued and may continue in the absence of the project.
e) In deforested areas, carbon stocks in soil organic matter, leaf litter and dead wood may decrease or remain stable.	Complies. In deforested areas, carbon stocks in soil organic matter, leaf litter and dead wood decrease.
f) The quantification of GHGs other than CO ₂ should be included in the quantification of emissions caused by forest fires during the monitoring period.	Complies. During the monitoring period, if forest fires are detected, GHG emissions will be quantified and included in the estimates of emissions associated with the project.

3. Normative References

Resolution 1447 of 2018: issued by the Ministry of Environment and Sustainable Development (MADS), regulates the monitoring, reporting and verification system of mitigation actions at the national level referred to in Article 175 of Law 1753 of 2015.

Resolution 471 of 2020: issued by the Agustín Codazzi Geographic Institute (IGAC), indicates the minimum technical specifications that Colombia's official basic cartography products must have, as well as their scope of application, scope, among others.

Comprehensive Strategy for Deforestation Control and Forest Management: approved in 2020 (CONPES Document 4021), its main objective is to reduce deforestation and forest degradation, to the extent that forest management is promoted in Colombia, under a sustainable comprehensive rural development approach.

National REDD+ Strategy: defines REDD+ policies and measures that will reduce GHG emissions associated with the forestry sector. It outlines the "roadmap" that sets out the activities that can be done, how they can be done, and the financial resources required. It is part of the actions on Climate Change contemplated in the National Development Plan 2018-2022.

National Interpretation of Social and Environmental Safeguards for REDD+ in Colombia: provides guidelines regarding social and environmental safeguards, which must be taken into consideration to ensure respect for the rights of communities and the mitigation of social and environmental risks.

Conceptual and methodological guidelines for the characterization of causes and agents of deforestation in Colombia: issued in 2018, presents a methodological and conceptual guide to adequately characterize the causes and agents of deforestation, so that the information is comparable and interoperable, at different spatial and temporal scales.

Proposal for a reference level of forest emissions from deforestation in the Amazon Biome of Colombia for payment payment for REDD+ results under the 2019 UNFCCC: presents the reference values to evaluate Colombia's performance in the implementation of REDD+ activities. The proposal presents the reference levels by biome (Amazon, Andes, Caribbean, Orinoco and Pacific).

Estimation of forest degradation in Colombia through a fragmentation analysis: prepared in 2018, it presents the results of one of the methodologies prioritized by the Forest and Carbon Monitoring System (SMByC), to estimate forest degradation in Colombia.

The guidelines established by the IPCC in 2006 and 2019 for national greenhouse gas inventories – Volume 4. Agriculture, forestry and other land uses: define guidelines for estimating and reporting GHG emissions and removals, incorporating good practices and uncertainty management in national GHG inventories.

BioCarbon Registry Program (BCR): Program for the Certification and Registration of GHG Mitigation Initiatives and other Greenhouse Gas Projects, corresponding to the latest published version. Standard for the voluntary Carbon market BCR, version 3.0 of 2023.

4. Carbon Reservoirs and GHG Sources

4.1. Carbon Reservoirs

The carbon reservoirs included in the project are:

Table 4. Carbon Deposits.

Carbon Pool	Is it included?	Justification
Aboveground biomass Tree vegetation	Yes	It represents the largest carbon reservoir derived from the implementation of the project's activities.

Carbon Pool	Is it included?	Justification
Aboveground biomass Non-arboreal vegetation	No	This deposit is not included, taking into account that it is planned to develop productive activities, based on agricultural species, on a semi-annual and annual basis.
Underground biomass	Yes	It is a representative carbon reservoir derived from the implementation of the project activities.
Dead wood and leaf litter	No	This deposit is conservatively excluded, as it is not expected to increase in the post-deforestation scenario.
Soil Organic Carbon	Yes	It is a reservoir whose carbon content is expected to change in the project scenario.

4.2. GHG Sources

The emission sources and GHGs associated with the project activities are presented below:

Table 5. GHG sources.

Source	GHG	Is it included?	Justification
Combustion of woody biomass	CO ₂	No	No project activities involving the burning of biomass are generated.
	CH ₄	No	In the event of forest fires occurring during the monitoring period of the activities, methane emissions will be estimated and included in the emissions for the corresponding period.
	N ₂ O	No	In the event of forest fires occurring during the monitoring period of the activities, nitrogen dioxide emissions will be estimated and included in the emissions of the corresponding period.

5. Spatial and temporal boundaries of the project

5.1. Areas eligible for the REDD+ project

The eligible areas of the project correspond to the stable forest that is located within the limits of the indigenous reserves that make up the first and second stages of the project for at least a period of ten years prior to the start date of the project, in accordance with the definition of forest adopted by Colombia and used by the SMByC, namely, land occupied mainly by trees that may contain shrubs, palms, bamboos, grasses and lianas, in which tree cover predominates with a minimum canopy density of 30%, a minimum in situ canopy height of 5 meters at the time of identification and a minimum area of one hectare. (IDEAM, 2014a)

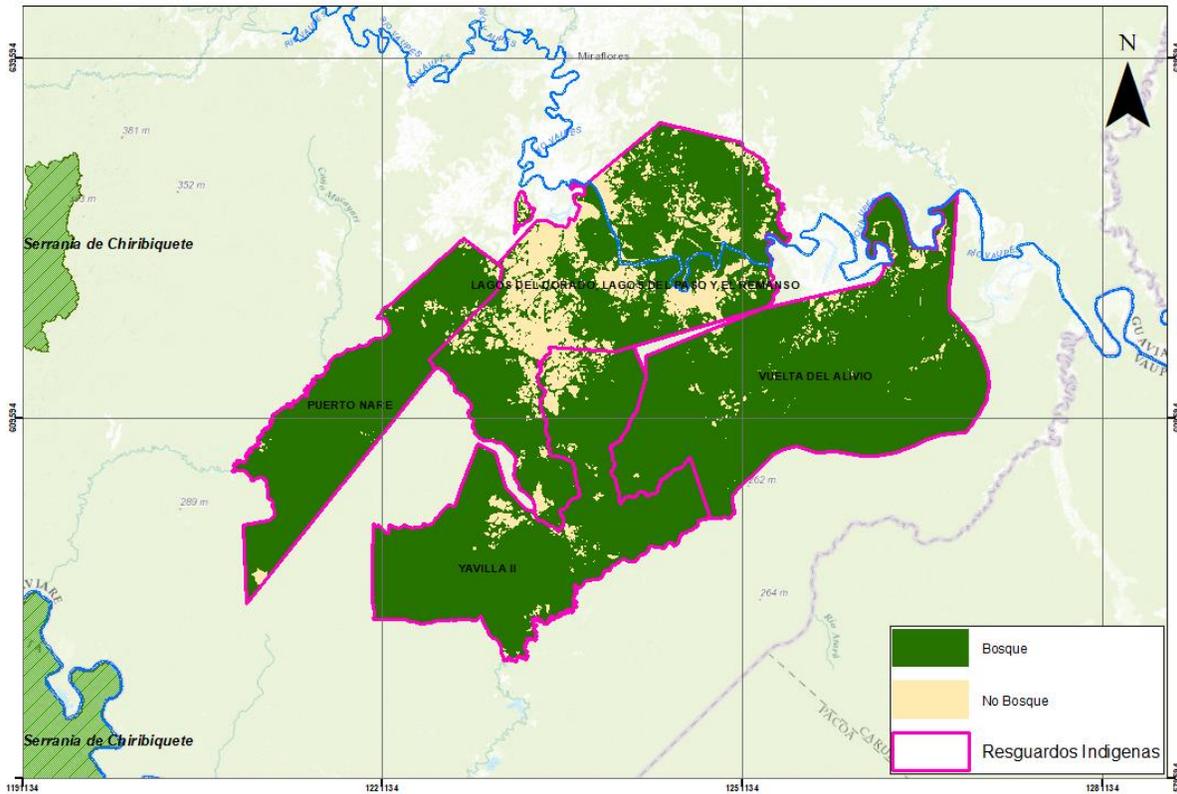
The Vuelta del Alivio Indigenous Reservation comprises a titled area of 38,750 hectares in accordance with the provisions of Resolution 046 of 1998; the Lagos El Dorado, Lagos del Paso and El Remanso Indigenous Reservation has a titled area of 43,980 hectares as defined in Resolution 076 of 1993; the Yavilla II Reservation comprises an area of approximately 30,000 hectares, as indicated in Resolution 007 of 1998; The Puerto Nare Indigenous Reservation has an area of 23,367 hectares granted by Resolution 022 of 2003, all issued by INCORA.

The cartographic extensions of the indigenous reserves used for the analysis and calculations were obtained from the open data page of the National Land Agency (ANT) of Colombia. It is pertinent to mention that the area of the polygons obtained from this page presents discrepancies with respect to the titled area related to the administrative acts by which the indigenous reservations were constituted. According to the information obtained on the ANT website, the polygon of the RI Vuelta del Alivio comprises an area of 40,869.93 hectares (24,331.64 ha in the first instance and 16,538.29 ha in the second instance); the RI Lagos El Dorado has an area of 41,184.77 hectares; the Yavilla II IR covers an area of 31,126.43 hectares; the RI Puerto Nare has 19,717.98 hectares. In total, the four IRs that make up the first and second stages of the project comprise an area of 132,899.12 hectares, of which 115,746.28 hectares are forest eligible for the REDD+ project.

The following is the location of the indigenous reservations:

In the Map 2, the project area is presented, corresponding to 115,746.28 hectares of forest located within the limits of the indigenous reserves that make up the first and second instance at the beginning of the project:

PROYECTO DABUCURY
MAPA DE BOSQUE NO BOSQUE 2019 EN EL ÁREA DE PROYECTO
GUAVIARE - COLOMBIA



Map 2. Project area. Source: Authors.

a) Vegetation in the area of the reserves

- Tropical Rainforest Zonobiome:

According to Bernal, Londoño Vega & Alvarez Dávila (1997), Sánchez Sáenz, (1997) and Gradstein, & Celis (2016), in the areas corresponding to the tropical humid forest zonobiome of the Amazon, it is characterized by vegetation of the families Fabaceae, Lecythidaceae, Sapotaceae, Euphorbiaceae, Lauraceae, Myristicaceae, Burseraceae, Moraceae and Rubiaceae, and the following species stand out: *Micrandra spruceana*, *Monopteryx uauco*, *Oenocarpus bataua*, *Goupia glabra*, *Clathrotropis macrocarpa*, *Swartzia schomburgkii*, *Protium* spp., *Eschweilera* spp., *Scleronema micranthum*, *Iryanthera* spp., *Dacryodes chimantensis*, *Nealchorneayapurensis*, *Tachigali* sp., *Buchenavia parvifolia* and *Micropholis Typeanensis*.

In addition, towards the southern part of this region, the most important tree species correspond to *Otoba parvifolia*, *Eschweilera coriacea*, *Eschweilera itayensis*, *Conceveiba* Spp., *Pseudolmedia laevis* and the palms *Astrocaryum ferrugineum* and *Iriartea deltoidea* (Barreto et al., 2010). The most predominant families in this area are Fabaceae, Rubiaceae, Melastomataceae, Annonaceae, Araceae, Euphorbiaceae, Meliaceae and Myristicaceae. (Rudas L. & Prieto C., 1998)

- Pedobiomes and helobiomes of the tropical humid forest zonobiome:

On the other hand, in the helobiomes of the Amazon there is a successional gradient of vegetation. In aquatic environments, floating populations are identified in which the following species dominate: *Eichhornia crassipes*, *Pistia stratiotes* and *Neptunia oleracea*, *Victoria amazonica*, *Pontederia rotundifolia*, *Montrichardia arborescens* and *Polygonum* sp. (Rudas L. & Prieto C., 1998; Rangel-Ch, 2008). In addition, the vegetation in the emergent areas is made up of grasslands and shrubs or small trees, among which the following are identified: *Cecropia* Spp., *Annona hypoglauca*, *Byrsonima japurensis*, *Inga punctata*, *Pseudobombax munguba*, and in some cases palm populations *Astrocaryum jauari* (Rangel-Ch, 2008).

About 25 species of trees have been identified in the floodplains, belonging to the families Fabaceae, Annonaceae, Moraceae, Arecaceae, Sapotaceae, Euphorbiaceae, Chrysobalanaceae, Lecythidaceae, Myristicaceae, Myrtaceae, Meliaceae and Lauraceae, mainly. Among the most important species are: *Cecropia membranacea*, *Annona hypoglauca*, *Iriartea deltoidea*, *Astrocaryum jauari*, *Parkia multijuga*, *Brownea grandiceps*, *Euterpe precatoria*, *Oenocarpus bataua*, *Oxandra mediocris* and *Pouteria torta*, in addition to large trees of the genera *Ceiba* and *Ficus* (Duivenvoorden, 1995; 1996; Duivenvoorden & Lips, 1995).

Finally, some of the species of flora identified by the Amazonian Institute of Scientific Research (SINCHI) during the development of the Colombia BIO Expedition, carried out in 2018, in the middle and upper basin of the Apaporis River, are presented below.

Table 6. Flora identified in the middle basin and upper Apaporis River. (Cárdenas López, Casataño Arboleda, Marín Canchala, & Osorno Muñóz, 2019)

Scientific name	Common name
<i>Guatteria guianensis</i>	Freighter
<i>Aspidosperma desmanthum</i>	Axe Rope
<i>Anaxagorea rufa</i>	Black Freighter
<i>Cymbopetaum brasiliense</i>	Plain Freighter
<i>Himatanthus articulatus</i>	Snake's Blood
<i>Macoubea guianensis</i>	Cucuy
<i>Parahancornia surrogata</i>	Juansoco
<i>Prestonia</i> sp.	Milk vine
<i>Bactris bidentula</i>	Thorn Palm
<i>Euterpe catinga</i>	Savannah Wasay
<i>Maximum geonomy</i>	Guara Wasay
<i>Bactris gasipaes</i>	Chontaduro
<i>Bactris hirta</i>	Thorn Palm
<i>Aechmea nidularioides</i>	Pineapple
<i>Lepidocaryum tenue</i>	Caraná
<i>Mauritiella armata</i>	Myrtle
<i>Stenopadus colombianus</i>	Bellaflor
<i>Amphilophium magnoliifolium</i>	Worm vine
<i>Tococa macrosperma</i>	Lulito de monte
<i>Guzmania vittata</i>	Toucan's Tongue
<i>Heterostemon conjugatus</i>	Trunk orchid
<i>Erythroxylon coca</i>	Fish coca
<i>Tachigali</i> sp.	Tangarana
<i>Macaw Superba</i>	Flor de Inírida
<i>Piper arboreum</i>	Bands

b) Biodiversity

The region where the project is located is characterized by high biological biodiversity that includes birds, amphibians, reptiles, mammals and plants. The territory of the indigenous reserves that make up the project is located in a corridor that separates the Serranía de Chiribiquete National Natural Park and the Nukak National Natural Reserve. In this area, species have been identified as vulnerable, endangered and critically endangered, according to the classification defined by the International Union for Conservation of Nature (IUCN).

Below are the species identified in the Red Book of Reptiles of Colombia, Red Book of Freshwater Fish of Colombia, Red Book of Birds of Colombia, Red Book of Plants of Colombia, that are of interest in the project area: (Morales-Betancourt, Lasso, Páez, & Bock, 2015) (Mojica, Usma Oviedo, Álvarez León, & Lasso, 2012)(Renjifo, Amaya-Villarreal, Burbano-Girón, & Velásquez-Tibatá, 2016)(Calderón-Sáenz, 2006; Cárdenas L. & Salinas, 2007)

Table 7. Biodiversity identified in the red books for the project area.

Common name	Scientific name	Classification
Reptiles		
Charapa Turtle	<i>Podocnemis expansa</i>	Critical Hazard
Terecay Turtle	<i>Podocnemis unifilis</i>	Danger
Chipiro Turtle	<i>Podocnemis erythrocephala</i>	Vulnerable
Cayman Llanero	<i>Crocodylus intermedius</i>	Critical Hazard
Freshwater fish		
Pirarucu	<i>Arapaima gigas</i>	Vulnerable
Pirahiba	<i>Brachyplatystoma filamentosum</i>	Vulnerable
Striped	<i>Brachyplatystoma juruense</i>	Vulnerable
Striped catfish	<i>Pseudoplatystoma metaense</i>	Vulnerable
Striped catfish	<i>Pseudoplatystoma orinocoense</i>	Vulnerable
Striped catfish	<i>Pseudoplatystoma punctifer</i>	Vulnerable
Striped catfish	<i>Pseudoplatystoma tigrinum</i>	Vulnerable
Phlegm or flat beard	<i>Brachyplatystoma platynemum</i>	Vulnerable
Gold	<i>Brachyplatystoma rousseauxii</i>	Vulnerable
Pirabuton or capable	<i>Brachyplatystoma vaillantii</i>	Vulnerable
Yellow	<i>Zungaro zungaro</i>	Vulnerable
Poultry		
Wagon Duck	<i>Oressochen jubatus</i>	Threatened
Tufted Eagle	<i>Morphnus guianensis</i>	Near Threatened
Shrew	<i>Harpia harpyja</i>	Near Threatened
Plants		
Epiphytic orchid	<i>Coryanthes vieirae</i>	Near Threatened
Cedar	<i>Cedrela odorata L.</i>	Global Category: Vulnerable National Category: Endangered

On the other hand, below is the list of species that have the category Endangered, Vulnerable and Near Threatened by the International Unit for Conservation of Nature (IUCN) in the project area. (IUCN, 2021)

Table 8. Species identified on the IUCN Red List in the project area. (IUCN, 2021)

Category: Endangered			
Animalia	Mammalia	Giant Otter	<i>Pteronura brasiliensis</i>
Animalia	Mammalia	Pink dolphin or Amazon dolphin	<i>Inia geoffrensis</i>
Animalia	Mammalia	Common Spider Monkey	<i>Ateles belzebuth</i>
Category: Vulnerable			
Animalia	Mammalia	Amazonian tapir or tapir	<i>Terrestrial tapirus</i>
Animalia	Mammalia	Humboldt monkey, choyo monkey or gray woolly monkey	<i>Lagothrix lagothricha</i>
Animalia	Mammalia	Giant Armadillo	<i>Priodontes maximus</i>
Animalia	Mammalia	Tigrillo or tiger leopard	<i>Leopardus tigrinus</i>
Animalia	Mammalia	Giant anteater	<i>Myrmecophaga tridactyla</i>
Animalia	Mammalia	White-chinned peccary	<i>Tayassu pecari</i>
Animalia	Poultry	Furrowed yellow toucan	<i>Ramphastos culminatus</i>
Animalia	Poultry	Vinous pigeon	<i>Patagioenas subvinacea</i>
Animalia	Poultry	Curassow or Typeanese Pavín	<i>Crax Reader</i>
Animalia	Poultry	Gara agami	<i>Agamia agami</i>
Animalia	Poultry	Red-winged Parakeet	<i>Touit huetii</i>
Animalia	Poultry	Spiny swift or chimney swift	<i>Pelagic chaetura</i>
Plantae	Magnolipsida	American Cedar	<i>Cedrela odorata</i>
Category: Near Threatened			
Animalia	Mammalia	Short-eared fox	<i>Atelocynus microtis</i>
Animalia	Mammalia	Margay or Tiger Cat	<i>Leopardus wiedii</i>
Animalia	Mammalia	Bushdog	<i>Speothos venaticus</i>
Animalia	Mammalia	Jaguar	<i>Panthera onca</i>
Animalia	Mammalia	Spectral Bat	<i>Vampyrum spectrum</i>
Animalia	Mammalia	River wolf or water dog	<i>Lontra longicaudis</i>
Animalia	Poultry	Agami	<i>Psophia crepitans</i>
Animalia	Poultry	Harpy Eagle	<i>Harpia harpyja</i>
Animalia	Poultry	Tripigrís goshawk	<i>Accipiter poliogaster</i>
Animalia	Poultry	Short-tailed or short-tailed	<i>Contopus cooperi</i>
Animalia	Poultry	Common Corcovado or Red-faced Quail	<i>Odontophorus gujanensis</i>
Animalia	Poultry	Crested Eagle	<i>Morphnus guianensis</i>
Animalia	Poultry	Curassow	<i>Mitu tomentosum</i>
Animalia	Poultry	Striated Warbler or Sparrow Warbler	<i>Setophaga striata</i>
Animalia	Poultry	Zebra heron or dwarf tiger bird	<i>Zebrilus undulatus</i>
Animalia	Poultry	Orinoco goose or road-duck	<i>Neochen jubata</i>
Animalia	Poultry	Orange-faced parrot	<i>Pytilia barrabandi</i>

Animalia	Poultry	Golden Crested Eagle	<i>Spizaetus ornatus</i>
Animalia	Poultry	Buff-breasted sandpiper	<i>Calidris subruficollis</i>
Animalia	Poultry	Large tinamu or olive tinamou	<i>Tinamus major</i>
Animalia	Poultry	Southern Long-tailed Nuthatch	<i>Deconychura pallida</i>
Animalia	Poultry	Green Parrot	<i>Amazona farinosa</i>
Animalia	Poultry	Inambú gallina or white-throated tinamu	<i>Tinamus guttatus</i>

c) High Conservation Value

For the definition of the High Conservation Values (HCV) in the project area, the biological, ecological, social and cultural attributes that stand out for the goods and services they provide were identified, among which are:

- Species of fauna to be preserved: jaguar and tapir. These species can be observed in indigenous reserves and are an indicator of the good state of conservation of the ecosystem. These species are also of high cultural importance as they are immersed in the beliefs, worldview and ritual practices of indigenous communities. The tapir also represents a highly prized food source for the indigenous people. For these reasons, the activities of the project promote the protection of these species and actions will be developed for their conservation.
- Traditional medicine: indigenous communities have an incredible cultural wealth built over thousands of years based on the relationship between man and his natural environment. Protecting the knowledge of the peasants or traditional doctors and guiding the younger generations in the procedures for ethnocultural healing is essential to preserve the identity and knowledge of the ethnic communities that inhabit this region. The recognition and promotion of internal cultural knowledge related to medicine and ethnobotany are structural elements of the identity of peoples. However, this knowledge is continually threatened by interaction with other cultures, such as those of white and mestizo men, who negatively influence the dimension of indigenous culture, offer alternative healing mechanisms, and affect the interest of its members in maintaining and exercising their traditional practices.

- Traditional language of the communities: The traditional languages of the communities in the reservations belong to the Tucano language family. The languages are called Tucano-Medio and Cubeo. It is important to note that it is not definitive that cubeo belongs to the same linguistic family, as it presents important differences; however, it is classified as a linguistic variety of the Middle Toucan. These languages have special characteristics such as a small number of speakers, relative cultural homogeneity, exchange with other languages of the same Tucano language family, and separation from other linguistic varieties. Its conservation is essential for the communities and for the preservation of the national linguistic richness and its cultural importance.
- Traditional subsistence agricultural production systems (Chagras): This is a traditional system of agricultural production of the communities living in the indigenous reservations and is the basis of food. The chagras correspond to a system in which several transitory and perennial species (cassava, corn, sugar cane, banana, among others) are cultivated in a cyclical manner. Given their cultural and food importance, the project aims to preserve and contribute to the continuity in the development of these production systems.

5.1.1. Adding Areas After Validation

The project corresponds to a project grouped by instances. The first stage of the project was validated and corresponds to the RI Lagos El Dorado, RI Vuelta del Alivio and RI Yavilla II. Subsequently, the Puerto Nare IR was included as the second instance of the project. Additionally, it is expected to incorporate a third instance, corresponding to the territory of the Barranquillita IR. The following are the criteria for the addition of new areas, in accordance with the requirements of the BCRv3.0 methodology (2022):

Table 9. Criteria for the addition of new areas to the REDD+ project.

Criterion	Compliance
Comply with the guidelines of the Certification and Registration Program for GHG Mitigation Initiatives and other Greenhouse Gas Projects, in its most recent version.	The additional area, corresponding to the forest present in the territory of the RI Puerto Nare, complies with the guidelines related to said Program.

Criterion	Compliance
Comply with all the provisions of the METHODOLOGICAL DOCUMENT. AFOLU SECTOR. Quantification of GHG Emission Reductions or Removals. REDD+ projects, in their most recent version.	The addition of new areas complies with the provisions of the most recent version of the methodological document AFOLU Sector Quantification of emission reductions or GHG removals REDD+ projects.
Include emission reductions only for validated REDD+ project activities.	The emission reductions considered in the new areas correspond to the initially validated REDD+ activities, which correspond to avoided reductions in emissions from deforestation and forest degradation.
Implement the activities to avoid deforestation or degradation described in the validated document.	The activities to prevent deforestation and forest degradation in the new areas correspond to those described in the previously validated document.
The additionality, causes and agents of deforestation/degradation, land tenure, and baseline scenario of the new areas should be consistent with the validated characteristics for the initial areas	The causes and agents of deforestation/degradation, land tenure, additionality, and baseline scenario of the new areas are consistent with those validated for the initial areas.
Have a start date later than the start date of the areas included in the validation	The start date of the project in the new areas is later than the start date of the initial project, which is January 15, 2019.

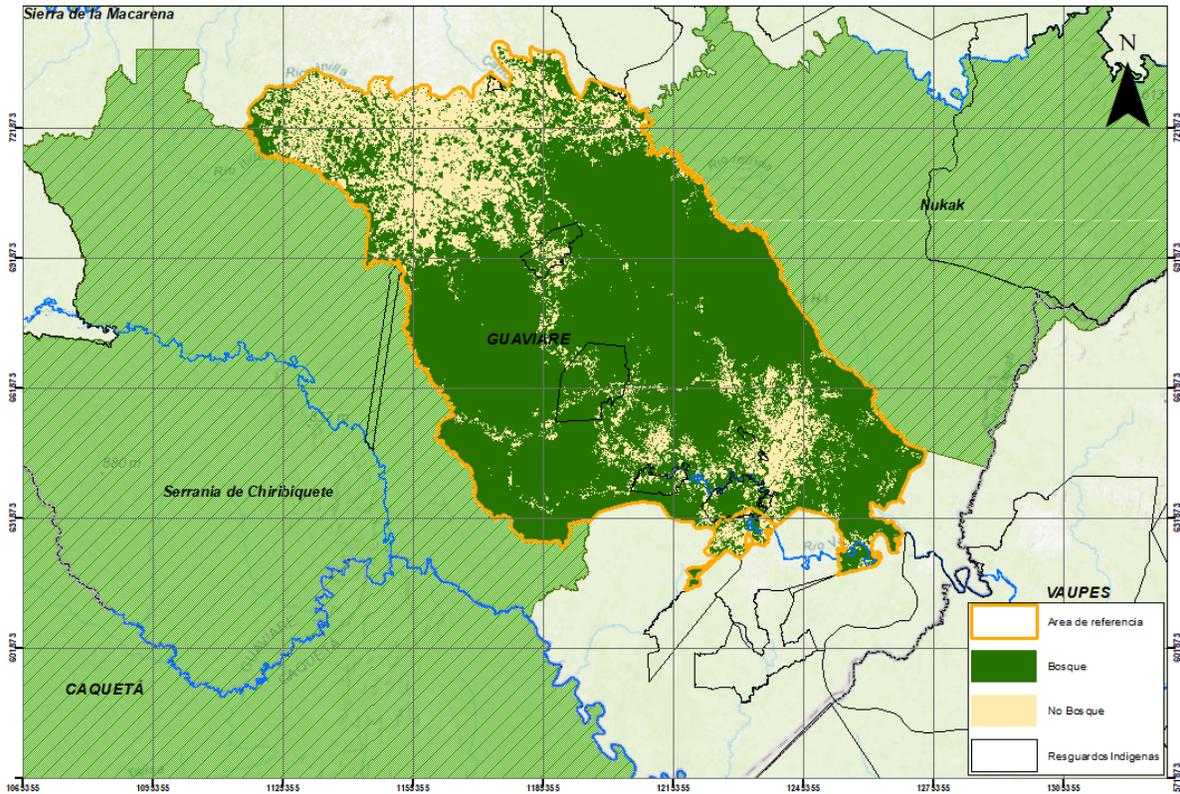
5.2. Reference Region for Baseline Estimation

To select the boundaries of the project, in accordance with the methodology and context of the indigenous territory of the project, all the forest areas of the indigenous reserves participating in the project were selected, in accordance with the national definition of forest, of the territory under the control and ownership of the indigenous communities. As prescribed by the methodology, "The REDD+ project holder must demonstrate that the areas within the geographical boundaries of the project correspond to the category of forest (according to the definition of the SMyC, at the beginning of the project activities, and ten years before the start date of the project, defined as stable forest). In the case of the project, data on the indigenous territory of the three SMyC reserves were downloaded, and the forest area was established at the time of the start of the project (data as of the immediately preceding year), and the areas that had forest cover for ten years before the start of the project were selected.

Evidence from this analysis is included in the PDD. This is fully and fully compliant with BCR0002, version 3.1 of 2022.

For the definition of the reference region (see Map 3), first, the regional context of deforestation where the project will take place was identified, determining that the location of the project is between two national protected areas and that it plays an important role as a biological corridor between them (see Map 4). It is also observed that the vocation of land use is mainly agroforestry, agriculture and forestry (see Map 5). Access to the project area, located in the municipality of Miraflores, is via the Vaupés River. There is also a highway in regular condition, which connects the municipality of Miraflores with the other municipalities located to the north such as Calamar and Retorno, as well as the city of San José del Guaviare. To enter the reference region, these access roads must also be used, and in the northwestern part of the region it is also accessed by the Tunia River, which flows into the Apaporis River, of which the Tacunema River and Caño Venado, located in the territory of the Yavilla II Reservation, are also tributaries in the southeastern part of its course. This area of the reference region is also accessed by a road in poor condition that connects the municipality of Calamar with the cities and municipalities located to the north.

PROYECTO DABUCURY
MAPA DE BOSQUE NO BOSQUE EN EL ÁREA DE REFERENCIA AÑO 2019
GUAVIARE - COLOMBIA

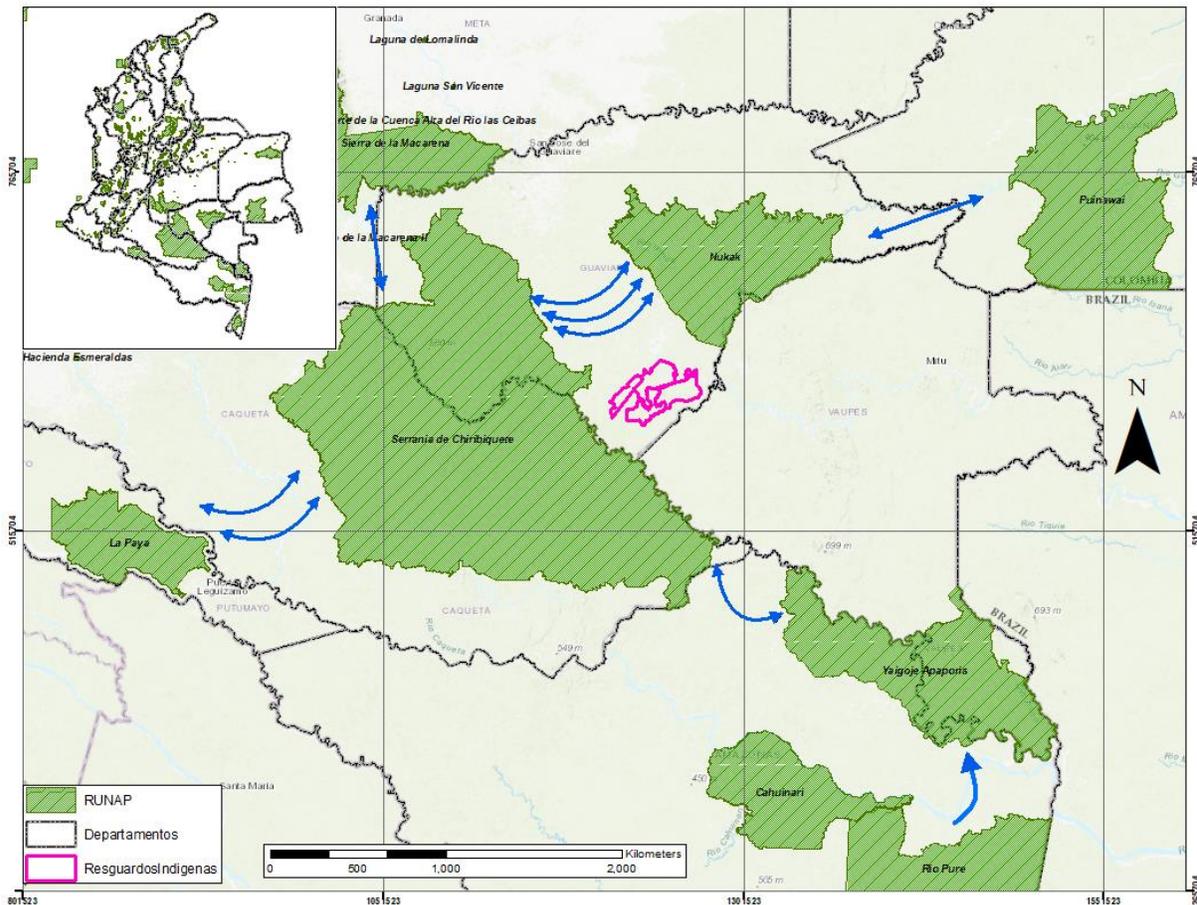


Map 3. Spatial location of the project area and reference region. Source: Authors.

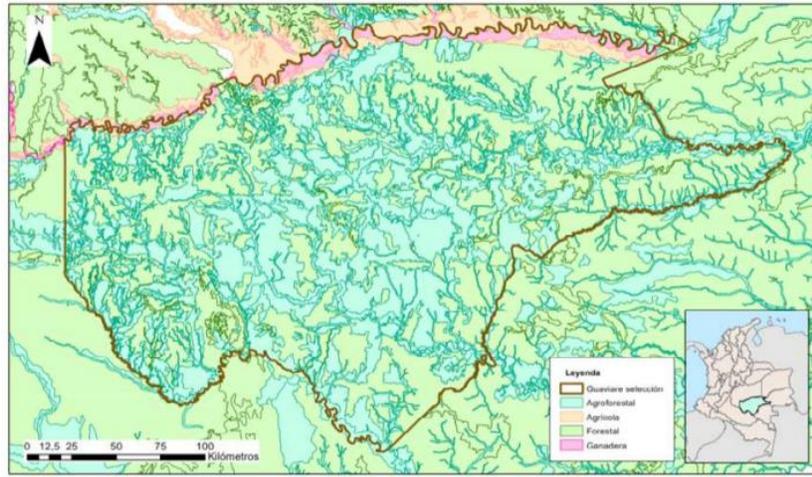
It is also important to mention that the municipalities of Miraflores, Calamar and El Retorno have high rates of deforestation. The project area and the reference region are located in the arc of active deforestation in this area of the country. Guaviare is considered one of the departments with the greatest forest loss, and additionally, since 2016 the rate of deforestation has increased above the historical average trends, due to national circumstances such as the signing of the peace accords and property speculation, among other reasons.

The main causes of deforestation in the reference region and the project area are associated with grassland processes, land occupation (legally or illegally), expansion of the agricultural frontier, introduction of livestock for extensive purposes, introduction of illicit crops, creation of infrastructure, and timber extraction (USAID, 2021). These causes were confronted and are similar to the causes indicated by the

members of the communities of the reservations (see Annex 1, files 1.1.1.1. *Problem Tree – El Dorado Lakes*, 1.1.1.2. *Tree of Solutions – El Dorado Lakes*, 1.2.1.1. *Tree of Trouble – Return of Relief*, 1.2.1.2. *Solution Tree – Relief Turn*, 1.3.1.1. *Problem Tree – Yavilla II*, 1.3.1.2. *Solution Tree – Yavilla II*, 1.5.1.3. *Nare problemas_Puerto Tree*, 1.5.1.4. *Nare soluciones_Puerto tree*, and Annex 2, files 2.1.1. *Lagos Dorado Surveys*, 2.2.1. *Polis Lap of Relief*, 2.3.1. *Yavilla Surveys II*, 2.4.1. *Puerto Nare Surveys*). The agents of deforestation that are mobilized and operate in the reference region and the project area are similar, and the project area is one of the areas towards which deforestation is advancing to the north of the reserves.

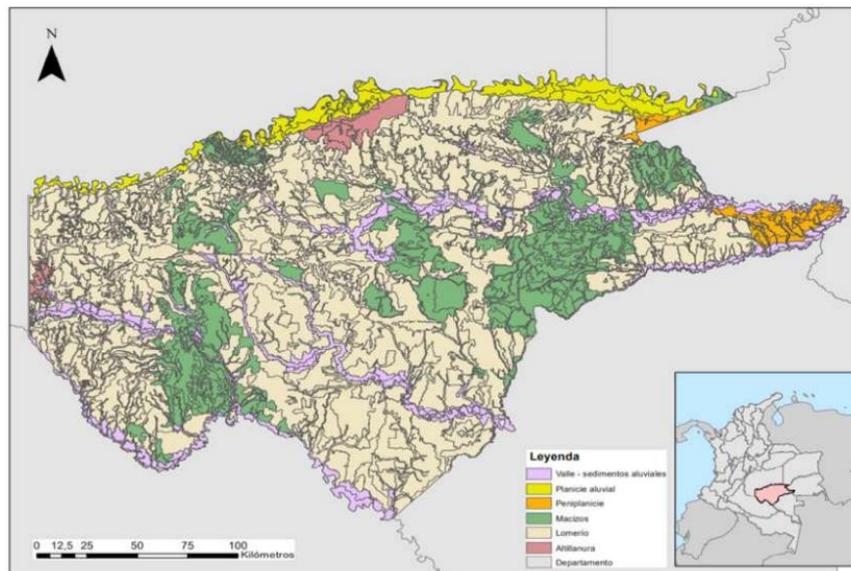


Map 4. Biological corridors between national protected areas (adapted from USAID, 2021).



Map 5. Vocation of Land Use (USAID, 2021).

Subsequently, in order to define the reference region of the Project, it was taken into account that 82% of the area of the reserves corresponded to mainland forest, so an area was located where the percentage of forests was similar. It was also taken into account that the landscapes and land cover were similar (see Map 6). In terms of applicable legislation, the reference region and the project area are similar, and the land tenure and land management figures of the project area are represented in the reference region.



Map 6. Type of Landscape (USAID, 2021).

Taking into account the combination and similarity of these attributes, as well as the similarities present in other climatological and geomorphological variables mentioned below, it can be concluded that the reference region (see Map 3) is, in fact, a representation of the trend and pressure that forests receive in areas such as those in which the project area is located, and that the deforestation agents acting in the reference region have a regional scope and permeate the territories of the indigenous reserves participating in the project.

d) Drivers and Drivers of Deforestation/Degradation: The main drivers of deforestation identified in the reference region and in the project area are similar, including:

- i. Livestock producers with beef cattle for sale.
- ii. Livestock producers with beef cattle for self-consumption.
- iii. Livestock producers with dual-purpose livestock for self-consumption and sale.
- iv. Intermittent agricultural producers of coca crops for sale.
- v. Agricultural producers for self-consumption and for sale
- vi. Prairies to grab and rent land.
- vii. Extractors for self-consumption.

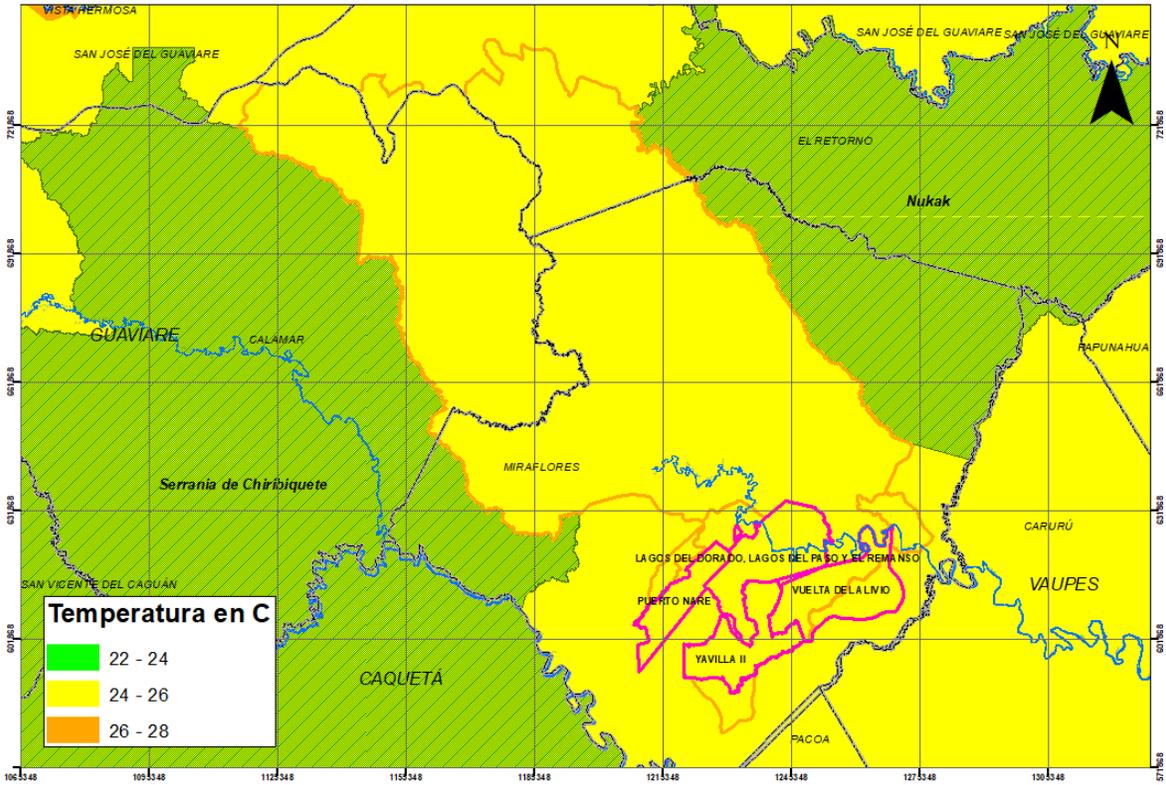
On the other hand, the direct causes of deforestation present in the project area and in the reference region correspond to:

- i. Livestock production for sale and self-consumption.
- ii. Subsistence agricultural production and generation of surpluses for sale.
- iii. Praderization for agricultural activities and land rent.
- iv. Extraction of wood for self-consumption.

e) Land tenure: the project area and the reference region have indigenous territories, which correspond to areas titled as collective property. In the reference area, there are also forest reserve areas established under the Second Law of 1959 and there are also areas of wastelands in the nation.

- f) **Land uses:** The main land uses in the project area and in the reference region correspond to pastures, heterogeneous agricultural areas, areas with herbaceous and/or shrubby vegetation, dense forests and fragmented forests.
- g) **Forest and ecosystems present:** considering that the project area and the project region are located in the same geographic region, the forests and ecosystems present are similar and belong to the following biomes: i) Tropical Humid Forest Zonobiome, ii) Tropical Humid Forest Zonobiome Orobiomes, and iii) Tropical Humid Forest Zonobiome Pedobiomes and Helobiomes.
- h) **Political context and enforceable norms:** the reference and project areas are located within the administrative boundaries of the department of Guaviare. In both cases, the enforceable rules and the political context are similar. In indigenous territories, the environmental authority is vested in the indigenous communities, who are responsible for administering and managing the lands in accordance with their traditions, customs and needs. Outside the indigenous territories, the Corporation for the Sustainable Development of the North and East of the Amazon (CDA) is the environmental authority responsible for structuring and implementing policies, plans, programs and projects that promote the conservation, protection and recovery of the environment and renewable natural resources.
- i) **Climate:** The climate of the region where the project area is located corresponds to the intertropical climate zone, typical of humid tropical forest ecosystems. It is a warm climate, typical of the transition system between the dry plains of the Orinoco and the humid tropical forest; temperatures range from 25°C to 30°C, with an average of over 28°C and a relative humidity of 87% (Instituto de Investigación de Recursos Biológicos Alexander von Humboldt, 1997)(Salazar, Gutiérrez, & Franco, 2006).

**PROYECTO DABUCURY
MAPA DE TEMPERATURA
GUAVIARE - COLOMBIA**

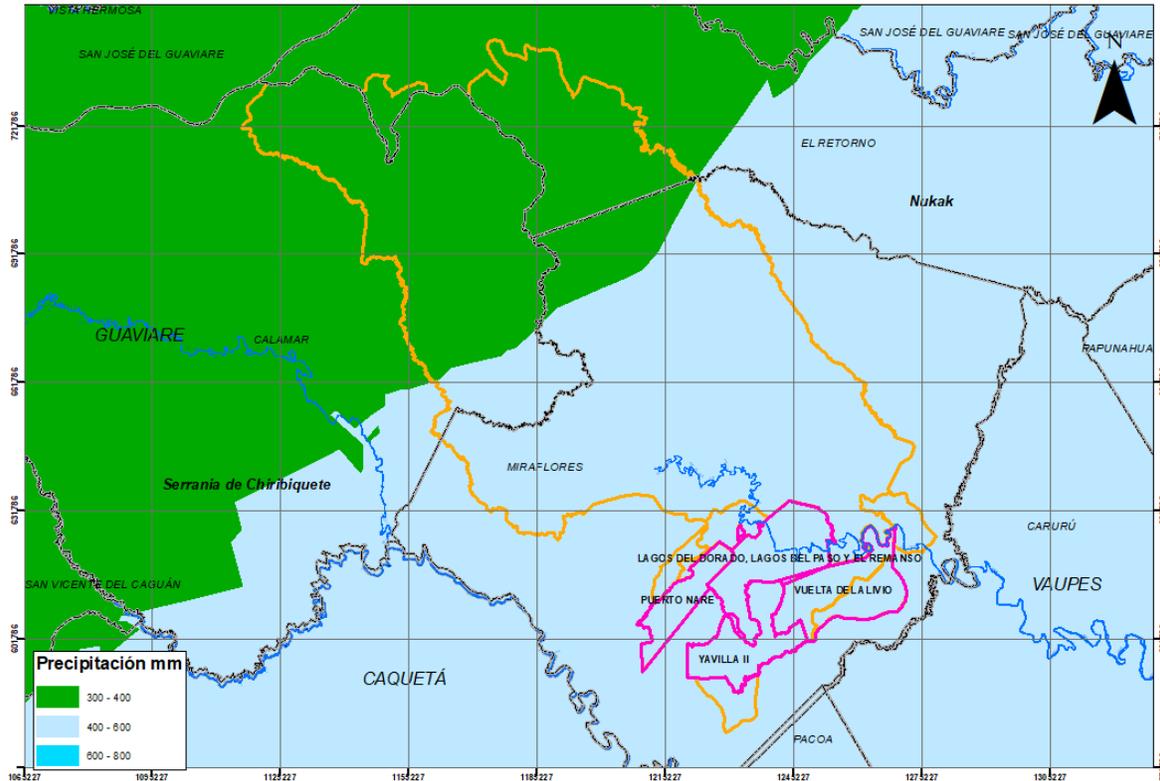


Map 7. Temperature in the project area, in the reference region, and in the leakage area. Source: WMS IDEAM, 2021.

j) Hydrology

Rainfall in the project area ranges from 3,000 to 4,000 mm/year. Among the main generators of precipitation in the region is the Intertropical Convergence Zone (ITCZ), which is characterized by high evaporation rates and high humidity levels; These characteristics mean that the rainfall regime in the project area and the reference region is monomodal, with a dry season (December to March) and a wet season (April to November). (IDEAM, 2015)(IDEAM, 2014b)

PROYECTO DABUCURY
MAPA DE PRECIPITACIÓN
GUAVIARE - COLOMBIA



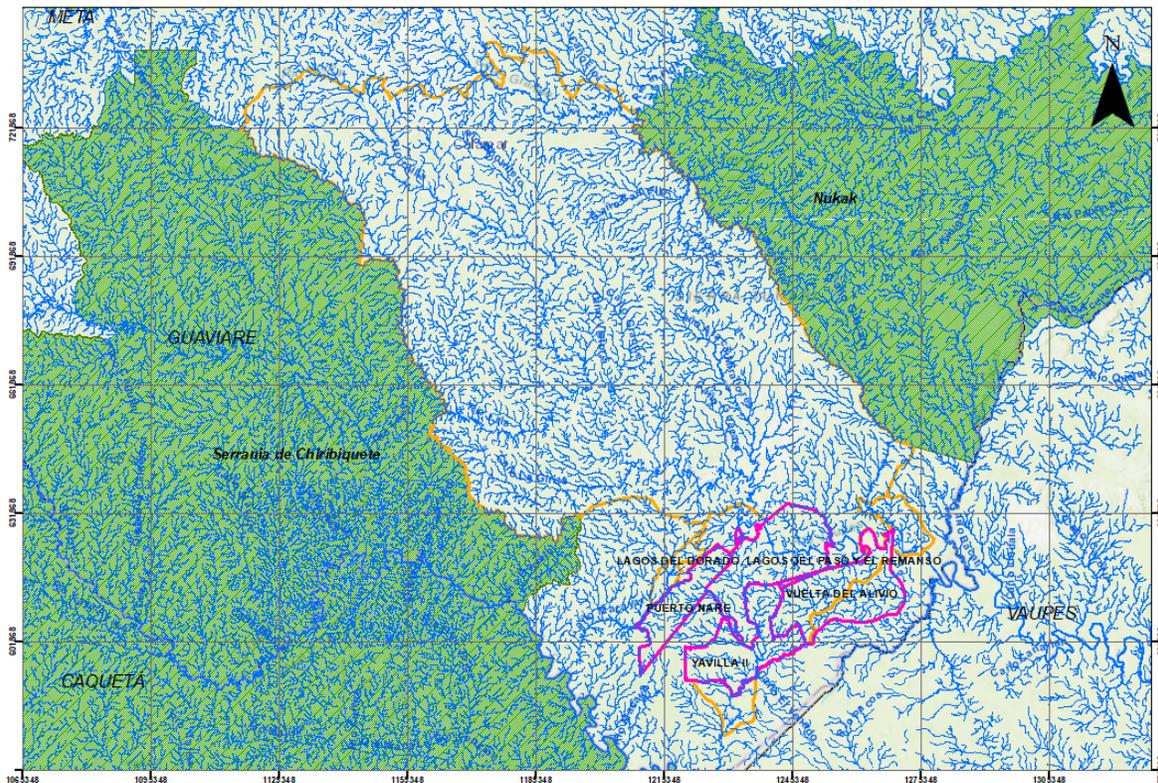
Map 8. Precipitation in the project area, in the reference region, and in the leakage area. Source: WMS IDEAM, 2021.

The project area is part of the river basins of the Vaupés River (Alto Vaupés hydrographic subzone) and the Apaporis River (Alto Río Apaporis hydrographic subzone). The following are some of the main associated water sources: (IDEAM, 2013)

- RI Lagos El Dorado: the Caño Buenos Aires and Matapí, tributaries of the Vaupés River, and the Caño Carrillo, which tributaries of the Caño Tacunema, a tributary of the Apaporis River, are identified. (INCORA, 1993a; Parques Nacionales Naturales de Colombia, 2016)
- RI Vuelta del Alivio: In the area of this RI there are channels that are part of the basin of the Vaupés River, among which are Arenas, Matapi, Cangrejo, Yaracara, Waracú and Jamaicurú. (INCORA, 1998; Parques Nacionales Naturales de Colombia, 2016)

- RI Yavilla II: the Yavilla II channel that flows into the Vaupés River is identified. There is also the Caño El Venado and the Caño Carrillo that pay tribute to the Caño Tacunema, a tributary of the Apaporis River. (INCORA, 1998; Parques Nacionales Naturales de Colombia, 2016)
- RI Puerto Nare: located in the upper part of the Vaupés River, in the sector between the Vaupés River and the Apaporís River, with a wide network of pipes characterized by their waters with a high content of organic matter. (INCORA, 2003)

PROYECTO DABUCURY
MAPA DE HIDROLOGIA
GUAVIARE - COLOMBIA



Map 9. Hydrography of the project area, the reference region, and the leakage area. Source: IGAC, 2021.

k) Soils

The soils of this Amazon region are made up of kaolinite-type clays and hydroxides due to soil weathering processes, these are characterized by low structural complexity,

elasticity and cation exchange capacity. The soils of this area have developed on flat terrain with dominant slopes between 0 and 1% from Tertiary fenovine kaolinitic clay sediments. They have good drainage, superficiality, high acidity and problems of aluminum toxicity and in general are of low fertility. In general, Amazonian soils comprise alluvial soils, denudation soils, and rock formations, which are described below: (INCORA, 2003)(Peña-Venegas & Vanegas Cardona, 2010)

- Alluvial soils: they can be of two types, alluvial soils of Andean rivers and alluvial soils of Amazon rivers; The former are the only ones that have moderately good fertility due to their cation exchange capacity and phosphorus availability, while the latter have low fertility because they come from denudation surfaces of low fertility.
- Denudation soils: these are formed from sedimentary, igneous-metamorphic or mixed parent material, as well as the accumulation of sediments of alluvial origin. Its texture can be sandy to sandy loam in the Guiana Shield areas, and from clay to clayey loam in areas influenced by soils of alluvial origin. These soils typically represent flat to undulating landscapes and exhibit moderately low to low fertility, have low cation exchange capacity, absence of minerals, and low nutrient availability.
- Rock formations: they correspond to plateaus, hills or mountain ranges and are characterized by superficial soils of very low fertility, which support low plant species.

Quaternary era are identified. The sediments of the Upper Tertiary Amazonian era correspond to a heterogeneous set of sediments of continental origin made up of a ferruginous conglomerate, with the exception of the Mitú region, made up of oolitic iron. As for the Quaternary deposits, these are composed of aeolian sands, terraces and alluvium; In general, this formation is made up of clayey sediments, silt-clay sediments and reddish to yellowish-white gravel. (Galvis, Huguet, & Ruge, 1979)

m) Ecosystems

According to the National Map of General Ecosystems of Colombia developed by IDEAM, presented on the digital platform of the Colombian Environmental Information System (SIAC), the following ecosystems can be found in the project area and in the reference region:

Table 10. Ecosystems present in the project area and in the reference region. (ANLA, 2021)

Biome Type	Biome	Ecosystem
Tropical Rainforest Zonobiome	Tropical Rainforests of the Amazon and Orinoco	ADB Slightly undulating northern sedimentary plain
		ADB Strongly undulating northern sedimentary plain
	Transformed ecosystems	Mixed settler agroecosystems
Pedobiomes and Heliobiomes of the Tropical Humid Forest Zonobiome	Helobiomes of the Amazon	BMD and BBD of Amazon River Floodplains (Black Water)

The tropical humid zonobiome covers extensive areas of the Amazon-Orinoco region, is characterized by being at an altitude below 500 m.a.s.l. and by being covered with dense forest, with complex structure and composition, and trees up to 1 m in diameter that form a canopy up to 30 m high, with emergences up to 60 m high and shallow roots. (Bernal, Gradstein, & Celis, 2016)

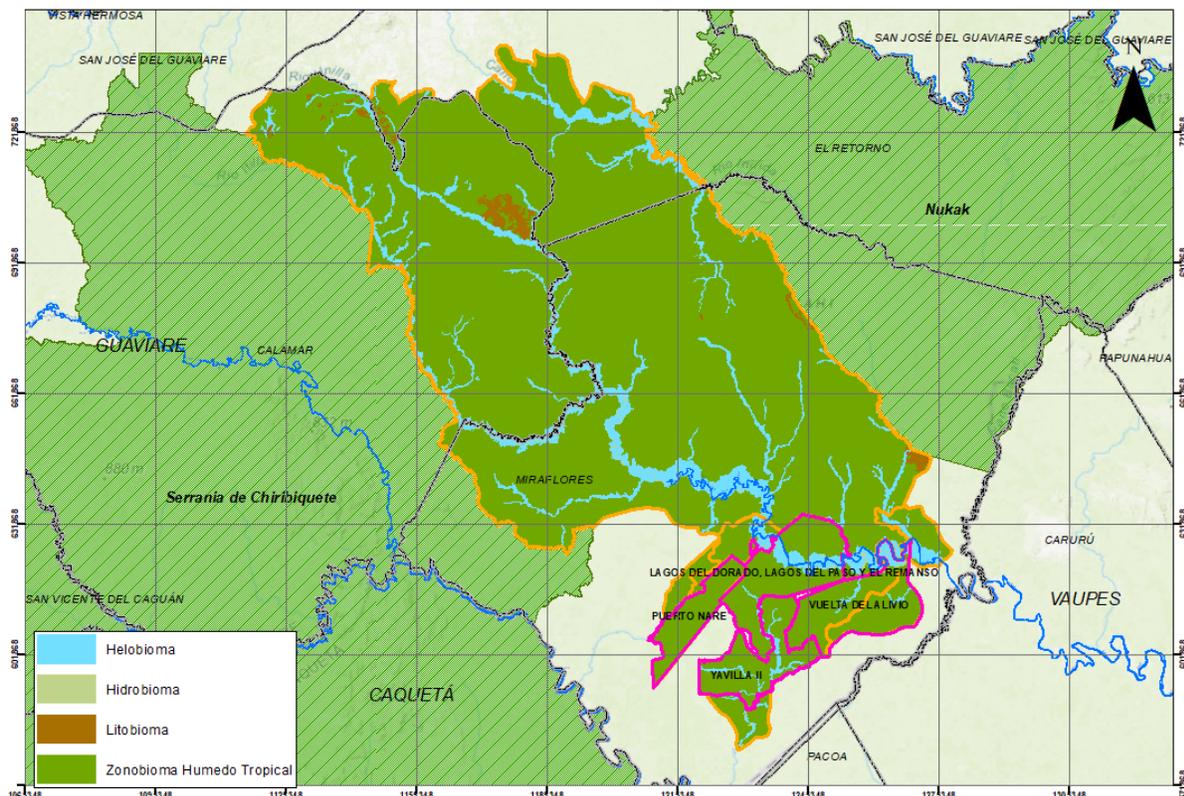
Additionally, the Amazon-Orinoco helobiome has areas of high aquatic influence, permanently or temporarily flooded. They are characterized by aquatic vegetation in the vicinity of rivers and lakes, and ecosystems of greater complexity, such as plain forests. (Bernal, Gradstein, & Celis, 2016)

Finally, if Holdridge's classification of life zones is taken into consideration, considering the characteristics of the project area and the reference region, the forests present, based on this classification, correspond to the tropical humid forest (bh-T), taking into account the following criteria: (Espinal & Montenegro, 1963)

Table 11. Forest stratification based on Holdridge life zones adapted for Colombia. (Phillips Bernal, y otros, 2011)

Criterion	Tropical Rainforest	Project Area and Reference Region
Altitude (m.a.s.l.)	<800	200 to 400
Temperature (°C)	>24.0	25 to 30
Precipitation (mm/year)	2,000 to 4,000	3,000 to 4,000

**PROYECTO DABUCURY
MAPA DE ECOSISTEMAS
GUAVIARE - COLOMBIA**



Map 11. Ecosystems present in the project area and in the reference region. Source: IDEAM, 2021.

5.3. Leakage area

The area of leaks was defined taking into account the trend of mobilization of deforestation agents in the territory, as well as the characteristics of relationships and development of activities that occur in the project area. Towards the southern side of the reserves, two main streams (Tacunema and El Venado) connect with the Apaporis River, which is an exit route for timber and other goods grown in the region, directly related to deforestation activities in and around the Yavilla II reservation. The agents who enter through this area into the territories of the indigenous reservations proposing the REDD+ Project are confronted and agreed to dialogue by the indigenous representatives, which can generate displacement of their activities to the south of the border with the reservation, which corresponds to areas of the second law of 1959 over which the national government does not have effective control.

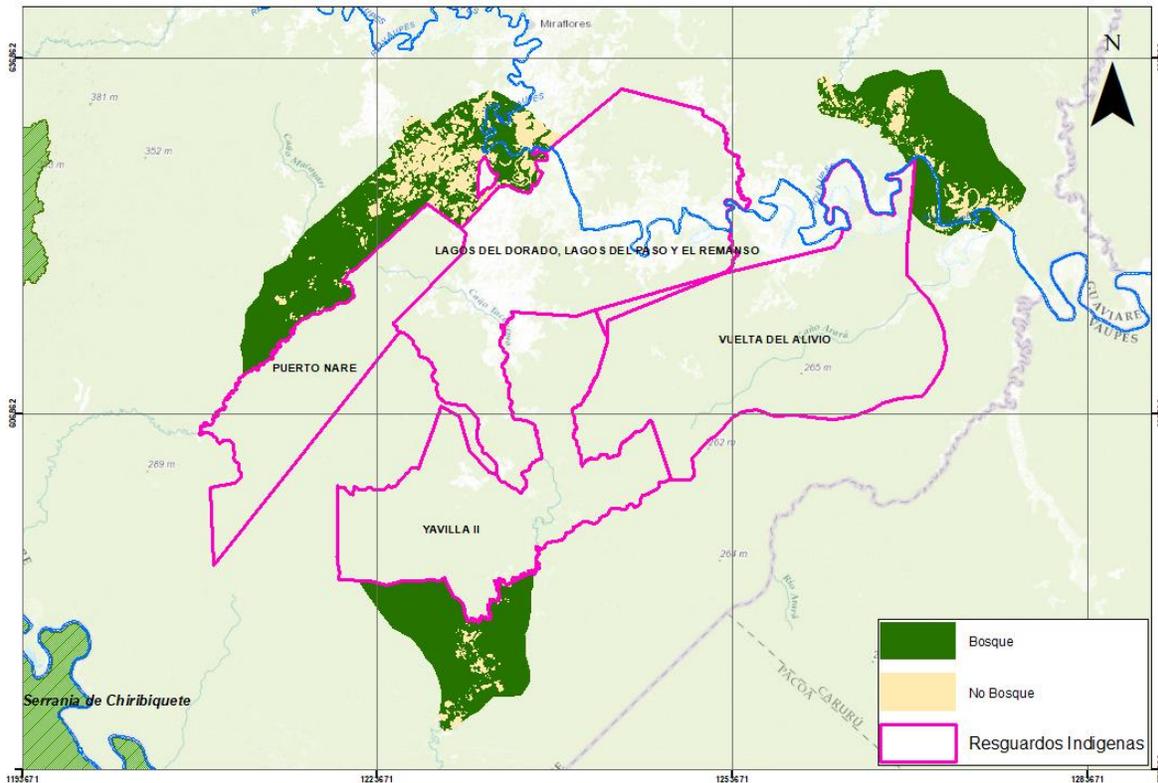
From the south side, towards the streams that are located in this region, the leaks that could occur are associated with the presence of other ethnic groups not belonging to the indigenous communities and the presence of settlers. Likewise, in the northeastern region, in the area of the Vuelta del Alivio RI, there is movement of actors out and into the reserves, which leads to the recognition of these areas as areas of leakage and possible location of deforestation activities that are avoided within the reserves. On the other hand, in the northwest area of the reserves, the mobilization of deforestation agents takes place through the tributaries of the Caño Macayá, which is why it was defined as a leakage zone to which activities that involve deforestation within the IRs could be displaced due to the implementation of the project.

The following criteria were also applied to determine the project's leakage area:

Table 12. Criteria for defining the leakage area and its compliance.

Criterion	Compliance
All forest areas that are within the range of mobility of the identified agents should be included.	Complies. This includes the total area of forest that is within the range of mobility of deforestation agents.
Exclude areas with restricted access to agents of deforestation and degradation.	Complies. Areas of National Natural Parks of Colombia are excluded.

**PROYECTO DABUCURY
MAPA DE BOSQUE NO BOSQUE 2019 EN EL ÁREA DE FUGAS
GUAVIARE - COLOMBIA**



Map 12. Leakage area of the project. Source: Authors.

5.4. Time limits and analysis periods

The time limits of the project are presented below:

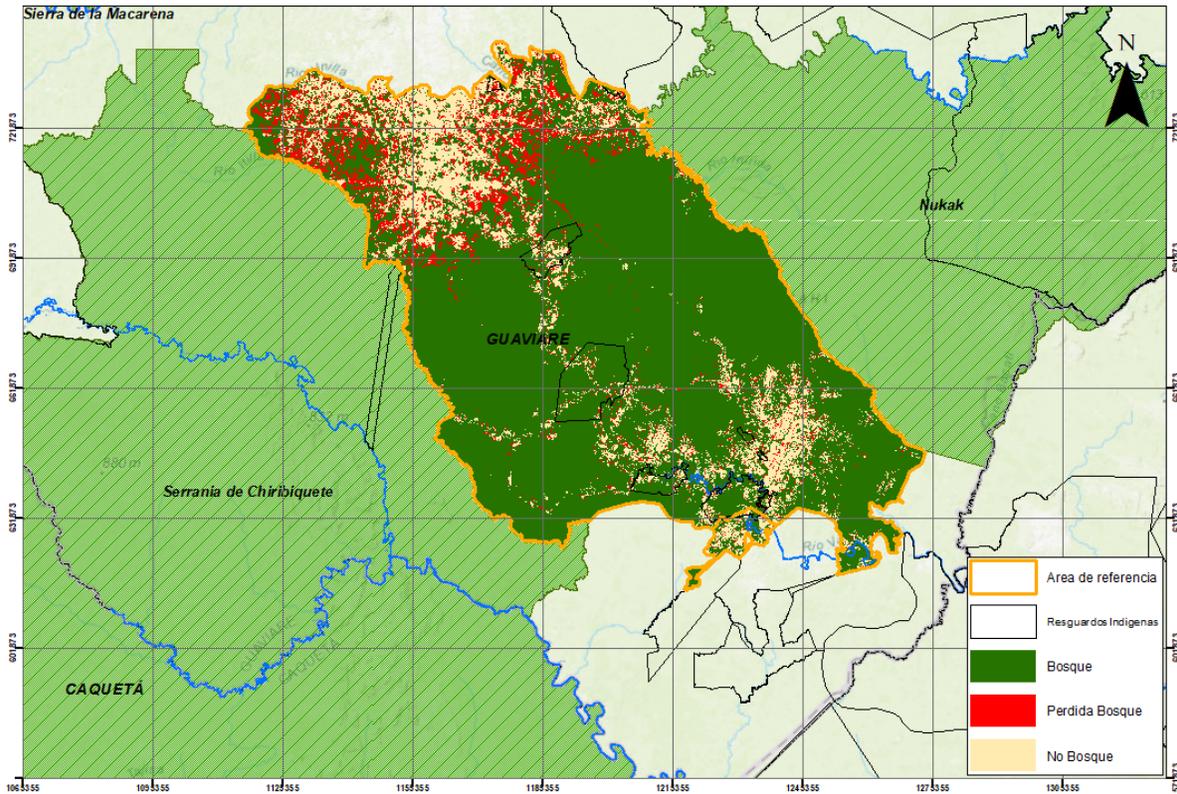
5.4.1. Project start date: 01-January-2019.

The start date was defined based on the moment when the forest protection activities voluntarily implemented by the community and the decrease in deforestation with respect to the regional trend are evidenced in the area of the reserves. It is about the integral action of the communities in the territory as a result of a decision to conserve their forests and avoid deforestation within their territory, taking as a reference the regional trend of deforestation. The effects result from the combination of community members' activities and their interaction with third parties. These activities

correspond to the strengthening of territorial governance that the communities and their leaders undertook since 2017, but which began to be consolidated from 2019, when the members of the armed groups definitively withdrew from their territory, within the framework of the implementation of the Peace Agreement between the national government and these groups. The initial actions consist of a greater exercise of territorial control and identifying the needs to ensure the protection of their territory and forests. By accessing the REDD+ mechanism, communities can consolidate their efforts to protect forests and strengthen territorial control and cultural adherence activities, as well as meet the economic needs that arise when they voluntarily renounce activities that compromise the stability of forests in their reserves.

Next, the Map 13, presents the forest loss that occurred for the period between 2008 and 2018, in the reference area, which amounts to a total of 78,639 hectares of forest cover, and is equivalent to a deforestation rate of 9.58% per year.

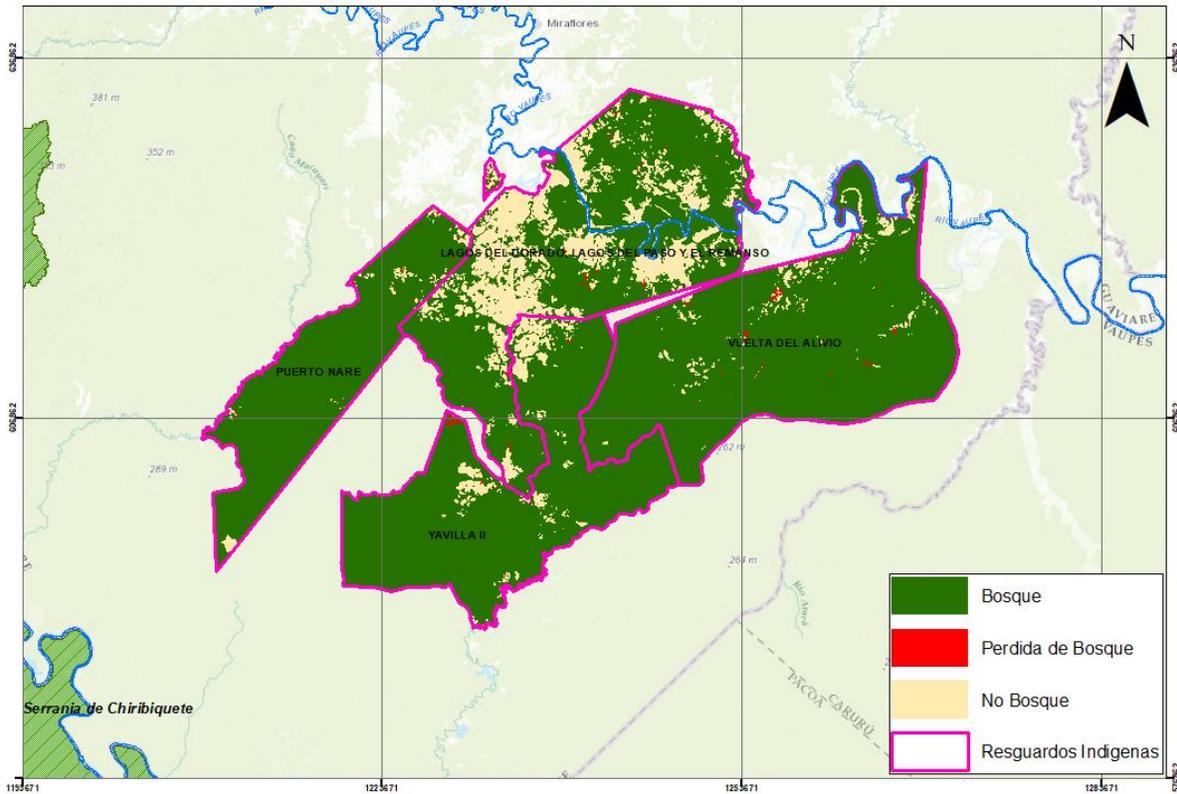
PROYECTO DABUCURY
MAPA DE PERDIDA DE BOSQUE EN EL ÁREA DE REFERENCIA AÑO 2008 -2018
GUAVIARE - COLOMBIA



Map 13. Forest loss in the project's reference area for the period 2008 to 2018. Source: Authors.

On the other hand, in the Map 14, the loss of forest cover for the period from 2019 to 2022 in the project area is presented, showing a significant reduction in the deforestation rate compared to that estimated for the reference area (2008-2018). For this period, forest loss was 423.60 hectares, equivalent to a deforestation rate of 0.36% per year.

PROYECTO DABUCURY
MAPA DE PERDIDA DE BOSQUE AÑO 2019 - 2022 EN EL ÁREA DE PROYECTO
GUAVIARE - COLOMBIA



Map 14. Forest loss in the project area for the period 2018-2020. Source: Authors.

The communities have been working on the protection of the forests since 2017, when representatives of the Puerto Nare, Vuelta del Alivio, Yavilla II and Lagos El Dorado, Lagos del Paso and El Remanso Reservations established an alliance with the company Plan Ambiente S.A.S. to develop a carbon project.

The interest of the communities in protecting their forests as a mechanism to access economic incentives materialized from that moment, when the members of the community decided to take better care of their territory, expecting a financial reward for the environmental service associated with forest conservation. Similarly, the community of the Vuelta del Alivio Reservation has worked for the conservation of its territory since 2017, as evidenced in the minutes of the workshop on the history of the reservation (see Annex 1, file 1.2.4.2. Workshop Proceedings 3 – Return of Relief).

Subsequently, in January 2019, the Mandate Contracts of the Yavilla II, Vuelta del Alivio and El Dorado Lakes IRs were signed, and the letter of intent of the Puerto Nare RI with the Environment Plan (*See Annex 3, files 3.8.1, 3.8.2 and 3.8.3, 3.9.1; and see subfolder 3.10*), which mark the start date of the project. and the date on which the monitoring period begins. In this way, the conservation activities carried out by the communities are reflected in the decrease in the rate of deforestation compared to the regional trend, which is also directly related to a greater exercise of territorial control and articulation among the inhabitants of the reservations. This is supported by programs with state entities that have been supporting the implementation of the project in the formulation of priorities for planning, establishment of health centers, and provision of services, and processes of voluntary eradication of illicit crops. Since 2019, there has been a significant decrease in deforestation, as shown in Annex 14, *file 14.5. Deforestation reduction analysis*.

In this way, the start date is supported by the agreements with Plan Ambiente, the interviews and workshops with the community where they point out conservation activities, activities with state entities and programs of planning and implementation in the territory; and the analysis of the decrease in deforestation since 2019. It is important to highlight that the oral tradition characterizes these communities of the Dabucury REDD+ Project, which implies that they transmit their knowledge and guidance on land management orally, and the record of the passive conservation actions they have carried out since 2019 can be seen in the maps of analysis of changes in cover and the testimonies of the people of the community (*see Annex 1, folder 1.2.4*).

5.4.2. Emissions Quantification Period

January 1, 2019 to December 31, 2048 (30 years).

5.4.3. Monitoring Periods

The first monitoring period was carried out from January 1, 2019 to December 31, 2020, for the first instance of the project; For the second instance, the first monitoring period ran from January 15, 2019 to June 30, 2022. The second monitoring period of the first instance was from January 1, 2021 to June 30, 2022. Subsequently, annual monitoring is expected to be carried out.

5.4.4. Historical period of deforestation

To estimate the deforestation trend in the reference area and the leakage area, the changes observed during the historical period 2008-2018, which corresponds to the ten-year period before the start of the project, were analyzed. The estimate of forest degradation was calculated taking two historical periods, the year 2018-2016 and 2016-2008.

5.4.5. Estimating emissions from the REDD+ project

Table 13. Reduction of GHG emissions derived from the implementation of the project.

Year	Dates	Estimating GHG Reductions from Avoided Deforestation	Estimation of Cumulative Avoided Deforestation GHG Reductions	Estimation of GHG reductions due to avoided degradation	Estimation of Cumulative Avoided Degradation GHG Reductions	Estimating Total GHG Reductions
1	01/01/2019 - 31/12/2019	679.247,07	679.247,07	4.007,05	4.007,05	683.254,12
2	01/01/2020 - 31/12/2020	702.163,46	1.381.410,53	4.006,20	8.013,25	706.169,67
3	01/01/2021 - 31/12/2021	719.818,35	2.101.228,88	4.005,36	12.018,61	723.823,71
4	01/01/2022 - 31/12/2022	731.778,98	2.833.007,86	4.004,51	16.023,12	735.783,49
5	01/01/2023 - 31/12/2023	469.622,43	3.302.630,29	4.003,66	20.026,78	473.626,09
6	01/01/2024 - 31/12/2024	465.079,59	3.767.709,88	4.002,81	24.029,59	469.082,41
7	01/01/2025 - 31/12/2025	460.580,46	4.228.290,34	4.001,97	28.031,56	464.582,43
8	01/01/2026 - 31/12/2026	456.124,62	4.684.414,97	4.001,12	32.032,68	460.125,74
9	01/01/2027 - 31/12/2027	451.711,66	5.136.126,63	4.000,27	36.032,95	455.711,93
10	01/01/2028 - 31/12/2028	447.341,15	5.583.467,78	3.999,43	40.032,38	451.340,58
11	01/01/2029 - 31/12/2029	443.012,70	6.026.480,48	3.998,58	44.030,96	447.011,28
12	01/01/2030 - 31/12/2030	438.725,90	6.465.206,38	3.997,73	48.028,69	442.723,63
13	01/01/2031 - 31/12/2031	434.480,35	6.899.686,73	3.996,89	52.025,58	438.477,24
14	01/01/2032 - 31/12/2032	430.275,65	7.329.962,38	3.996,04	56.021,62	434.271,69
15	01/01/2033 - 31/12/2033	426.111,41	7.756.073,79	3.995,20	60.016,82	430.106,61
16	01/01/2034 - 31/12/2034	421.987,25	8.178.061,04	3.994,35	64.011,17	425.981,60
17	01/01/2035 - 31/12/2035	417.902,77	8.595.963,82	3.993,51	68.004,67	421.896,28
18	01/01/2036 - 31/12/2036	413.857,61	9.009.821,42	3.992,66	71.997,33	417.850,27
19	01/01/2037 - 31/12/2037	409.851,37	9.419.672,79	3.991,82	75.989,15	413.843,18
20	01/01/2038 - 31/12/2038	405.883,68	9.825.556,48	3.990,97	79.980,12	409.874,66
21	01/01/2039 - 31/12/2039	401.954,19	10.227.510,66	3.990,13	83.970,25	405.944,31
22	01/01/2040 - 31/12/2040	398.062,51	10.625.573,17	3.989,28	87.959,53	402.051,79
23	01/01/2041 - 31/12/2041	394.208,29	11.019.781,46	3.988,44	91.947,97	398.196,72
24	01/01/2042 - 31/12/2042	390.391,16	11.410.172,62	3.987,59	95.935,56	394.378,75
25	01/01/2043 - 31/12/2043	386.610,77	11.796.783,39	3.986,75	99.922,31	390.597,52
26	01/01/2044 - 31/12/2044	382.866,77	12.179.650,17	3.985,91	103.908,22	386.852,68
27	01/01/2045 - 31/12/2045	379.158,81	12.558.808,98	3.985,06	107.893,28	383.143,88
28	01/01/2046 - 31/12/2046	375.486,54	12.934.295,52	3.984,22	111.877,50	379.470,76
29	01/01/2047 - 31/12/2047	371.849,62	13.306.145,14	3.983,38	115.860,88	375.833,00

Year	Dates	Estimating GHG Reductions from Avoided Deforestation	Estimation of Cumulative Avoided Deforestation GHG Reductions	Estimation of GHG reductions due to avoided degradation	Estimation of Cumulative Avoided Degradation GHG Reductions	Estimating Total GHG Reductions
30	01/01/2048 - 31/12/2048	368.247,71	13.674.392,85	3.982,53	119.843,41	372.230,24
Reduction of average annual GHG emissions (tCO_{2e}/year)		455.813,10		3.994,78		459.807,88

6. Baseline Scenario and Additionality Analysis

The baseline scenario was identified from changes in carbon stocks at the project boundaries, establishing the most likely land use at the start of the project. This section presents the procedure developed for the identification of the baseline scenario, in accordance with the guidelines established in the AFOLU Sector Methodological Document, REDD+ Projects, version 3.0 (BCR, 2022), and the BCR baseline and additionality tool, VERSION 1.0 (BCR, 2023).

6.1. Step 0. Start date of the REDD+ project

The start date of the project, January 1, 2019, was defined based on the start of activities that demonstrate a reduction in emissions from deforestation and forest degradation in the project area. These activities correspond to the strengthening of territorial governance that the communities and their leaders undertook, even before this date, when the members of the armed groups definitively withdrew from their territory, within the framework of the implementation of the Peace Agreement between the national government and these groups. The initial actions consist of a greater exercise of territorial control and identifying the needs to guarantee the protection of their territory and forests, established by the signing of agreements of intent for the development of the REDD+ project in the reserves.

6.2. Step 1. Identification of land-use alternatives

6.2.1. Sub-step 1a. Identification of likely land-use alternatives in project areas

The following land-use scenarios were identified taking into account the conditions present in the project area:

Scenario i: Continuation of previous land use (pre-project)

The trend of deforestation and forest degradation in the territory has historically increased and threatens the sustainability of the territory, local communities and biodiversity. The socio-economic conditions faced by indigenous communities in their territory make it difficult to effectively control activities that threaten forests and reduce the availability of other natural resources. Likewise, different productive bonanzas that have passed through these territories, controlled by people outside the reservations, have impacted the populations (e.g., displacement, violence) and have compromised their cultural structure, governance capacity and the management of their territories.

Based on the observations and workshops carried out with the members of the indigenous reservations and the multitemporal analyses of land use, the continuation of existing practices involves the following activities:

- *Subsistence agriculture (chagras)*: it is a traditional system of agricultural production of the communities living in the indigenous reservations and is the basis of food. The chagras correspond to a system in which several transitory and perennial species (cassava, corn, sugar cane, banana, among others) are cultivated in a cyclical manner. This system is complemented by activities such as fishing, hunting and gathering of products available from the forest.

The process for the establishment of the chagras consists of 1) Selecting the site and proceeding with the healing; 2) Cutting vegetation and felling trees; 3) Burning; 4) Sowing of the plants that will bear tubers, fruits, bread; 5) Weeding and maintenance of the chagra; 6) Harvesting; 7) Abandonment and natural restoration (after approximately 3-6 years of use).

- *Colonization*: since the 1980s, colonization processes have developed, understood as a form of social construction that manifests itself in the occupation of territories for the development of productive activities. The

colonization process has been influenced by dynamics associated with displacement caused by illegal armed groups that force the local population to migrate to other areas. After the signing of the Peace Agreement in 2016, there has been the return of some members of these communities; At the same time, people from other regions have seen an opportunity to enter this region and settle down. The colonization of new areas involves the clearing of forested areas to establish housing and a subsequent expansion of the cleared areas for the development of productive activities.

- *Expansion of the agricultural frontier:* in the last decade, cattle ranching activity has increased in the region because it is a viable economic alternative for the community and the expansion of grazing areas is not a limitation in this territory. The marketing of livestock and livestock products is the main source of income for the population. Likewise, the development of crops for the generation of surpluses occurs to a lesser extent.
- *Timber extraction:* this activity is a cause of historical forest degradation. The exploitation and commercialization of timber species is an opportunity to generate economic resources for some members of the community.

Scenario ii: REDD+ projects without certification of emission reductions

This scenario consists of community members voluntarily controlling the activities that generate forest loss in their territories: they prevent the expansion of extensive cattle ranching, timber extraction, and the establishment of new areas of agricultural systems. In this scenario, these activities are progressively replaced by productive activities that do not affect forest cover. The expansion of the agricultural frontier is reduced through the improvement of livestock practices, the intensification of production and the establishment of silvopastoral systems. By not registering the project with the REDD+ mechanism, the members of the indigenous reserves do not have access to economic income associated with the reduction of GHG emissions due to deforestation and degradation of the forests present in their territories.

Scenario iii: Augmentation and improvement of agricultural systems

This scenario consists of an increase in the establishment of agricultural systems above the historical trend and is based on the promotion currently carried out by the municipal and departmental authorities in the region. Taking into account the vocation of land use and the most promising activities, there is an interest in promoting agroforestry (rubber, cocoa, cassava and chagras), timber systems and the productive chain. Although the participation of indigenous communities in these initiatives has been incipient to date, the process can be strengthened if budgetary constraints are overcome and the geographical scope includes indigenous reservations. (Alcaldía de Miraflores, Guaviare, 2016; Gobernación de Guaviare, 2016)

These economic alternatives would make it possible to progressively displace the activities that result in deforestation from the territory and counteract the economic dependence that exists of the population on these activities; However, it would also increase the establishment and expansion of agricultural activities, which can intensify and accelerate forest loss in the project area.

6.2.2. Sub-step 1b. Consistency of land use alternatives with applicable laws and regulations

The scenarios that have been considered can be implemented based on the records and the historical trend of the region. According to municipal and departmental planning instruments, these territories have a vocation for the conservation of forests, the establishment of agroforestry systems and subsistence production systems. In addition, the reality of the territory also contemplates the possibility that activities that involve deforestation and are not approved by national regulations will continue, such as deforestation for the expansion of the agricultural frontier and illegal timber extraction.

Considering the limited capacity of the State to apply the regulations that protect natural resources in these areas far from urban centers, non-compliance with the rules does not entail a judicial or criminal consequence that discourages those involved from correcting their practices. The scarce, and in some cases non-existent, presence of government representatives in these indigenous reserves makes it impossible to ensure compliance with the laws.

Taking into account that the legal constitution of the reservation's grants autonomy to the indigenous peoples for the management and development of the territory, the scenarios that have been proposed are aligned with the possibilities and vocation of the territory and in line with national regulations, and therefore can be developed without inconveniences within the reservation.

Scenario	Description
i	It involves the continuation of the land use that has occurred historically (cattle ranching, colonization, farming, timber extraction, and illicit crops). Although these activities are not aligned with current regulations, they are carried out by the population established in the project area and in the reference region. Therefore, it is assumed that this scenario can be maintained over time and constitute a likely alternative for land use.
ii	It corresponds to a decrease in practices that have deteriorated the forest through the implementation of productive alternatives that are friendly to the natural environment (sugarcane, corn, cocoa, cassava, fish farming and forestry). These activities comply with current regulations. Taking into account that the community seeks to improve its living conditions and its capacity to manage the territory in a sustainable way, this scenario is configured as an alternative that the community can seek using its own resources.
iii	It consists of the development and improvement of agricultural activities, farms, timber species systems and the production chain. These activities are aligned with the interests of municipal and departmental authorities. Therefore, it is considered a likely alternative land use in the future.

6.3. Step 3. Barrier analysis

6.3.1. Sub-step 3a. Identification of barriers that would impede the implementation of the project

Investment barriers:

The only viable instrument to finance the project's activities is access to the REDD+ mechanism, which enables the possibility of commercializing the CCVs and receiving resources to support the required investments. The project activities do not envisage the development of initiatives that offer sufficient financial returns to cover the costs of the project.

The production systems that are expected to be implemented and strengthened have low profit margins and the objective is that these resources are reinvested and directed to sustain them and pay salaries. The other activities of the project (governance, monitoring and social investment) will not generate any kind of profitability and their implementation depends entirely on the resources that can be obtained from the commercialization of the CCVs. In addition, the formulation, validation and verification of the project represent a high cost, which could not be financed in the absence of revenues from the commercialization of the CCVs.

Social barriers:

In the project area and in the reference region, a relationship of economic dependency between the indigenous and non-indigenous population was identified. The non-indigenous population offers work to expand the agricultural frontier and the establishment of some productive systems, which represents an opportunity for indigenous people due to the general absence of job offers in the region. This relationship fosters the development of practices that can result in deforestation.

6.3.2. Sub-step 3b. Analysis of barriers to the implementation of at least one of the identified alternatives, with the exception of the project activity

Next, the analysis of barriers identified in sub-step 2a is presented, with respect to the land-use scenarios presented in sub-step 1a.

Table 14. Analysis of barriers to the identified land use scenarios.

Land Use Alternatives	Barrier Type		Analysis and implementation of the scenario
	Investment	Social Status	
i	No	No	None of these barriers prevents the continuation of the activities that have historically been developed in the territory.
ii	Yes	Yes	<p>Investment: Without the availability of investment capital, there is no transition from current productive activities to those that do not affect forest cover.</p> <p>Social: Considering the economic dependence among the population groups present in the reserves and that</p>

Land Use Alternatives	Barrier Type		Analysis and implementation of the scenario
	Investment	Social Status	
			this promotes the development of activities that generate deforestation, if the population does not have a financial mechanism to counteract this dependence, it is unlikely that economic alternatives will be developed that offer employment opportunities and mitigate those that generate deforestation.
iii	Yes	Yes	<p>Investment: The Mayor's Office of Miraflores and the Government of Guaviare have limited investment resources and the actions to be carried out in the indigenous reserves have not been defined. Therefore, it is considered unlikely that these institutions will invest resources in the project area that would succeed in counteracting the activities that cause deforestation in the area.</p> <p>Social: the intervention that is planned to be carried out with resources from the Mayor's Office of Miraflores and the Government of Guaviare for the strengthening of productive systems includes few beneficiaries in the community and its impact is insignificant with respect to the problems that arise among the population groups, so that the identified barrier could not be overcome.</p>

According to the results presented in the Table 14, the most likely land-use alternative to define the project baseline (other than the project activity), is the continuation of the use at the time of project initiation, which corresponds to Scenario i.

6.4. Step 4. Impact of Project Registration

The economic benefits derived from the commercialization of CCVs are a source of investment resources for the implementation of project activities, which are necessary to address practices and factors that pose a threat to forests. REDD+ activities provide opportunities for jobs and income generation, which reduces dependence on activities that involve deforestation of the territory.

The resources from the registration of this REDD+ project are configured as working capital available to materialize the interests and opportunities identified by the members of the community, who seek the sustainability of their culture and territory. They will also overcome the barriers identified in sub-step 2a of the additionality analysis. IR members do not have access to credit or financial support from the state or banks, so the resources derived from the commercialization of CCVs are a unique opportunity to finance REDD+ activities. These resources will also strengthen the capacity for territorial management and governance, which results in a cultural strengthening of the communities and an improvement in their quality of life.

By accessing the REDD+ mechanism, the benefits associated with the reduction of GHG emissions are translated into direct economic income for the community, which ensures the continuity of actions that achieve the reduction of deforestation.

Considering the above, it can be evidenced that the project does not correspond to the baseline scenario, therefore, the project is additional.

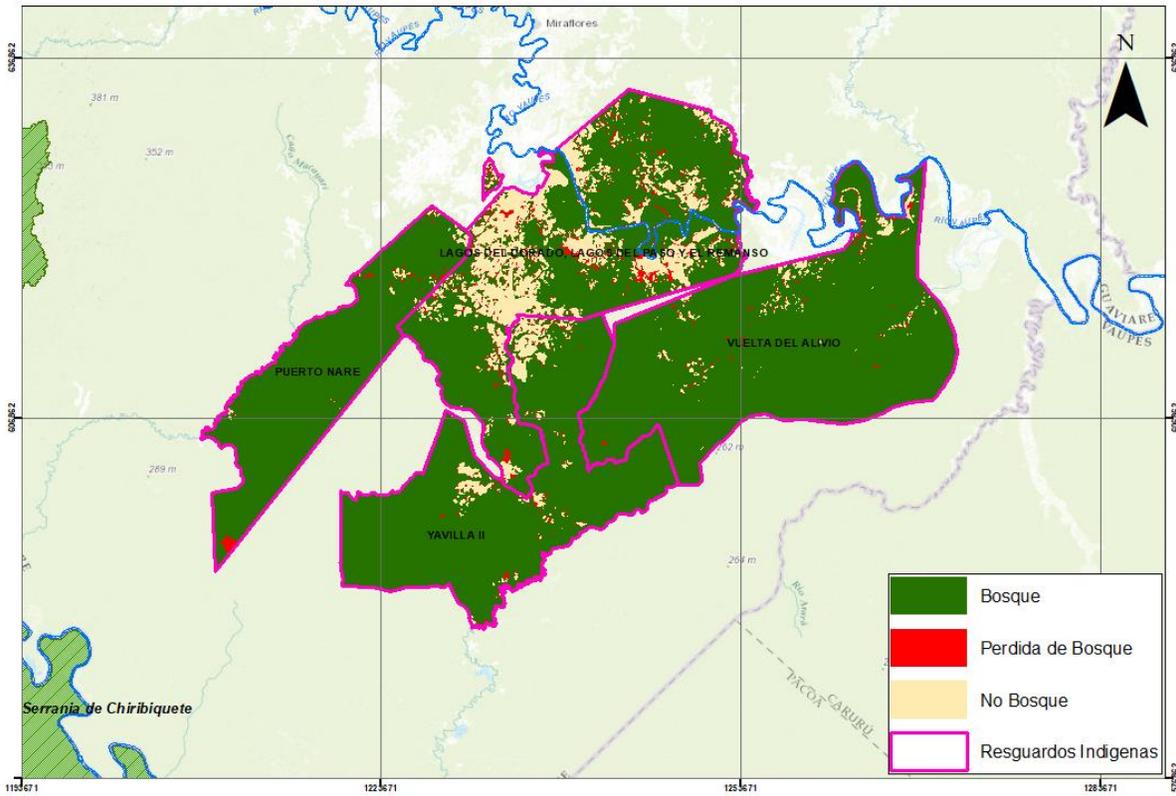
7. Causes and Agents of Deforestation and Degradation

Next, the identification, description and analysis of the causes and agents of deforestation are presented, from which the measures and actions aimed at mitigating deforestation and forest degradation present in the project area were designed.

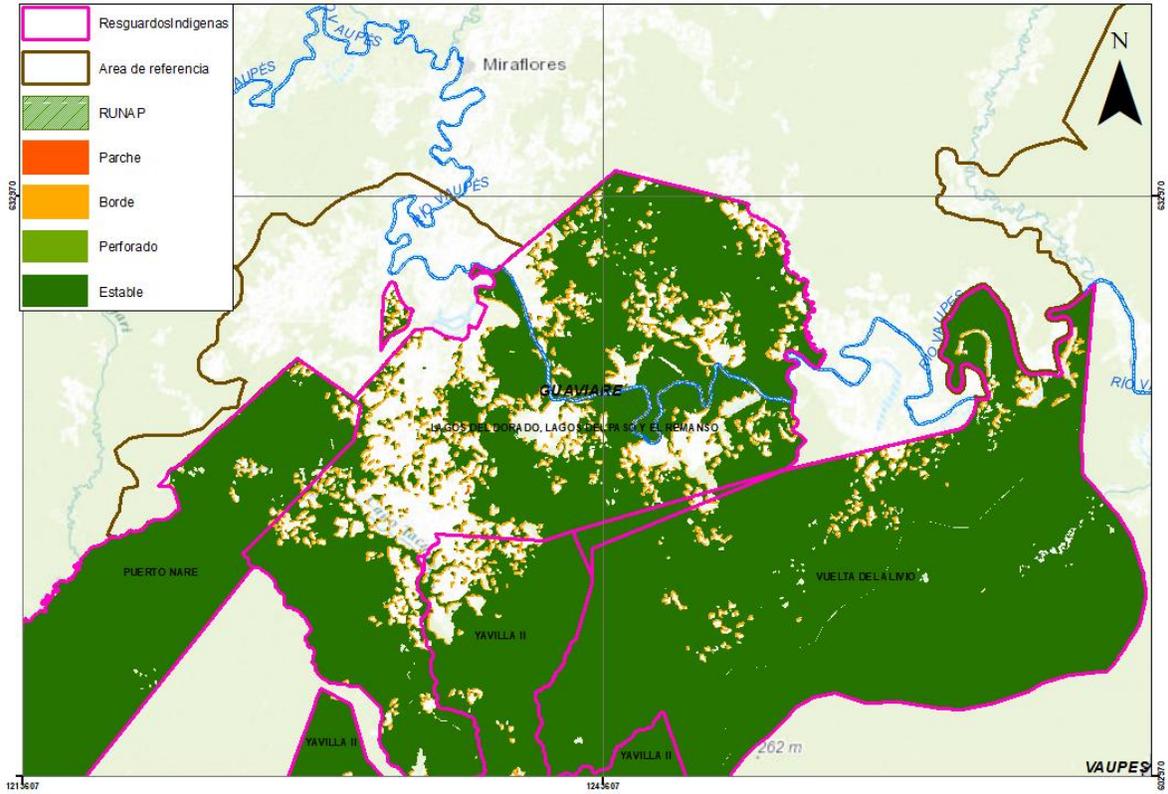
7.1. Spatial and temporal dimensions

The deforestation and degradation present in the reference region were characterized spatially and temporally. The analysis for the project area was also carried out. To this end, an analysis period was taken for deforestation between 2008 and 2018, and for degradation the periods 2008-2016 and 2016-2018 were taken.

PROYECTO DABUCURY
MAPA DE PERDIDA DE BOSQUE AÑO 2008 - 2018 EN EL ÁREA DE PROYECTO
GUAVIARE - COLOMBIA

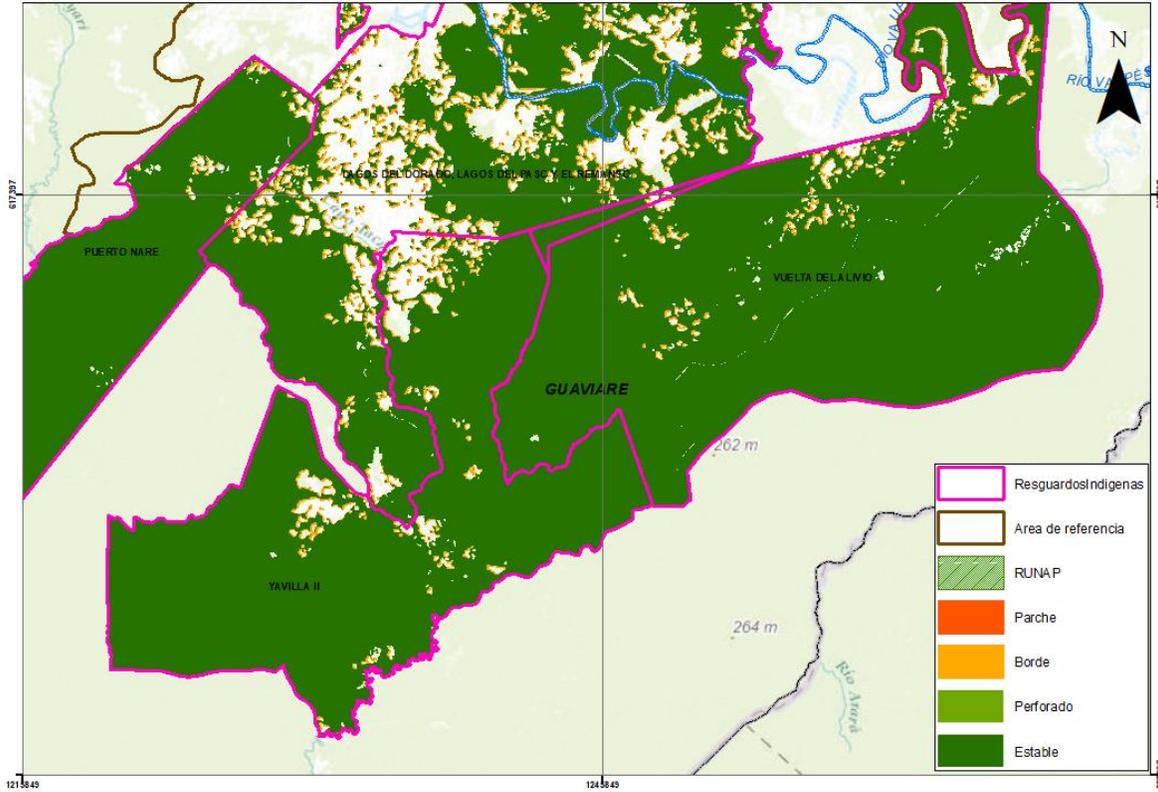


PROYECTO DABUCURY
MAPA DE DEGRADACION AÑO 2008 EN EL ÁREA DE PROYECTO
GUAVIARE - COLOMBIA



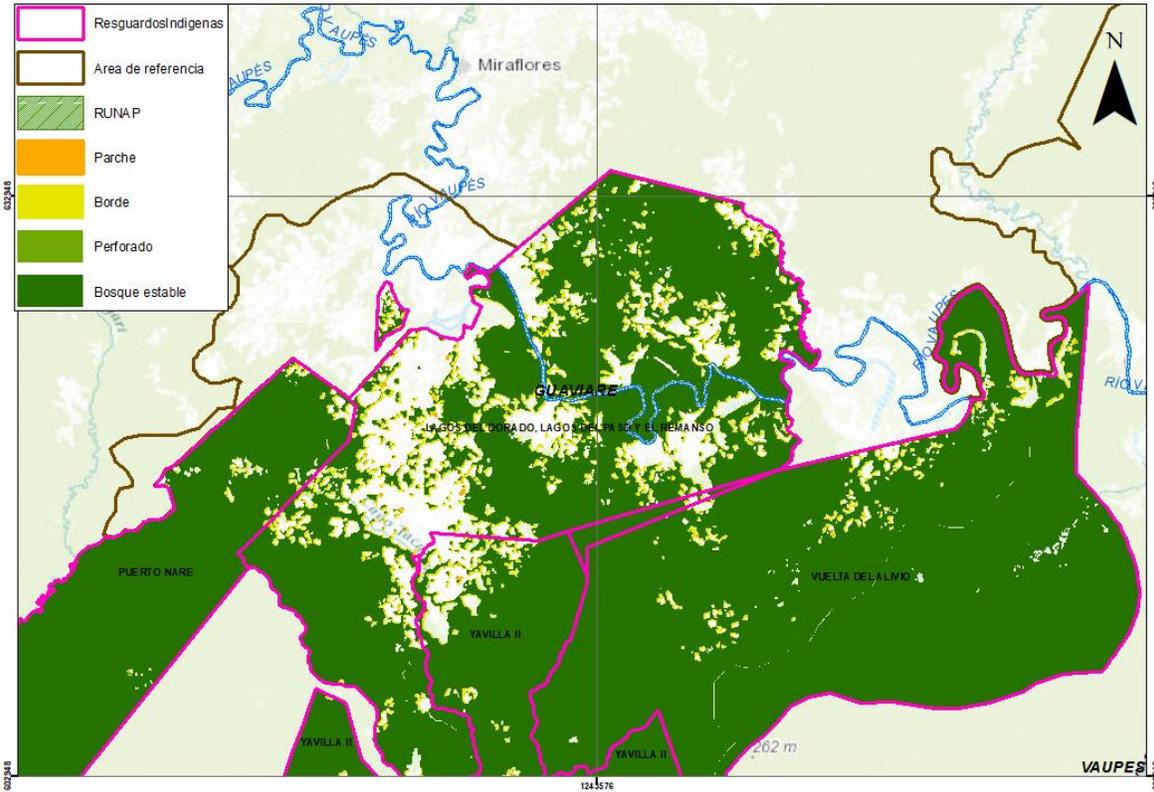
Map 16. Degradation in the project area in 2008. Source: Authors.

**PROYECTO DABUCURY
MAPA DE DEGRADACION AÑO 2008 EN EL ÁREA DE PROYECTO
GUAVIARE - COLOMBIA**



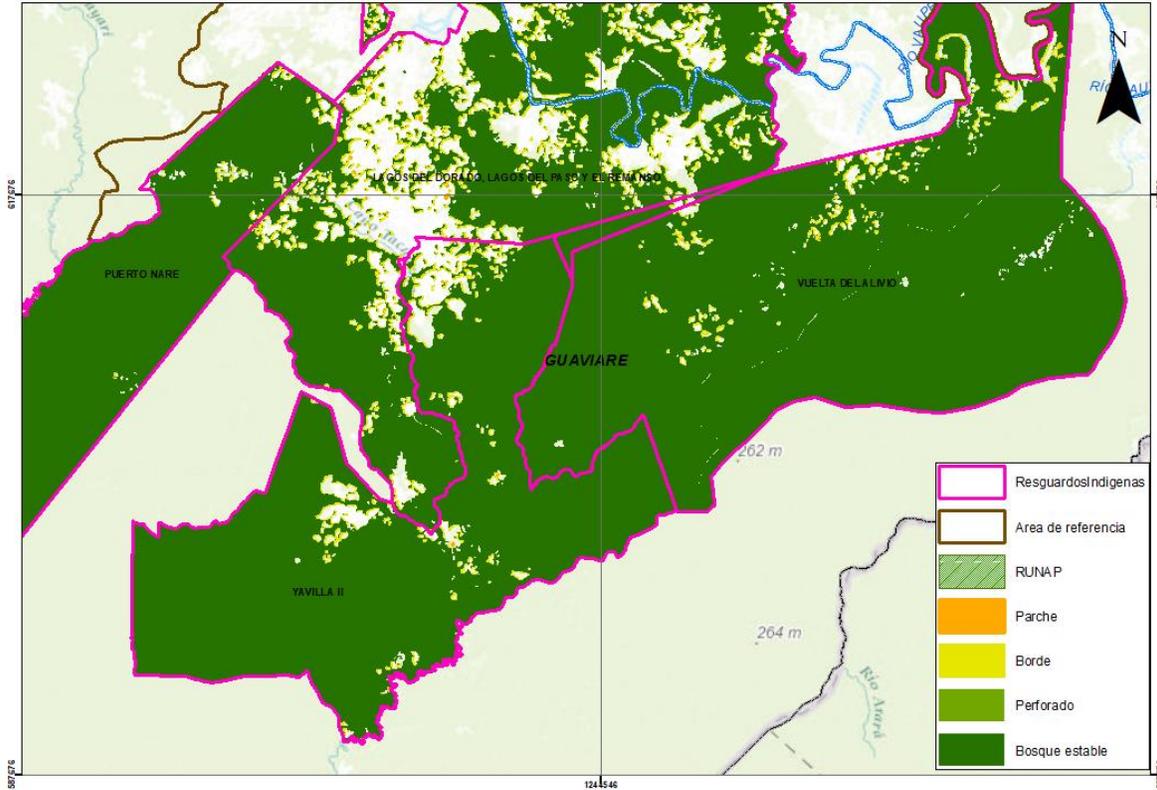
Map 17. Degradation in the project area in 2008. Source: Authors.

PROYECTO DABUCURY
MAPA DE DEGRADACION AÑO 2018 EN EL ÁREA DE PROYECTO
GUAVIARE - COLOMBIA



Map 18. Degradation in the project area in 2018. Source: Authors.

PROYECTO DABUCURY
MAPA DE DEGRADACION AÑO 2018 EN EL ÁREA DE PROYECTO
GUAVIARE - COLOMBIA



Map 19. Degradation in the project area in 2018. Source: Authors.

7.2. Context

7.2.1. Territorial context

The area is characterized by a dense forest cover that, when occupied by the members of the community, requires the clearing of vegetation for the establishment of housing. Although the project area is owned by members of the indigenous reservations, there is also a presence of settlers from other areas of the country. Settler and indigenous families tend to settle in different areas of the territory, indigenous people prefer to settle in areas with little intervention, while settlers tend to settle in more open or cleared areas. When some members of settler or indigenous families are

united in marriage, their customs and preferences mix and share the spaces of housing and production.

Families sometimes settle in the vicinity of schools, but some have chosen to go much deeper into the territory. This means that the distances for the children of the community to reach the schools can exceed 6 hours and, consequently, families choose to send their children to the boarding schools that the shelters have for periods ranging from weeks to months. These boarding schools are financed with resources granted by the Ministry of Education.

The presence and establishment of settlers in the territory has occurred mainly since the 1970s, with the economic opportunities associated with the boom in illicit crops. Subsequently, links are created with the indigenous people and the social relationship between these two groups is strengthened, allowing their occupation of the territory to be maintained over time. Likewise, historically, the presence of illegal armed groups has been recorded in the territory of the reservations. The interaction between indigenous peoples, settlers and these groups has been mediated mainly by indigenous fear and limitations in defending their culture and territory. Settlers and outsiders are usually the ones who have working capital and resources to invest in productive activities, and indigenous people benefit from the job opportunities offered by these groups in the territory.

7.2.2. Socio-cultural context

According to the National Census carried out by the National Administrative Department of Statistics (DANE) in 2018, 419 people live in the RI Lagos El Dorado, of which 319 are indigenous, the rest identified as black and as not belonging to any ethnic group; On the other hand, in the RI Vuelta del Alivio the DANE counted a total of 859 indigenous members of the reservation. In the case of RI Yavilla II, a total of 12 families are estimated. According to the Mayor's Office of Miraflores, in 2017 the RI Puerto Nare has a population of 183 inhabitants and around 32 families.

Each reservation is inhabited by several communities, organized around a traditional authority or captain. In the case of the RI Vuelta del Alivio and the RI Yavilla II, the communities belong to the Cubeo (Tucano) group, while the RI Puerto Nare

corresponds mainly to the Carijona ethnic group, originally from the Vaupés. For these IRs, the family is the basis of social organization and they have captains for the purposes of internal management and as spokespersons before individuals and departmental and national bodies. Some communities are segmented and hierarchized into units identified as clans organized from highest to lowest for the distribution of territory, clans are groups of exogamous, pratilinear and patrilocal succession. On the other hand, the RI Lagos El Dorado is founded on the traditional authorities and there are councils. (Alcaldía de Miraflores, Guaviare, 2017a)

The axis of the indigenous organization is the Indigenous Captaincy, which is the highest authority and is elected by consensus of the inhabitants of the reservation and is in charge of organizing, directing and representing their communities. Within the communities, there are also instances for discussion and decision-making, such as local committees and community assemblies. (Alcaldía de Miraflores, Guaviare, 2017b)

Indigenous people and settlers have subsistence farming systems that provide them with food such as cassava, plantain, rice, chili peppers, pineapples and corn. Usually, these systems are around or in the vicinity of your homes. The food that makes up the family basket and that is not produced in the area (coffee, flour, panela) is transported from the Municipal Seat of Miraflores (Guaviare).

Currently, livestock farming is one of the main productive activities in the area. Settlers and indigenous people carry out this activity, although the former have the greatest participation. It is important to highlight that in the last decade there has been the entry of new settlers in search of developing their economic activities, for which they require labor and this represents a source of employment for the community. The settlers offer the indigenous people to work as day laborers to establish pastures and expand the areas of livestock production, which they are forced to accept due to the absence of other employment options. This situation discourages and conditions the decision of the indigenous people to prevent the entry of these settlers into the territory or to participate in the clearing of the forested areas.

In this region, there is also the possibility of generating economic income by planting plants for illicit use. Some inhabitants of the reservations establish small plots distributed throughout the territory in order to access these economic resources. The

difficulty of accessing other production systems that generate surpluses that can be marketed makes it easier for these inhabitants to participate in this activity.

7.2.3. Economic context

Subsistence agriculture (chagras) is carried out in the indigenous reserves, mainly producing cassava, plantains, sugarcane, corn, chili peppers and rice. These products are complemented mainly with the collection of wild fruits, the raising of chickens and the fishing of river fish. As they are subsistence activities, none of them correspond to a representative source of income; When there are surpluses in agricultural production volumes, they are exchanged for other goods and their commercialization is very sporadic.

Considering the low availability of profitable productive activities in the area, an increase in extensive livestock farming has been identified. Thus, the main sources of employment for the members of the reservation consist of working as day laborers on the farms of the settlers who need to expand the grazing areas and renting the pastures of their own land for the foraging of the animals. Illicit crops also offer an opportunity to generate economic income.

Despite the national government's interest in promoting the strengthening of viable economic alternatives for these territories, limited resources and capacity have not allowed these geographical areas to be successfully reached. It is also identified that the cost of goods and services is high due to the spatial location of the shelters, since the logistics required for the transport of these elements involve the use of fuels or expensive transport. Most of the goods that are not produced in the region (toiletries, coffee, dairy, etc.) are transported from San José del Guaviare and from the Municipal Seat of Miraflores.

7.2.4. Historical Context

The indigenous population occupied the territory long before the arrival of Europeans on the continent and the discovery of America. With the arrival of the conquistadors, ethnic groups and indigenous peoples were subjected to slavery, lost their freedom, autonomy, control over their territory, cultural identity, resources, organization, and

family members. The indigenous people were victims of inhumane treatment when they wanted to be dispossessed of their property and put-up resistance, others fled their territory and settled in other areas of the country.

Subsequently, during the second half of the 19th century and the first half of the 20th century, the popularization of rubber extraction transformed the spatial and population dynamics of the region. This period was marked by the exploitation and enslavement of the indigenous population for the development of economic activity and the intensification of trade.

Then, the scarcity of rubber gave rise to the fur bonanza. Merchants began to work in the extraction of skins from animals coveted in the market, such as the caiman and the tigrillo. During this boom, the indigenous population was once again violated, which led to their displacement and the establishment of new indigenous settlements within the forest.

From the late 1960s to the early 1970s, the drug trafficking economy became one of the main economic drivers, not only for the region but also for the country because of the profitability it represented. The boom in planting had an impact on the development of new businesses and the migration of people from other areas of the country in search of new economic alternatives, attracted by the coca boom.

By the 1990s, with the emergence of outlaw groups and Colombia's armed conflict, there was massive land dispossession and forced displacement of indigenous people. These communities have been particularly vulnerable, considering that they depend on their territories, because of the relationship they establish with their lands.

Subsequently, in accordance with the provisions of Colombian regulations regarding indigenous reservations, INCORA conferred the legal status of reservation in favor of the Wananos, Carapanas, Cubeos and Piratapuyos indigenous communities of Vuelta del Alivio, to a globe of vacant land, to the indigenous communities of Lagos el Dorado, Lagos del Paso and El Remanso. and the communities of Yavilla II, located in the Municipality of Miraflores, Department of Guaviare. In the case of the RI Lagos El Dorado, this occurred in 1993, while for the RI Vuelta del Alivio and Yavilla II it was in 1998 and for the RI Puerto Nare in 2003.

Then, in the 2000s, paramilitaries, military and FARC members joined in. In the Amazon region, the FARC configured itself as an alternative social order to the central state. This was a period marked by territorial disputes between armed groups. These disputes affected the territorialities of the indigenous reservations in the area, who in many cases were forced to move outside their territories.

In 2016, with the signing of the Peace Agreement and the departure of the FARC from the area, part of the territories that were previously controlled by this group were left at the mercy of new occupiers. Although the FARC were promoters of deforestation processes, they also acted as a regulatory body in this area characterized by the low presence of the state, which is why the expansion of colonization and land grabbing increased after their departure from the territory.

Currently, the presence of FARC dissidents has been identified in the region. These groups, despite not having a high level of armed capacity, have carried out actions with a great negative impact on the indigenous populations and their territories. In the area, a corridor of expansion of these groups has been identified between the south of Guaviare, the southwest of Caquetá and the west of Vaupés. (Álvarez Vanegas, Pardo Calderón, & Cajiao Vélez, 2018)

7.3. Key Actors, Interests and Motivations

The main drivers of deforestation identified in the reference region and in the project area are similar, including:

- Indigenous.
- Settlers.
- Floating population.

These agents are classified as:

- Livestock producers with beef cattle for sale.
- Livestock producers with beef cattle for self-consumption.
- Livestock producers with dual-purpose livestock.
- Intermittent agricultural producers.
- Prairies for renting land.

- Extractors for self-consumption.

Regarding the direct causes of deforestation, the following are identified:

- Expansion of the agricultural frontier.
- Prairie.
- Establishment of agricultural crops.
- Extraction of wood for self-consumption.

Table 15. Key actors, motivations and interests.

Actor	Scope	Motivations and interest	Location of deforestation
Livestock producers with beef cattle for sale	Direct and indirect	Economic Interest for Wealth Accumulation in Unregulated Markets	Expansion of the production area Close to streams and rivers Near the house
Livestock producers with beef cattle for self-consumption	Direct	Economic interest for self-consumption	Expansion of the production area Close to streams and rivers Near the house
Livestock producers with dual-purpose livestock for self-consumption	Direct	Economic interest for self-consumption	Expansion of the production area Close to streams and rivers Near the house
Intermittent agricultural producers	Direct and indirect	Economic Interest for Wealth Accumulation in Unregulated Markets Subsistence economic interests	Expansion of the production area Close to streams and rivers Deep into the woods
Prairies for land lease	Direct	Subsistence economic interests	Expansion of the production area
Extractors for self-consumption	Direct	Subsistence economic interests	Close to streams and rivers

Actor	Scope	Motivations and interest	Location of deforestation
			Near the house

7.4. Economic activities and their importance

Table 16. Economic activities and their importance.

Activity	Economic Importance	Socio-cultural significance	Description
Subsistence agricultural production	Low	High	These systems incorporate products of nutritional and food security relevance to the community.
Agricultural production for surplus generation	Medium	High	The possibility of commercialization of surpluses is low, but it represents a source of income for the members of the community.
Prairie	Medium	Low	The possibility of renting pastures represents a source of income for the members of the community.
Livestock production for sale	High	Low	This economic activity represents a source of income for the members of the community.
Livestock production for self-consumption	Low	High	These systems incorporate products of nutritional and food security relevance to the community.
Extractors for self-consumption	Low	Medium	This activity is carried out for the self-consumption and subsistence of the members of the community.

7.5. Direct and indirect impact

Table 17. Causes of deforestation and its impact.

Cause	Agent	Type of impact	Impact
Agricultural production for self-consumption	Agricultural producers with traditional crops for self-consumption	Direct	Low. The establishment of chagras and subsistence farming systems represents areas of less than 1 hectare and has periods of use of 3 to 4 years on average.

Cause	Agent	Type of impact	Impact
Agricultural production to generate surpluses	Intermittent agricultural producers	Direct and indirect	Middle. The establishment of these crops involves the occupation of areas of approximately <1 to 5 hectares. The increase in the area occupied by these crops is associated with the community's search for income.
Prairie	Prairies for land lease	Direct	Middle. The increase in grassland areas is associated with the community's search for additional income. It is not a common practice since a limited portion of the community has the resources to rent this type of area.
Livestock production for sale	Livestock producers with beef cattle for sale	Direct	High. The expansion of areas for cattle ranching is the main cause of deforestation in the area.
Livestock production for self-consumption	Livestock producers with beef cattle for self-consumption Livestock producers with dual-purpose livestock for self-consumption	Direct	Low. The areas intervened for the establishment of livestock systems for self-consumption are small, they do not require a large extension of land.
Extraction of wood for self-consumption	Extractors for self-consumption	Direct	Low. The practice of timber extraction is not carried out on a permanent basis.

7.6. Relationships and synergies

To analyze deforestation processes in the project area, surveys were conducted with communities to identify problems, causes of problems, and solutions to forest loss. Based on satellite images and changes in coverage during the reference period, it was

possible to compare the information obtained directly with the community. As can be seen in file 14.6. *Shift from forest to other land uses 2008-2018* (Annex 14), and Table 17 (period 2008-2016), the historical trend of forest shift to another land use is mainly to clean pastures, weedy pastures, crops, and secondary or transitional vegetation (deforested and abandoned areas). This is consistent with the drivers of forest change identified with the community, which correspond to the expansion of the agricultural frontier, subsistence production systems, grassland, illicit crops, and timber extraction. With this analysis of land uses after deforestation, it is possible to validate the reasons associated with forest loss during the period 2008 and 2018, which are also recorded in the workshops carried out with the communities.

Table 18. Land use change matrix.

CODE	COVERAGE 2008	CODE	2016 COVERAGE	Area (ha)
231	Clean pastures	111	Continuous urban fabric	15,9
231	Clean pastures	231	Clean pastures	2.526,8
231	Clean pastures	233	Weedy pastures	299,3
231	Clean pastures	334	Burned areas	294,6
233	Weedy pastures	231	Clean pastures	51,6
233	Weedy pastures	233	Weedy pastures	19,5
233	Weedy pastures	334	Burned areas	9,3
243	Mosaic of crops, pastures and natural spaces	243	Mosaic of crops, pastures and natural spaces	133,1
244	Mosaic of pastures with natural spaces	231	Clean pastures	728,6
244	Mosaic of pastures with natural spaces	233	Weedy pastures	136,9
244	Mosaic of pastures with natural spaces	243	Mosaic of crops, pastures and natural spaces	1.441,6
244	Mosaic of pastures with natural spaces	244	Mosaic of pastures with natural spaces	1.543,4
244	Mosaic of pastures with natural spaces	334	Burned areas	6,4
323	Secondary or transitional vegetation	231	Clean pastures	142,4
323	Secondary or transitional vegetation	243	Mosaic of crops, pastures and natural spaces	24,6
323	Secondary or transitional vegetation	244	Mosaic of pastures with natural spaces	86,4
323	Secondary or transitional vegetation	323	Secondary or transitional vegetation	43,8
323	Secondary or transitional vegetation	323	Secondary or transitional vegetation	2.755,3
323	Secondary or transitional vegetation	334	Burned areas	21,7
323	Secondary or transitional vegetation	323	Secondary or transitional vegetation	4.439,9
411	Swampy areas	411	Swampy areas	900,8
511	Rivers (50 m)	511	Rivers (50 m)	843,8
3131	Fragmented forest with pastures and crops	231	Clean pastures	91,1
3131	Fragmented forest with pastures and crops	233	Weedy pastures	14,0
3131	Fragmented forest with pastures and crops	243	Mosaic of crops, pastures and natural spaces	233,8
3131	Fragmented forest with pastures and crops	244	Mosaic of pastures with natural spaces	103,3

CODE	COVERAGE 2008	CODE	2016 COVERAGE	Area (ha)
3131	Fragmented forest with pastures and crops	323	Secondary or transitional vegetation	592,3
3131	Fragmented forest with pastures and crops	3131	Fragmented forest with pastures and crops	928,2
3132	Fragmented forest with secondary vegetation	231	Clean pastures	11,3
3132	Fragmented forest with secondary vegetation	243	Mosaic of crops, pastures and natural spaces	76,5
3132	Fragmented forest with secondary vegetation	323	Secondary or transitional vegetation	90,7
3132	Fragmented forest with secondary vegetation	3131	Fragmented forest with pastures and crops	226,3
3132	Fragmented forest with secondary vegetation	3132	Fragmented forest with secondary vegetation	2.221,8
3111	High dense forest of dry land	231	Clean pastures	59,3
3111	High dense forest of dry land	233	Weedy pastures	56,2
3111	High dense forest of dry land	243	Mosaic of crops, pastures and natural spaces	125,7
3111	High dense forest of dry land	244	Mosaic of pastures with natural spaces	76,0
3111	High dense forest of dry land	323	Secondary or transitional vegetation	86,8
3111	High dense forest of dry land	323	Secondary or transitional vegetation	422,7
3111	High dense forest of dry land	334	Burned areas	22,3
3111	High dense forest of dry land	3131	Fragmented forest with pastures and crops	70,2
3111	High dense forest of dry land	3132	Fragmented forest with secondary vegetation	294,0
3111	High dense forest of dry land	3111	High dense forest of dry land	68.864,9
31121	Dense, high, flooded, heterogeneous forest	244	Mosaic of pastures with natural spaces	2,8
31121	Dense, high, flooded, heterogeneous forest	3132	Fragmented forest with secondary vegetation	17,8
31121	Dense, high, flooded, heterogeneous forest	31121	Dense, high, flooded, heterogeneous forest	6.531,3

Elements that affect land use change:

Expansion of the agricultural frontier and establishment of crops for the generation of productive surpluses.

Actors:

The indigenous people clear forest areas for the establishment of chagras. It also presents the scenario in which the settlers offer the indigenous people the possibility of raising cattle at the increase in exchange for a payment for the rental of pastures, which promotes the increase of forest area converted to pasture.

Settlers are also actors who clear forest areas for the establishment of subsistence farming systems. In addition, the settlers are the main owners of the cattle present in the area and need to clear areas of forest to establish new grazing areas. This activity is carried out with the participation of settlers and indigenous people as day laborers paid by settlers who have the purchasing power to pay for labor.

The establishment of small-scale crops to generate surpluses also leads to forest loss. Both indigenous people and settlers participate in this activity, encouraged mainly by the opportunity to market the product and obtain income for their livelihood.

The geographical location of the reserves and the characteristics of the access roads represent a limitation to connect the territory with secondary cities and other points of commercialization of goods and services. The distances between these points are wide and the main means of transport require fuel, which implies a high cost for the movement of goods. On the other hand, the high cost of fuel affects productive development and makes most agricultural initiatives in this region unviable. The supply of electricity in the territory is limited and in some areas non-existent, which means that there are no refrigeration systems and it is not possible to produce and distribute products that require maintaining low temperatures to maintain their quality. In addition, the low availability of agricultural incentives (access to loans, low market prices, high cost of inputs, difficulty in accessing technical assistance programs, among others) and the absence of productive chains limit the opportunity to generate income and promote sustainable development for the communities of the reservations.

7.7. Chain of Deforestation and Degradation Events

Table 19. Chain of deforestation and degradation events.

Underlying Cause	Agent Involved	Direct Cause
Cattle ranching is a profitable economic alternative in the region. There is a market and the commercialization of the products derived from this activity is currently taking place, therefore, it is an attractive activity for the population of this area.	Livestock producers with beef cattle for sale.	Livestock production for sale

Underlying Cause	Agent Involved	Direct Cause
The availability of large tracts of land for this type of activity facilitates its development.		
Communities have historically used subsistence production systems to meet food security requirements.	Livestock producers with beef cattle for self-consumption.	Livestock production for self-consumption
Communities have historically required subsistence production systems to meet food security requirements.	Livestock producers with dual-purpose livestock.	Livestock production for self-consumption
<p>The low presence of the state in the territory facilitates the development of irregular activities.</p> <p>There is a market and the possibility of commercialization of the products and therefore it is attractive for the population of these areas.</p> <p>The low availability of cost-effective economic productive alternatives limits the possibilities of obtaining income in the communities.</p>	Intermittent agricultural producers.	Agricultural production for the generation of surpluses.
The presence of livestock activity and the demand for grazing areas promote the grazing of new areas, for which the forest cover present in the territory is intervened.	Prairies for renting land.	Prairie

8. REDD+ activities

8.1. General intervention strategy

The territorial dynamics that cause deforestation and forest degradation in the territory are diverse and have effects that are difficult to foresee or directly counteract. In other words, dose-response functions cannot be established, and the effects on reducing deforestation result from the conjugation of several factors that affect the causative agents of the problem. Thus, REDD+ strategies incorporate land management (governance), which is usually combined with activities that discourage deforestation activities and promote conservation. These incentives should not always be placed directly on direct agents; It is often more effective to generate incentives in the community as a whole (especially when there is a culturally stratified indigenous community in a pyramidal and hierarchical manner), in order to ensure that the

beneficiary community effectively exercises social controls over its members and inhabitants of the territory. Thus, investments in community infrastructure have effects of this nature, since, by benefiting the whole, they encourage and reinforce social control. Even more so when these investments are selected from the grassroots with the direct participation of the beneficiaries, and in accordance with their priorities, expressly established in the workshops held with all the communities participating in the project.

To address the dynamics of deforestation and its effective remedies, several workshops were held with the intention of identifying those activities or investments that could generate a change in the current dynamics of forest use (see *Annex 1*, files *1.1.1.1. Problem Tree – El Dorado Lakes*, *1.1.1.2. Tree of Solutions – El Dorado Lakes*, *1.2.1.1. Trouble Tree - Relief Turn*, *1.2.1.2. Solution Tree – Relief Turn*, *1.3.1.1. Problem Tree – Yavilla II*, *1.3.1.2. Solution Tree – Yavilla II*, *1.5.1.3 Workshop 1 Problem Nare_Árbol Port*, *1.5.1.4 Workshop 1 Solution Port Nare_Árbol and Annex 2*, files *2.1.1. Lagos Dorado Surveys*, *2.2.1. Polls Lap of Relief*, *2.3.1. Yavilla II Surveys*, *2.4.1. Puerto Nare Surveys*). It was based on territorial control, considering the capacity and interference of indigenous communities in their territorial management, leaving aside, although not neglecting, the management of territories outside their control, that is, in areas with other figures of use and tenure, and with different actors, such as settlers.

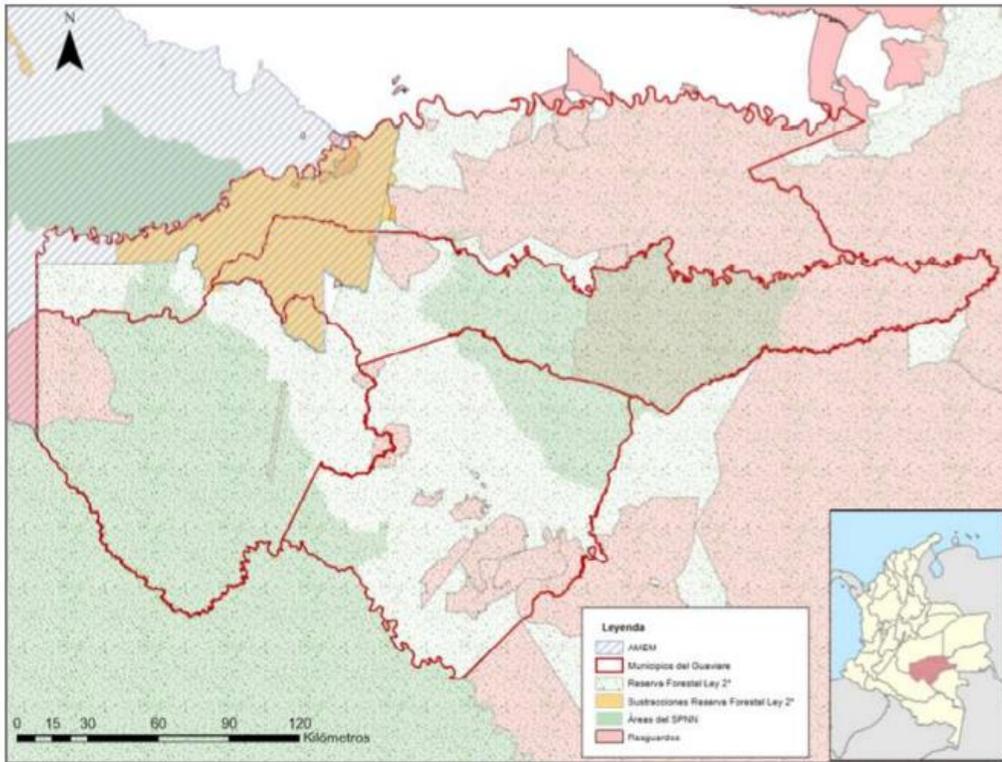
8.2. Prioritization of areas for interventions

As part of the exercise of articulation of regional territorial planning instruments and the definition of REDD+ activities, the guidelines for updating environmental determinants that must be included in land use planning to combat deforestation according to Judgment 4360 of 2018 were taken into account. The first is to permeate the strategic component of the project, with the priority of promoting the maintenance of the forest as an axis for the preservation of the ecosystem services necessary for the populations of these areas and their specific contribution to the economy of the region. The second is that the model of occupation of the territory must allow an adequate development and approach of the activities of the inhabitants and be articulated with the objectives, policies and long-term strategies identified by the community. These guidelines are included within the objectives of the project and are part of the prioritized activities.

The specific determinants of zero deforestation were also recognized. The areas that were deforested from 2010 to the time of the start of the Project are prioritized to be incorporated into forest restoration and recovery actions, and in the generation of business models that use the forest in a sustainable way. Indigenous forest knowledge and management define the characteristics of the project's intervention and are taken into account in the planning of REDD+ activities. Agricultural activities will be limited to previously intervened areas and actions will be promoted that involve the development of agroforestry systems and good production practices that protect the biodiversity and natural resources of the reserves. Finally, priority is given to areas to promote the productive transition and the restoration of connectivity in forested areas to support the stabilization of the agricultural frontier and the adoption of good production practices.

In this way, the project's interventions are concentrated in areas that present a change from forest to other land uses (pastures, crops and fragmented forests) to locate the areas where the first actions of environmentally friendly production systems and the restoration of forest areas with native species should be carried out. The identification of areas is aimed at containing the agricultural frontier or active deforestation fronts and recovering forest that has recently been lost, which is congruent with the environmental determinants for the planning of the territorial planning of the Amazon region (MOTRA, 2019).

To plan the activities, the determinants of the department of Guaviare were also taken into account, which are included in Resolution 235 of 2019 of the Corporation for the Sustainable Development of the North and East of the Amazon (CDA), within which, for the purposes of the project, the forest reserve of Law 2 of the Amazon that surrounds the project area is highlighted (see Map 20). This type of planning is vulnerable to activities that involve the expansion of the agricultural frontier, so the strategy of the project is to strengthen communities in territorial control and the development of productive systems that allow the needs of the population to be met and the proclivity of their members to participate in activities that threaten forests is reduced.



Map 20. Ordering figures in the department of Guaviare (taken from USAID, 2021).

8.3. Participation of actors in the territory

Regarding the processes or agreements for the inclusion of peasants and indigenous people in REDD+ activities, according to the information provided by the community in the different meetings, the history of recent shared life should be highlighted, such as economic bonanzas (skins, coca, livestock), violence, ways and means of life; close parental affiliation and the exchange of knowledge in technologies, gastronomy and agricultural production are part of the social dynamics that characterize the communities that inhabit the reservations of the Dabucury REDD+ Project. These elements represent that the economic development and sustainable community production activities that are driven by the project, as well as those of capacity building and social investment, include indigenous and peasant people. As part of the project's strategy, it is essential to recognize the importance of involving those directly and indirectly responsible for deforestation in the area of the reserves, to strengthen the social fabric and to foster healthy relationships that respect the principles of good neighborliness.

The communities of the Dabucury REDD+ Project, within their historical context of natural resource management, have natural reserve areas that are given a rational use of the forest resources according to their uses and traditions (chagras, hunting, agroforestry, fruits, seeds), maintaining a division of the forest areas such as the monte bravo or virgin forest which they protect for the recovery of the native species of the forest. fauna and flora, the exploited forest which is the area closest to their homes which they use for their farms, areas of stubble are those that have previously been used for farms and are in the process of ecological recovery, and the areas of guachinacales and guayabetales which are the areas destined for hunting and fishing.

8.4. Contribution and synergies of the REDD+ Project with local and regional development plans

As for the Municipal Development Plan, the project is framed in article 4.2.7. on opportunities for sustainable development based on biodiversity and ecosystem services; and Article 4.3 on risk management and climate change. The strategic part supports strategy 6.1.1.2 on poverty reduction and eradication; strategy 6.1.1.11 for attention to ethnic groups and minorities; strategy 6.1.1.12 on education coverage and strengthening; programme 6.1.1.25 on environment and sustainable development; Environmental Education Program 6.1.1.27 (see Annex 12).

In relation to the Departmental Development Plan, the draft supports Article 6.1. articulation with the National Development Plan, in particular the main purpose of sustainable development, conservation of Amazon forests and jungles, preservation of natural, multicultural and multiethnic heritage. Also, Article 4 in the Strategic Axis of Sustainable Productive and Economic Consolidation, and in particular the solutions for sustainable rurality; in Axis 3 on quality of life, and in particular conditions and access to education, and the safeguarding of cultural heritage; and in Axis 4 on comprehensive sustainable rural development, including the conservation and efficient management of natural resources (See Annex 12).

Regarding the Action Plan for Regional Transformation (PATR), and the Municipal Plan for Regional Transformation (PMTR), the project is framed in the pillars of Social Planning of Land Use (P1), Rural Health (P3), Rural Education and Rural Early

Childhood (P4), Housing, Rural, Drinking Water and Rural Basic Sanitation (P5). and Economic Reactivation and Agricultural Production (P6), see *Annex 12*.

8.5. Contribution of the REDD+ Project to national climate change targets

In terms of land use planning, the Amazon Regional Land Use Planning Model (MOTRA (MADS and DNP, 2019) guides the implementation of concrete actions that lead to the resolution of existing conflicts in this area of the country. The actions prioritized to the historical conflicts in the Amazon region correspond to the following: effective articulation of territorial planning instruments, recognition of the economic and social dynamics that affect the use and occupation of the territory, the importance of protecting the main ecological structure and reducing vulnerability to climate change. Strengthen territorial governance and the articulation of urban centres with rural areas. The Dabucury REDD+ Project bases its intervention strategy and the prioritization of activities taking into account these guidelines of regional territorial planning. Taking into account that by 2030 the country expects to be internationally recognized for solving conflicts related to territorial planning, the project contributes directly to achieving the following achievements:

- Reduce forest loss.
- Reduce deforestation to zero.
- Increasing community and ecosystem resilience
- Stabilize the agricultural frontier within the territory.
- Strengthen the regional integration of the territory.

It is also true that the country has set ambitious targets for reducing domestic GHG emissions. Colombia updated the Nationally Determined Contribution (NDC) at the end of 2020, setting the goal of reducing projected emissions by 51% by 2030 and through the Climate Action Law (Law 2169 of 2021) the country's low-carbon development is promoted through the establishment of minimum goals and measures in terms of carbon neutrality and climate resilience. Much of Colombia's forests, particularly in the Amazon and the Pacific, are located in indigenous reserves and Afro-Colombian collective territories, and their preservation depends on the defense of ways of life appropriate to the territory. The participation of indigenous peoples is essential to protect forests, and the participation of peasant communities is essential

to transform the country's agro-productive practices and rural development, to prevent the expansion of the agricultural frontier and to safeguard food security. The Dabucury REDD+ Project promotes the active participation of these focus groups, contributing directly to the country's goal of reducing the annual rate of deforestation to 50,000 ha/year by 2030, with a trajectory of 155,000 ha/year in 2022, and 100,000 ha/year in 2025. The historical reference rate of deforestation in the project area is equivalent to approximately 968 ha/year, and it is expected that by 2030 the project's actions will maintain a maximum of 210 ha/year. This represents a reduction of 758 ha/year, equivalent to 0.68% of the national target for 2025 and 1.3% of the deforestation reduction target for 2030.

8.6. Project Management Mechanism

The members of the indigenous reservations, together with the project developers, defined a common project management structure based on principles, procedures and guidelines for the administration and execution of the project (see file *3.4.1. REDD+ Project Administration Mechanism Dabucury_V3.pdf*, in the *Annex 3 folder. Agreements and Confidential Documents*, subfolder *3.4. Project Management and Profit Sharing*). This Mechanism was defined in community work spaces, as evidenced in the minutes of the meetings (files *1.1.9.2*, *1.1.9.3* and *1.1.9.4* at the Lagos El Dorado IR; *1.2.8.2* in the RI Vuelta del Alivio; *1.3.7.2* in the Yavilla II IR; *1.5.6.2* in the RI Puerto Nare).

For the community management of the project, a REDD+ Committee was defined, which is made up of people who assume different positions that are related to the actions and components defined in the REDD+ project as follows: Coordinator, Secretariat, PQRS, Governance, Monitoring, Profitable Alternatives, Social Investment, Technical.

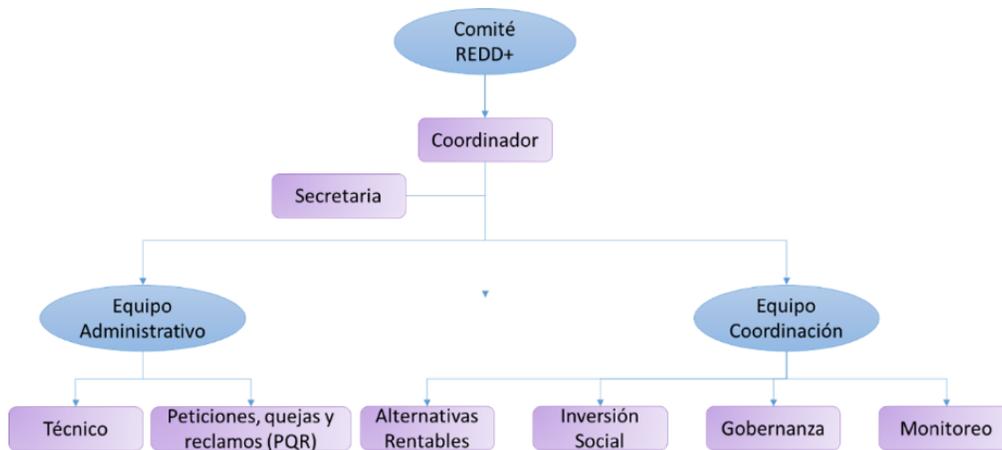


Figure 1. Organizational chart of the REDD+ Committee.

The roles of each of the persons occupying these positions are described in document 3.4.1. *REDD+ Project Administration Mechanism Dabucury_V3.pdf*.

8.7. Description of REDD+ actions

The REDD+ actions were defined in a participatory manner based on the results of the analysis of causes and agents of deforestation. Below is the general list of activities:

Activity ID	A-1
Description of REDD+ activity	Development of Project Document (PDD) to access carbon markets
Relationship between activity and direct or underlying cause	Certification is required for the activities carried out by the community to reduce land use change through the conversion or degradation of forest cover. The document management of GHG emission reduction will allow the generation of income to generate a virtuous circle in the management of the territory, so that the conservation of the forest can be sustained in the long term, while achieving the development of the community and the protection of biodiversity
Compliance with life plans or ethno-development plans	This activity is aligned with the Life Plans of the indigenous reservations, particularly with Strategy 7 proposed in the <i>Life Plan of the Mi Miraflores-Guaviare Indigenous Peoples</i> , considering that it is aimed at the development of economic, social and cultural activities suitable for the generation of sustainable income. It is also articulated with the principle of life of food sovereignty and sustainable economy set forth in the <i>Life Plan of the Lagos del Dorado</i> Indigenous Reserve, in the <i>Life Plan of the Remanso</i> Indigenous Reservation and in the <i>Life Plan of the Yavilla II</i> Indigenous Reserve, considering that priority is given to projects that allow access to carbon markets and promote the conservation of the biological and intellectual heritage associated with resources of the territory.
Consultation mechanism to	Participatory workshops with the members of the reservations Approval at the General Assembly.

Activity ID	A-1				
define REDD+ activity					
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> • Indigenous Reservations: Developer and Implementer. • Project Manager. • Carbo Sostenible and Terra Commodities: developer. 				
Implementation Timeline	From the first year of the project.				
Indicators for reporting progress					
Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement
# of people participating in meetings, surveys or workshops on problem tree and identification of drivers of deforestation and productive systems and governance management	A-1.1	Result	Workshops or meetings are held in a participatory manner.	Number of people	Sustainable Carbo Terra Commodities Representative of the communities
# of legal support agreements for the development and implementation of the project, including carbon credit trading	A-1.2	Result	Development and commercialization agreements in place	Number of agreements	Sustainable Carbo Terra Commodities Indigenous Reservations
Registration of a project in an emission reduction certification program	A-1.3	Result	Project Registration	Registration	Sustainable Carbo Terra Commodities

Activity ID	A-2
Description of REDD+ activity	Strengthen the capacities of the communities for the management of prioritized production systems and development of business plans to implement productive systems that contribute to the well-being of the community and the natural environment (e.g., sugarcane, cassava, cocoa, corn, rice, climate-sustainable livestock, others).
Relationship between activity and	Defining and prioritizing viable productive systems for the community is a basis for achieving the economic sustainability of communities and offering income and

Activity ID	A-2				
direct or underlying cause	maintenance alternatives that counteract the opportunity cost of displacing activities that involve deforestation. Involving the community in this exercise allows us to set expectations and increase the commitment of its members to the control of activities that threaten the forest, since the availability of resources for their development depends on the care of the forest. To the extent that the technical and operational capacities of the community for the management of the prioritized production systems are strengthened, the probability of success and permanence increases. This strengthens members' confidence and capacity to fight the opportunities associated with activities involving deforestation.				
Compliance with life plans or ethno-development plans	This activity is aligned with Strategy 7 set out in the <i>Life Plan of the Mi Miraflores – Guaviare Indigenous Peoples</i> , considering that it is aimed at access to technical assistance and the development of economic, social and cultural activities suitable for the generation of sustainable income. It is also articulated with the principle of life of food sovereignty and sustainable economy set forth in the Life Plan of the Lagos del Dorado Indigenous Reservation, in the <i>Life Plan of the Lagos del Dorado Indigenous Reservation</i> , in the <i>Life Plan of the Remanso Indigenous Reservation</i> and in the <i>Life Plan of the Yavilla II Indigenous Reservation</i> , taking into account that it focuses on the development of stable economic activities, access to technical assistance, promoting community training and diversifying access to job opportunities.				
Consultation mechanism to define REDD+ activity	Participatory workshops with the members of the reserves and approval at the general assembly. Meetings with entities and programs				
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> Local Communities: Implementer. Implementing Organization: Implementer. SENA, Mayor's Office, Governor's Office, CDA, NGOs, etc.: technical assistance and accompaniment. 				
Implementation Timeline	From the fourth year of the project.				
Indicators for reporting progress					
Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement
# of people involved in the development of production systems who participate in training or training sessions for the management of prioritized production systems	A-2.1	Result	All the people involved in the development of production systems participate in training or training sessions for the management of the prioritized production systems.	# of people	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
# of women involved in the development of production systems who participate in	A-2.2	Result	All women involved in the development of production systems participate	# of women	Implementing Organization Community Representative

Activity ID	A-2				
training or training sessions for the management of prioritized production systems			in training or training sessions for the management of the prioritized production systems.		Cost-Effective Alternatives Coordinator – REDD+ Committee
# Elaborate business plans	A-2.3	Product	At least one business plan is defined to be implemented	Number	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee

Activity ID	A-3	
Description of REDD+ activity	Implement or improve prioritized production systems (e.g., sugarcane, cassava, cocoa, corn, rice, climate-sustainable livestock, etc.).	
Relationship between activity and direct or underlying cause	The establishment and improvement of prioritized production systems allows for a reduction in community dependence on livestock and the establishment of new grazing areas and crops to generate surpluses, which will reduce the pressure on forest cover.	
Compliance with life plans or ethno-development plans	This activity is aligned with Strategy 7 set out in the <i>Life Plan of the Mi Miraflores – Guaviare Indigenous Peoples</i> , considering that it is aimed at access to technical assistance and the development of economic, social and cultural activities suitable for the generation of sustainable income. It is also articulated with the principle of life of food sovereignty and sustainable economy set forth in the Life Plan of the Lagos del Dorado Indigenous Reservation, in the <i>Life Plan of the Lagos del Dorado Indigenous Reservation</i> , in the <i>Life Plan of the Remanso Indigenous Reservation</i> and in the <i>Life Plan of the Yavilla II Indigenous Reservation</i> , taking into account that it focuses on the development of stable economic activities, access to technical assistance, promoting community training and diversifying access to job opportunities.	
Consultation mechanism to define REDD+ activity	Participatory workshops with the members of the reserves and approval at the general assembly.	
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> Local Communities: Implementer. Implementing Organization: Implementer. SENA, SINCHI, NGO, Private Sector, CDA, Mayor's Office, Governor's Office, etc.: technical assistance and accompaniment. 	
Implementation Timeline	From the fourth year of the project.	
Indicators for reporting progress		

Activity ID		A-3			
Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement
# People employed for the development of productive activities	A-3.1	Impact	Project activities provide jobs for the community	Number of people	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
# Women employed for the development of productive activities	A-3.2	Impact	Project activities provide jobs for women in the community	Number of women	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
# of people improving their incomes with productive systems	A-3.3	Impact	The project's activities allow community members to improve their income.	Number of people	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
# of women improving their incomes with productive systems	A-3.4	Impact	The project's activities allow women members of the community to improve their incomes.	Number of people	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
# of hectares of production systems that have special management measures to promote biodiversity	A-3.5	Product	Management measures are implemented in production systems that favor biodiversity.	Area (ha)	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
# of hectares of production systems being	A-3.6	Product	Productive systems are implemented or existing production	Area (ha)	Implementing Organization

Activity ID	A-3				
improved or established			systems are improved.		Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee

Activity ID	A-4	
Description of REDD+ activity	Maintain and monitor the implemented production systems.	
Relationship between activity and direct or underlying cause	By carrying out maintenance and monitoring activities, positive results and continuous improvement of the production activity are promoted. Successful productive activities contribute to halting the advance of forest-threatening activities and displacing the economic dependence of community members on them.	
Compliance with life plans or ethno-development plans	This activity is aligned with Strategy 7 set out in the <i>Life Plan of the Mi Miraflores – Guaviare Indigenous Peoples</i> , considering that it is aimed at access to technical assistance and the development of economic, social and cultural activities suitable for the generation of sustainable income. It is also articulated with the principle of life of food sovereignty and sustainable economy set forth in the Life Plan of the Lagos del Dorado Indigenous Reservation, in the <i>Life Plan of the Lagos del Dorado Indigenous Reservation</i> , in the <i>Life Plan of the Remanso Indigenous Reservation</i> and in the <i>Life Plan of the Yavilla II Indigenous Reservation</i> , taking into account that it focuses on the development of stable economic activities, access to technical assistance, promoting community training and diversifying access to job opportunities and closing economic gaps.	
Consultation mechanism to define REDD+ activity	Participatory workshops with the members of the reserves and approval at the general assembly.	
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> Local Communities: Implementer. Implementing Organization: Implementer. SENA, SINCHI, NGO, Private Sector, CDA, Mayor's Office, Governor's Office, etc.: technical assistance and accompaniment. 	
Implementation Timeline	From the fifth year of the project.	

Indicators for reporting progress					
Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement
# Records of controls or maintenance carried out	A-4.1	Result	Production systems receive the required controls or maintenance.	Number	Implementing Organization Community Representative Cost-Effective Alternatives

Activity ID	A-4				
					Coordinator – REDD+ Committee
Total quantity of goods or services produced in production systems	A-4.2	Product	Production systems that offer goods or services are implemented quantifiable for the community	Units	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
Balance of income and expenditure generated in production systems.	A-4.3	Product	At least one production system is implemented with a positive balance.	Coin	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee

Activity ID	A-5
Description of REDD+ activity	Identify and prioritize community needs for social investment.
Relationship between activity and direct or underlying cause	Identifying social investment needs and planning how they will be addressed by the project allows for an increase in the degree of community ownership and commitment to the project. Planning clearly defines the expected results and the expectations of the population. This helps mitigate the risk of the community seeking additional resources from activities that may involve deforestation, as it would compromise access to elements that are prioritized by all members.
Compliance with life plans or ethno-development plans	This activity is aligned with Strategies 1, 9 and 10 set out in the <i>Life Plan of the Mi Miraflores – Guaviare Indigenous Peoples</i> , considering that these strategies are oriented towards land rights and housing conditions, comprehensive access to education and comprehensive access to health. It is also articulated with the principles of self-education and interculturality, health and traditional medicine, and decent housing and access to basic services set forth in the <i>Life Plan of the Lagos del Dorado Indigenous Reservation</i> , in the <i>Life Plan of the Lagos del Dorado Indigenous Reservation</i> , in the <i>Life Plan of the Remanso Indigenous Reservation</i> and in the <i>Life Plan of the Yavilla II Indigenous Reservation</i> , taking into account that it focuses on strengthening ethno-education, knowledge, recreation, transmission of native languages to new generations, closing gaps in access to education, recovery of ancestral medicine, improving access to health and improving the quality of life of communities.

Activity ID	A-5				
Consultation mechanism to define REDD+ activity	Participatory workshops with the members of the reserves and approval at the general assembly. Participatory events with institutions and programs				
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> Local Communities: Implementer. Implementing Organization: Implementer. 				
Implementation Timeline	From the first year of the project.				
Indicators for reporting progress					
Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement
# of people participating in meetings or workshops on social investment topics	A-5.1	Result	The processes of identification and prioritization of social investment are carried out in a participatory manner.	Number of people	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
# of women participating in meetings or workshops on social investment issues.	A-5.2	Result	The processes of identification and prioritization of social investment are carried out in a participatory manner.	Number of women	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee

Activity ID	A-6				
Description of REDD+ activity	Improve transport conditions to facilitate the movement of people and items in the shelters (e.g. vehicles, road adaptation).				
Relationship between activity and direct or underlying cause	Improving transportation conditions makes it possible to strengthen connectivity between communities, markets, population centers, among others. This contributes to reducing the cost of transporting goods, improving access to markets and can therefore boost the local and regional economy. In this way, the prices of goods and services that enter and leave the communities become more competitive, increasing the options for economically viable activities, which allows to shift to some extent the dependence on the activities that historically promote deforestation.				
Compliance with life plans or ethno-development plans	This activity is aligned with Strategies 5 and 7 set out in the Life Plan of the Mi Miraflores – Guaviare Indigenous Peoples, with the principles of self-education and interculturality, health and traditional medicine, and food sovereignty and sustainable economy set forth				

Activity ID	A-6				
	in the Life Plan of the Lagos del Dorado Indigenous Reserve, <i>in the Life Plan of the Lagos del Dorado Indigenous Reserve, in the Life Plan of the Remanso Indigenous Reservation and in the Life Plan of the Yavilla II Indigenous Reservation</i> , considering that they are aimed at social and cultural stability and integrity, to the extent that they strengthen territorial control and connectivity of the territory and access to markets.				
Consultation mechanism to define REDD+ activity	Participatory workshops with the members of the reserves and approval at the general assembly. Meetings with Funding Entities and Programs				
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> Local Communities: Implementer. Implementing Organization: Implementer. Companies, Suppliers, Mayor's Office, Governor's Office, etc.: provision of goods and services, technical assistance and accompaniment. 				
Implementation Timeline	From the first year onwards				
Indicators for reporting progress					
Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement
# of people participating in meetings or workshops on transportation issues	A-6.1	Result	The processes of identification and prioritization in the field of transport are carried out in a participatory manner.	Number of people	Implementing Organization Community Representative Social Investment Coordinator - REDD+ Committee
# of activities/elements that facilitate the mobilization of people	A-6.2	Product	Improved mobilization of community members	Number	Implementing Organization Community Representative Social Investment Coordinator - REDD+ Committee

Activity ID	A-7
Description of REDD+ activity	Improve infrastructure and education services in the reserves.
Relationship between activity and direct or underlying cause	The education of community members is essential to raise awareness and build criteria and knowledge that allow for the continuity of the protection of the territory and the indigenous culture, which strengthens the social fabric and serves as a barrier against

Activity ID	A-7				
	possible extractive and unsustainable activities that may compromise the natural resources of the territory.				
Compliance with life plans or ethno-development plans	This activity is aligned with Strategy 9 set out in the Life Plan of the Mi Miraflores-Guaviare Indigenous Peoples, with the principle of self-education and interculturality set forth in the Life Plan of the Lagos del Dorado Indigenous Reserve, in the Life Plan of the Lagos del Dorado Indigenous Reserve, in the Life Plan of the Remanso Indigenous Reservation and in the Life Plan of the Yavilla II Indigenous Reserve, considering that it is aimed at comprehensive access to education and the strengthening of ethno-education.				
Consultation mechanism to define REDD+ activity	Participatory workshops with the members of the reserves and approval at the general assembly. Meetings with institutions and programs				
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> Local Communities: Implementer. Implementing Organization: Implementer. SENA, NGOs, Private Sector, Companies, Mayor's Office, Governor's Office, etc.: suppliers of goods and services, technical assistance and accompaniment. 				
Implementation Timeline	From the first year of the project.				
Indicators for reporting progress					
Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement
# of people participating in meetings or workshops on education topics	A-7.1	Result	The processes of identification and prioritization of social investment are carried out in a participatory manner.	Number of people	Implementing Organization Community Representative Social Investment Coordinator - REDD+ Committee
# of educational facilities improved/built.	A-7.2	Product	Improve or construct educational facilities located on reservations	Number	Implementing Organization Community Representative Social Investment Coordinator - REDD+ Committee
# of Instructors Funded	A-7.3	Product	Improve educational service provision	Number	Implementing Organization Community Representative Social Investment Coordinator -

Activity ID	A-7				
					REDD+ Committee

Activity ID	A-8				
Description of REDD+ activity	Provide facilities for community members to access formal education or a better quality of education (literacy, baccalaureate, scholarships for higher education).				
Relationship between activity and direct or underlying cause	The education of community members is essential to raise awareness and build criteria and knowledge that allow for the continuity of the protection of the territory and the indigenous culture, which strengthens the social fabric and serves as a barrier against possible extractive and unsustainable activities that may compromise the natural resources of the territory.				
Compliance with life plans or ethno-development plans	This activity is aligned with Strategy 9 set out in the Life Plan of the Mi Miraflores-Guaviare Indigenous Peoples, with the principle of self-education and interculturality set forth in the Life Plan of the Lagos del Dorado Indigenous Reserve, in the Life Plan of the Lagos del Dorado Indigenous Reserve, in the Life Plan of the Remanso Indigenous Reservation and in the Life Plan of the Yavilla II Indigenous Reserve, considering that it is aimed at comprehensive access to education and the strengthening of ethno-education.				
Consultation mechanism to define REDD+ activity	Participatory workshops with the members of the reserves and approval at the general assembly. Meetings with entities and programs				
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> Local Communities: Implementer. Implementing Organization: Implementer. SENA, NGOs, Private Sector, Companies, Mayor's Office, Governor's Office, etc.: suppliers of goods and services, technical assistance and accompaniment. 				
Implementation Timeline	From the fifth year of the project.				

Indicators for reporting progress

Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement
# people with access to formal education programs or better quality education	A-8.1	Result	The quality of education or access to formal education programmes for community members is improved.	Number of people	Implementing Organization Community Representative Social Investment Coordinator - REDD+ Committee
# of women with access to formal education programs	A-8.2	Result	The quality of education or access to formal education programmes for	Number of women	Implementing Organization Community Representative

Activity ID	A-8				
or better quality education			women in the communities is improved.		Social Investment Coordinator – REDD+ Committee

Activity ID	A-9	
Description of REDD+ activity	Improve health care mechanisms for the inhabitants of indigenous reservations (e.g., health post, availability of medical supplies and health promoter, strengthening of traditional medicine).	
Relationship between activity and direct or underlying cause	Facilitating access to medical care and health services is essential to protect community members, promote healthy practices, and improve care for people at stages of life that are more vulnerable than others, such as children and the elderly. Having basic health care services contributes to the protection of the population, which increases awareness of the importance of the REDD+ project, which fights against the deterioration of the territory through a comprehensive approach.	
Compliance with life plans or ethno-development plans	This activity is aligned with Strategy 10 set out in the Life Plan of the <i>Mi Miraflores-Guaviare Indigenous Peoples</i> , with the principle of health and traditional medicine set forth in the Life Plan of the Lagos del Dorado Indigenous Reserve, in the Life Plan of the <i>Lagos del Dorado Indigenous Reserve</i> , in the Life Plan of the Remanso Indigenous Reservation and in the Life Plan of the <i>Yavilla II Indigenous Reserve</i> , considering that it is oriented to comprehensive access to health and the recovery of ancestral medicine.	
Consultation mechanism to define REDD+ activity	Participatory workshops with the members of the reserves and approval at the general assembly. Meetings with institutions and programs	
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> Local Communities: Implementer. Implementing Organization: Implementer. Private sector, NGOs, Mayor's Office, Governor's Office, etc.: suppliers of goods and services, technical assistance and accompaniment. 	
Implementation Timeline	From the first year of the project.	

Indicators for reporting progress					
Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement
# of people participating in meetings or workshops on health issues	A-9.1	Result	The processes of identification and prioritization in health matters are carried out in a participatory manner.	Number of people	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
# of people with access to health services	A-9.2	Result	Access to health services for community members is improved.	Number of people	Implementing Organization

Activity ID	A-9				
					Community Representative Social Investment Coordinator – REDD+ Committee
# of health posts built/improved	A-9.3	Result	Infrastructure to provide health services to community members is improved.	Number of health posts	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee

Activity ID	A-10	
Description of REDD+ activity	Improve the conditions of basic sanitation and housing of the members of the communities that are part of the indigenous reserves (e.g., water purification plant, septic tanks, housing solutions and improvement of deteriorated homes, electrification with solar panels, comprehensive waste management, among others).	
Relationship between activity and direct or underlying cause	By improving housing and basic sanitation conditions, members' living conditions are enhanced. The difficulties faced by the community and the scarcity of resources to satisfy these types of basic elements are circumstances that facilitate their participation in activities that involve deforestation, as people are willing to do whatever it takes to improve their living conditions. Addressing these needs with project resources mitigates the risk of adopting practices that result in forest loss, and also increases the interest of communities in participating in project activities, contributing to the long-term sustainability of the entire project.	
Compliance with life plans or ethno-development plans	This activity is aligned with Strategies 1 and 7 set out in the Life Plan of the Mi Miraflores-Guaviare Indigenous Peoples, with the principle of decent housing and access to basic services set forth in the Life Plan of the Lagos del Dorado Indigenous Reserve, in the Life Plan of the Lagos del Dorado Indigenous Reserve, in the Life Plan of the Remanso Indigenous Reservation and in the Life Plan of the Yavilla II Indigenous Reservation, considering that these are oriented to the right to territory (including housing sites), access to drinking water in homes, basic sanitation, general improvement of housing and the solution of phytosanitary problems.	
Consultation mechanism to define REDD+ activity	Participatory workshops with the members of the reserves and approval at the general assembly.	
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> Local Communities: Implementer. Implementing Organization: Implementer. Private Sector, NGOs, Mayor's Office, Governor's Office, etc.: suppliers of goods and services, technical and professional assistance and accompaniment. 	
Implementation Timeline	From the first year of the project.	

Indicators for reporting progress

Activity ID	A-10				
Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement
# of people participating in meetings or workshops on housing, energy, waste management, water and sanitation issues	A-10.1	Result	The processes of identification and prioritization of housing, drinking water and basic sanitation, and energy are carried out in a participatory manner.	Number of people	Implementing Organization Community Representative Social Investment Coordinator - REDD+ Committee
# of people with access to clean water or better water quality	A-10.2	Result	People in the community have access to clean water or better water quality.	Number of people	Implementing Organization Community Representative Social Investment Coordinator - REDD+ Committee
# of homes or infrastructure that have electric power systems	A-10.3	Product	Access to electricity in indigenous reservations is improved.	Number	Implementing Organization Community Representative Social Investment Coordinator - REDD+ Committee
# of actions aimed at strengthening comprehensive waste management	A-10.4	Result	Actions are implemented to carry out an adequate waste management in the reserves.	Number	Implementing Organization Community Representative Social Investment Coordinator - REDD+ Committee
# of Improved/Built Homes	A-10.5	Result	Community members' homes are improved or built.	Number	Implementing Organization Community Representative Social Investment Coordinator - REDD+ Committee

Activity ID	A-11				
Description of REDD+ activity	Develop and support the implementation of the Life Plan of the indigenous communities living in the reservations.				
Relationship between activity and direct or underlying cause	The Indigenous Life Plan is an instrument of governance and policy specific to indigenous communities and represents a navigation chart for the future. It includes the characterization of the community, its interests, visions, needs, expected changes, among others. The construction of the Indigenous Life Plan makes it possible to define the approach and measures that will be implemented to improve territorial governance, protection of their culture, among which the mechanisms to control the activities that result in deforestation and degradation of the natural resources of their territories are highlighted. The life plan can be strengthened if it is articulated with regional territorial initiatives that contribute to achieving its main objectives, including the goals of forest conservation and protection.				
Compliance with life plans or ethno-development plans	The Indigenous Life Plans will be built as part of the project's activities for the reservations that do not have one, and the process of updating this will be supported in the case of the Puerto Nare IR. This activity was defined with the communities. Regional initiatives and experiences that can help meet the main objectives of the Life Plan and forest conservation efforts will be taken into account.				
Consultation mechanism to define REDD+ activity	Socialization workshops with the members of the reservations and approval in General Assemblies of the indigenous reservations.				
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> • Local Communities: Implementer. • Implementing Organization: Implementer. • Private Sector, NGOs, Mayor's Office, Governor's Office, etc.: suppliers of goods and services, technical and professional assistance and accompaniment. • Ministry of the Interior: technical support. • Miraflores Office of Indigenous Affairs: technical accompaniment. 				
Implementation Timeline	From the fourth year of the project.				
Indicators for reporting progress					
Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement
# of people participating in meetings or workshops on governance issues	A-11.1	Result	The process of building/updating the Life Plans is carried out in a participatory manner.	Number of people	Implementing Organization Community Representative Governance Coordinator - REDD+ Committee
# of life plans drawn up or updated	A-11.2	Product	At least 3 Life Plans are drawn up, one for each shelter.	Number of Life Plans	Implementing Organization Community Representative

Activity ID	A-11				
					Governance Coordinator - REDD+ Committee
# Life Plans in Implementation	A-11.3	Result	The implementation of at least 3 Life Plans begins, one for each safeguard.	Number of Life Plans	Implementing Organization Community Representative Governance Coordinator - REDD+ Committee

Activity ID	A-12				
Description of REDD+ activity	Build and support the implementation of the land use plan for indigenous reservations.				
Relationship between activity and direct or underlying cause	The Land Use Plan allows for the identification and planning of land uses in the area of the reserves. It defines the areas within the territory that will be used for conservation, production, settlements, among others. This instrument strengthens territorial governance and territorial planning, and contributes to the control of forest harvesting and degradation activities.				
Compliance with life plans or ethno-development plans	This activity is aligned with Strategy 6 set out in the Life Plan of the Mi Miraflores - Guaviare Indigenous Peoples, with the principle of conservation of the traditional territory and the environment set forth in the Life Plan of the Lagos del Dorado Indigenous Reserve, in the Life Plan of the Lagos del Dorado Indigenous Reserve, in the Life Plan of the Remanso Indigenous Reserve and in the Life Plan of the Yavilla II Indigenous Reserve, considering that they are aimed at the conservation and sustainable use of natural resources, including the design and implementation of management plans and conservation and use systems that reduce deforestation and promote the restoration processes of intervened areas, tags.				
Consultation mechanism to define REDD+ activity	Socialization workshops with the members of the reservations and approval in General Assemblies of the indigenous reservations.				
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> Local Communities: Implementer. Implementing Organization: Implementer. Mayor's Office, Governor's Office, CDA: technical and professional assistance and accompaniment. 				
Implementation Timeline	From the fifth year of the project.				
Indicators for reporting progress					
Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement

Activity ID	A-12				
# of indigenous land use plans drawn up	A-12.1	Product	At least 3 Land Use Plans are drawn up, one for each reservation.	Number of Land Use Plans	Implementing Organization Community Representative Governance Coordinator - REDD+ Committee
# of land use plans in implementation	A-12.2	Result	The implementation of at least 3 Land Use Plans begins, one for each reservation.	Number of Land Use Plans that are being implemented	Implementing Organization Community Representative Governance Coordinator - REDD+ Committee

Activity ID	A-13	
Description of REDD+ activity	Strengthen capacities to maintain and improve traditional production systems (e.g., maize, cassava, plantain, fisheries, minor species) and promote community dynamics (e.g., nursing, traditions, language).	
Relationship between activity and direct or underlying cause	To the extent that communities have the capacity to meet their food needs and have the supply of goods and services offered by their traditional productive practices, the less need they will have to carry out additional practices that can affect the forest. Food security strengthens members' confidence and security to protect their territories from destructive practices.	
Compliance with life plans or ethno-development plans	This activity is aligned with Strategy 7 set out in <i>the Life Plan of the Mi Miraflores - Guaviare Indigenous Peoples</i> , with the principles of self-government, health and traditional medicine, and elders as guardians of ancestral knowledge set forth in the Life Plan of the Lagos del Dorado Indigenous Reserve, <i>in the Life Plan of the Lagos del Dorado Indigenous Reserve</i> , <i>in the Life Plan of the Remanso Indigenous Reservation</i> and <i>in the Life Plan of the Yavilla II Indigenous Reservation</i> , considering that they are aimed at food security and access to land in a manner appropriate for the indigenous economy, the recovery of ancestral knowledge and practices, and the recovery of indigenous knowledge and strengthening of cultural identity.	
Consultation mechanism to define REDD+ activity	Participatory workshops with the members of the reserves and approval at the general assembly.	
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> • Local Communities: Implementer. • Implementing Organization: Implementer. • Other Indigenous Communities with Successful Experiences: Technical Support. • Mayor's Office, Governor's Office, CDA, NGOs, companies and research centers: technical support. 	
Implementation Timeline	From the fourth year of the project.	

Activity ID	A-13				
Indicators for reporting progress					
Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement
# of people who participate in trainings, meetings or training sessions for the development of traditional production systems	A-13.1	Result	Strengthen the capacities of community members for the development of traditional production systems.	Number of people	Implementing Organization Community Representative Governance Coordinator - REDD+ Committee
# of women who participate in trainings, meetings or training sessions for the development of traditional production systems	A-13.2	Result	Strengthen the capacities of women in the communities for the development of traditional production systems.	Number of women	Implementing Organization Community Representative Governance Coordinator - REDD+ Committee
# of families that have established and/or improved farms	A-13.3	Result	Strengthening community members' access to traditional production systems	Number of families	Implementing Organization Community Representative Governance Coordinator - REDD+ Committee
# of hectares of traditional production systems being improved or established	A-13.4	Product	Traditional production systems are implemented or existing production systems are improved.	Area (ha)	Implementing Organization Community Representative Governance Coordinator - REDD+ Committee
# Built or suitable malocas	A-13.5	Product	Construct or adapt malocas to strengthen traditional and ancestral culture	Number of malocas	Implementing Organization Community Representative Governance Coordinator - REDD+ Committee
# of actions carried out to preserve	A-13.6	Result	Promote the preservation of	Number of Shares	Implementing Organization

Activity ID	A-13				
elements of traditional cultural identity			elements of traditional cultural identity		Community Representative Governance Coordinator – REDD+ Committee

Activity ID	A-14				
Description of REDD+ activity	Consolidate the indigenous guard and families that help protect forests and strengthen the capacities of community members to contribute to territorial monitoring and deforestation control.				
Relationship between activity and direct or underlying cause	The consolidation of groups of families that help protect the forests and the strengthening of the capacities of community members contributes to the control and administration of indigenous territory, provides the possibility of involving the population in biodiversity monitoring and follow-up activities, and leads to greater ownership of the protection of the reserve. All this favors the control and prevention of deforestation.				
Compliance with life plans or ethno-development plans	This activity is aligned with Strategies 2 and 3 set out in the <i>Life Plan of the Mi Miraflores-Guaviare Indigenous Peoples</i> , with the principles of conservation of the traditional territory and the environment, and self-government set forth in the Life Plan of the Lagos del Dorado Indigenous Reserve, in the Life Plan of the Lagos del Dorado Indigenous Reserve, in the <i>Life Plan of the Remanso Indigenous Reservation</i> and in the <i>Life Plan of the Yavilla II Indigenous Reservation</i> , considering that they are oriented to the management of territorial affairs and their jurisdiction, as well as the legal security of the territory.				
Consultation mechanism to define REDD+ activity	Participatory workshops with the members of the reserves and approval at the general assembly.				
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> Local Communities: Implementer. Implementing Organization: Implementer. Other Indigenous Communities with Successful Experiences: Technical Support. NGOs, CDAs, companies and research centres: technical support. 				
Implementation Timeline	From the first year of the project.				

Indicators for reporting progress

Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement
# of people who participate in awareness-raising, meetings or training sessions	A-14.1	Result	Strengthen the capacities of community members for territorial monitoring and control of deforestation	Number of people	Implementing Organization Community Representative Monitoring Coordinator –

Activity ID	A-14				
on territorial monitoring					REDD+ Committee
# of women participating in awareness-raising, meetings or training sessions on territorial monitoring	A-14.2	Result	Strengthen the capacities of women in the communities for territorial monitoring and control of deforestation	Number of women	Implementing Organization Community Representative Monitoring Coordinator - REDD+ Committee
Document of constitution or formalization of the Group of Families Protecting the Forest or the Indigenous Guard	A-14.3	Product	Formalize the group of rangers or the indigenous guard.	Number of documents	Implementing Organization Community Representative Monitoring Coordinator - REDD+ Committee
# of members who belong to the Ranger Family Group or the Indigenous Guard	A-14.4	Product	Link community members in the ranger group or indigenous guard	Number of people	Implementing Organization Community Representative Monitoring Coordinator - REDD+ Committee
Programming of the activities of the Forest Ranger Group or the Indigenous Guard in implementation	A-14.5	Product	Implement the scheduling of the monitoring activities of the group of rangers or the indigenous guard.	Number of schedules in implementation	Implementing Organization Community Representative Monitoring Coordinator - REDD+ Committee

Activity ID	A-15
Description of REDD+ activity	Carry out the follow-up and monitoring of the forest in the indigenous reserve.
Relationship between activity and direct or underlying cause	Information on forest tracking and monitoring makes it possible to assess the impact of REDD+ activities on forest protection and wildlife conservation. This information is the basis for decision-making aimed at controlling deforestation, as well as verifying the results that are obtained over time.
Compliance with life plans or	This activity is aligned with Strategies 2 and 3 set out in the <i>Life Plan of the Mi Miraflores-Guaviare Indigenous Peoples</i> , with the principles of conservation of the traditional territory

Activity ID	A-15				
ethno-development plans	and the environment, and self-government set forth in the Life Plan of the Lagos del Dorado Indigenous Reserve, <i>in the Life Plan of the Lagos del Dorado Indigenous Reserve, in the Life Plan of the Remanso Indigenous Reservation and in the Life Plan of the Yavilla II Indigenous Reservation</i> , considering that they are oriented to the management of territorial affairs and their jurisdiction, as well as the legal security of the territory.				
Consultation mechanism to define REDD+ activity	Participatory workshops with the members of the reserves and approval at the general assembly.				
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> Local Communities: Implementer. Implementing Organization: Implementer. CDA, Mayor's Office, Governor's Office, NGOs, companies and research centers: technical support. Sustainable Carbo: Cartographic Analysis and Quantification of Emission Reductions 				
Implementation Timeline	From the first year of the project.				
Indicators for reporting progress					
Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement
# of hectares of forest standing in the project area	A-15.1	Impact	Conserve the forests present in indigenous reserves and monitor the progress of deforestation	Area (ha)	Sustainable Carbo Implementing Organization Community Representative Monitoring Coordinator - REDD+ Committee
# tonnes of CO ₂ e avoided	A-15.2	Impact	Reduce CO ₂ e emissions	Emission reduction (tCO ₂ e)	Sustainable Carbo
# of people employed for community monitoring	A-15.3	Impact	Employ community members in deforestation monitoring and follow-up activities	Number of people	Implementing Organization Community Representative Monitoring Coordinator - REDD+ Committee
# of hectares of forest standing in the leakage area	A-15.4	Impact	Monitor the progress of deforestation and its changes in the coverage of the leakage area	Area (ha)	Sustainable Carbo Implementing Organization

Activity ID	A-15				
					Community Representative Monitoring Coordinator - REDD+ Committee

Activity ID	A-16				
Description of REDD+ activity	Recover vegetation cover through the development of restoration actions with community members.				
Relationship between activity and direct or underlying cause	The development of restoration actions promotes the recovery of forest cover in areas that have been previously intervened, as well as the improvement of connectivity and carbon sequestration conditions. In addition, it favors conservation actions, and the control and prevention of deforestation.				
Compliance with life plans or ethno-development plans	This activity is aligned with Strategy 6 set out in the Life Plan of <i>the Mi Miraflores - Guaviare Indigenous Peoples</i> , with the principle of conservation of the traditional territory and the environment set forth in the Life Plan of the Lagos del Dorado Indigenous Reserve, in the Life Plan of the Lagos del Dorado Indigenous Reserve, in the Life Plan of the Remanso Indigenous Reserve and in the Life Plan of the Yavilla II Indigenous Reserve, considering that they are aimed at the conservation and sustainable use of natural resources, including the design and implementation of management plans and conservation and use systems that reduce deforestation and promote the restoration processes of intervened areas, tags.				
Consultation mechanism to define REDD+ activity	Participatory workshops with the members of the reserves and approval at the general assembly.				
Responsibility and Role of Actors Involved in Implementation	<ul style="list-style-type: none"> Local Communities: Implementer. Implementing Organization: Implementer. Other Indigenous Communities with Successful Experiences: Technical Support. CDA, Mayor's Office, Governor's Office, NGOs, research centers: technical support. 				
Implementation Timeline	From the fifth year of the project.				

Indicators for reporting progress

Name	Indicator ID	Type	Goal	Unit of Measurement	Responsible for Measurement
# of people participating in awareness-raising, meetings or training sessions on restoration	A-16.1	Result	Strengthen the capacities of community members for the development of restoration actions	Number of people	Implementing Organization Community Representative Monitoring Coordinator - REDD+ Committee

Activity ID	A-16				
					Governance Coordinator - REDD+ Committee
# of women participating in awareness-raising, meetings or training sessions on restoration	A-16.2	Result	Strengthen the capacities of women in the communities for the development of restoration actions	Number of women	Implementing Organization Community Representative Monitoring Coordinator - REDD+ Committee Governance Coordinator - REDD+ Committee
# of hectares subject to restoration actions	A-16.3	Product	Develop restoration actions in intervened areas	Area (ha)	Implementing Organization Community Representative Monitoring Coordinator - REDD+ Committee Governance Coordinator - REDD+ Committee

9. REDD+ safeguards

REDD+ Safeguards are measures aimed at preventing the impact on social, economic or environmental rights, as well as the occurrence of negative impacts due to the design and implementation of REDD+ activities. In addition, they include measures to improve the obtaining and distribution of the benefits derived from the implementation of REDD+ activities.

As a mechanism to facilitate the monitoring and compliance with the safeguards, a monitoring matrix was defined (REDD+ Safeguards Monitoring Matrix in folder). Annex 8) and presents the Table 20 by way of summary considering the National

Interpretation of REDD+ Safeguards. Additionally, in order to comply with the guidelines defined in the BCR Standard (version 3.1.), the development of the BCR REDD+ Safeguards Tool is presented. *Tool REDD+_Dabucury REDD+ Safeguards.pdf* in the Annex 8.

Table 20. REDD+ safeguards and compliance.

Thematic	Cancun Safeguard	National Safeguard	Description	Compliance
Institutional	A. Consistent with national forest programmes and international agreements	1. Correspondence with national legislation	<p>The initiative is developed within the framework of the National Forestry Development Plan, the international conventions and agreements signed by Colombia in the field of: Forests, Biodiversity and Climate Change, as well as the national policies corresponding to these agreements.</p> <p>All proposed REDD+ Policies, Actions and Measures must be in correspondence with:</p> <ul style="list-style-type: none"> • The international agreements signed by Colombia. • National legislation (the Constitution, laws and decrees). • National policies, programmes and projects. 	<p>Complies. The initiative complies with the provisions of the National Policy on REDD+ Projects and is part of the climate change management strategies and the forest governance instruments and environmental regulations, as indicated in the Regulatory Framework.</p> <p>In terms of territorial planning, by virtue of Article 330 of the Political Situation of Colombia, and ILO Convention 169, the Indigenous Reserves have autonomy in matters of territorial planning and constitute a special figure of territorial and environmental planning. However, the project will seek synergies through articulation with regional initiatives at the territorial level, which contribute to the conservation objectives of the project</p>
	B. Transparency and effectiveness of forest governance structures	2. Transformation and access to information	<p>Stakeholders have access to transparent, accessible and timely information related to REDD+ actions on the platforms or media that are determined.</p> <p>If there are ethnic groups</p>	<p>Complies. As part of the development of the project, participatory workshops have been held with community members. The workshops have been developed in language appropriate for the understanding of the</p>

Thematic	Cancun Safeguard	National Safeguard	Description	Compliance
			<p>involved, and who do not speak Spanish well, it must be ensured that interpreters of their language are available in the consultation and information spaces, as well as adequate material that facilitates their understanding.</p> <p>Be clear about the following:</p> <ul style="list-style-type: none"> • Which entity is responsible for formulating and implementing the measure. • What are the benefits that will be delivered to the communities in the territory. • The commitments made by the parties involved in the implementation of the measures. 	<p>participants. Some of the topics that have been addressed pertain to the activities of the project and their implications and responsibilities. In addition, the corresponding documents have been submitted.</p> <p>There is a letter of commitment signed by the authorities of the Indigenous Reserves and a record of approval of the activities at the General Assembly held by the communities.</p>
		3. Accountability	<p>Institutions and actors report on their management of REDD+ to stakeholders, institutions and the general public and include information on the implementation and respect of safeguards.</p> <p>Those in charge of implementing REDD+ activities should convene accountability spaces where the reports of their management are presented: what has been done, how, how much has been spent and how resources have been invested, what results there are.</p> <p>Information on the status of implementation of the Risk Reduction and Benefit-</p>	<p>Complies. It is expected that, during the implementation of the project, the representatives of the community and the implementers of the project will present the relevant reports and documents to make an adequate accountability as appropriate, as established in the implementation plan and the monitoring of the project.</p>

Thematic	Cancun Safeguard	National Safeguard	Description	Compliance
			<p>Building Safeguards should be included.</p> <p>The actors involved are committed to attending these information spaces. Accountability reports should be public and accessible to the various actors.</p>	
		4. Recognition of forest governance structures	<p>REDD+ actions are developed in accordance with the existing forest governance structures established by the regulations and/or by establishing the necessary ones among the actors involved in the process (the strengthening or creation of a new structure can be a mechanism for implementing governance).</p> <p>In some cases where several actors are involved, the establishment of new arrangements or articulation mechanisms for decision-making may be required. These can be forestry committees, monitoring committees, or enable spaces for dialogue within the framework of community action boards.</p>	<p>Complies. There is an appropriate governance structure that takes into account the ethnic particularities, knowledge and traditions of the Indigenous Reserves participating in the project, and that is in accordance with the forms of governance and guidelines related to compliance with the safeguard 14.</p>
		5. Capacity building	<p>The strengthening of the technical, legal and administrative governance capacities of the actors directly involved is guaranteed, so that the parties can make documented, analyzed and informed decisions.</p> <p>It is necessary to have</p>	<p>Complies. During the socialization days and in the activities of the project, it is planned to strengthen the technical, legal and administrative capacities of those involved in the project for its proper implementation and to achieve the sustainability of the results</p>

Thematic	Cancun Safeguard	National Safeguard	Description	Compliance
			<p>programs that contribute to the strengthening of the capacities of the actors involved as required in each case:</p> <ul style="list-style-type: none"> • Technical capacities: training on REDD+ issues, climate change, forest governance, sustainable forest management, conservation, monitoring, implementation of sustainable production models, among others. • Legal skills: training in national legislation and international agreements related to these issues. • Administrative skills: training in tools for project monitoring, resource management and accountability. 	over time and once the project ends.
Social & Cultural	C. Respect for traditional knowledge and rights of communities	6. Free, Prior and Informed Consent	When a measure or action directly affects or may directly affect one or more ethnic groups, the national provisions on free, prior and informed consultation and consent established in legislation and jurisprudence, as well as by the guidelines given by the Ministry of the Interior as the competent entity in this matter with the accompaniment of the control bodies, must be applied.	Complies. The project complies with the provisions of current regulations regarding consultation and relations with indigenous communities.
		7. Respect for traditional knowledge	They are recognized, respected and promoted, in accordance with the provisions of national legislation and compliance with international conventions; traditional knowledge systems and the	Complies. The project complies with the regulations of consultation and relations with indigenous communities. During the formulation and implementation of the

Thematic	Cancun Safeguard	National Safeguard	Description	Compliance
			<p>territorial visions of ethnic and local peoples and communities.</p> <p>For the development of any initiative to reduce deforestation, the different cultures that inhabit the territories must be taken into account, respecting their ways of understanding and relating to the environment, so that the traditions, uses and customs of the communities are not affected.</p>	<p>project, the worldview, culture, knowledge and capacities of the communities participating in the project have been taken into account.</p>
		8. Profit Sharing	<p>The fair and equitable sharing and sharing of the benefits generated by policies, measures and actions to reduce deforestation for ethnic and local peoples and communities, and of all those benefits derived from traditional knowledge, innovations and practices for the conservation and sustainable use of forests, is guaranteed; its diversity and ecosystem services.</p>	<p>Complies. There is a mechanism for the distribution of income derived from project activities that ensures that it is done equitably among the project participants, considering the levels of risk and profit of the project.</p>

Thematic	Cancun Safeguard	National Safeguard	Description	Compliance
		9. Territorial rights	<p>The collective and individual territorial rights of ethnic and local peoples and communities are respected; its cultural, economic, and spiritual use and significance.</p> <p>To this end, it is necessary to know what the forms of land tenure in the areas are where REDD+ measures and actions are expected to be implemented and to make decisions accordingly.</p>	<p>Complies. The project is aligned with the regulations for consultation and relations with indigenous communities.</p> <p>The culture, knowledge and capacities of the communities are taken into account in the formulation and implementation of the project activities.</p> <p>In addition, it is recognized that the form of land tenure corresponds to collective property and that the area is titled in favor of the indigenous reservations proposing the project.</p>
	D. Full and effective participation	10. Participation	<p>The right to full and effective participation of all stakeholders is respected to ensure governance and adequate decision-making on REDD+.</p> <p>The structures of participation of each interest group, especially the communities, must be recognized and respected, in accordance with national legislation and international conventions signed by Colombia.</p>	<p>Complies. All interested community representatives have been involved in the participation process for the formulation of the project, taking into account the applicable regulations and considering the organizational structure of the indigenous reservations.</p>
Environmental & Social	E. Conservation and Benefits	11. Conservation of forests and their biodiversity	<p>REDD+ initiatives support forest conservation and the implementation of measures put in place to this end.</p> <p>REDD+ initiatives in the country should not be detrimental to the</p>	<p>Complies. The project seeks to conserve forests, so it is expected that it will allow the conservation of the biodiversity that is present.</p>

Thematic	Cancun Safeguard	National Safeguard	Description	Compliance
			conservation of forests and the biodiversity they support.	
		12. Provision of environmental goods and services	<p>REDD+ initiatives support the provision and enjoyment of ecosystem services.</p> <p>The implementation of REDD+ initiatives should not directly or indirectly affect the benefits provided by ecosystems, which are known as ecosystem services (supply, support, regulation and cultural) such as: water supply, soil, biodiversity, among others.</p>	Complies. The project is expected to improve the conservation of ecosystem resources, so it does not have a negative impact on them.
	F. Prevent risks of reversal	13. Environmental and Territorial Planning	<p>REDD+ initiatives support the consolidation of territorial and environmental planning instruments provided for in legislation, with a focus on conservation and sustainable forest management.</p> <p>It is necessary that the REDD+ initiatives carried out in the country recognize, respect, adapt or strengthen the measures and instruments of territorial and environmental planning that are defined by national legislation. In the same way, it is ideal to encourage citizen participation in the formulation and adjustment of these instruments, in accordance with land uses.</p>	Complies. Within the framework of the strengthening of forest governance, the development of a Territorial Planning Plan is contemplated, taking into account the forms of management defined by the members of the Indigenous Reserves.

Thematic	Cancun Safeguard	National Safeguard	Description	Compliance
			The specific forms of territorial planning of ethnic groups and local communities must also be recognized, so that their permanence over time can be supported.	
		14.Sectoral planning	<p>Sectoral REDD+ actions are proposed on the basis of environmental and territorial planning instruments, as well as legislation related to the conservation of forests and their biodiversity.</p> <p>When a sector defines and implements REDD+ actions, they must be articulated with national legislation that protects forests, their conservation and the diversity they harbor</p>	<p>The project is articulated with the Municipal Development Plan, as it is framed in article 4.2.7. on sustainable development opportunities based on biodiversity and ecosystem services; and Article 4.3 on risk management and climate change. The strategic part supports strategy 6.1.1.2 on poverty reduction and eradication; strategy 6.1.1.11 for attention to ethnic groups and minorities; strategy 6.1.1.12 on education coverage and strengthening; programme 6.1.1.25 on environment and sustainable development; Environmental Education Program 6.1.1.27 (see Annex 12, file 12.6. <i>Miraflores Municipal Development Plan 2020 - 2023</i>).</p> <p>With regard to the Departmental Development Plan, the project supports article 6.1 of articulation with the National Development Plan, in particular the main purpose of sustainable development, conservation of Amazon forests and jungles, preservation of natural, multicultural and multiethnic heritage. Also</p>

Thematic	Cancun Safeguard	National Safeguard	Description	Compliance
				Article 4 in the Strategic Axis of Sustainable Productive and Economic Consolidation, and in particular the solutions for sustainable rurality; in Axis 3 on quality of life, and in particular conditions and access to education, and the safeguarding of cultural heritage; and in Axis 4 on integral sustainable rural development, including the conservation and efficient management of natural resources (See Annex 12, <i>file and 12.5. Guaviare Development Plan 2020 - 2023</i>)
	G. Avoiding Emission Displacement	15. Forest control and surveillance to prevent the displacement of emissions	REDD+ initiatives incorporate measures to reduce emissions displacement into their design and ensure timely monitoring and control when emissions displacement occurs. Community monitoring, articulated with early warning systems of deforestation, and the activation of protocols that allow for timely responses, can be decisive in ensuring that the problems associated with forest loss and degradation do not spread to other places.	Complies. One of the objectives of the project is to contribute to the monitoring and conservation of forests and biodiversity present in the territory through the development of actions aimed at monitoring and control of the territory.

10. Contribution to the SDGs

The project contributes to the fulfillment of the Sustainable Development Goals (SDGs), as it seeks to improve the living conditions of communities, income generation and promote sustainable economic and social development alternatives,

in addition to strengthening territorial environmental management, as well as adaptation and mitigation of climate change, and favoring the conservation of vegetation cover in the territory of the indigenous reserves that make up the project and the biodiversity that they harbor.

The SDGs to which the project contributes are:

- SDG 1 – No Poverty: the project contributes to increasing the income of the beneficiaries through the diversification of sources of income and the implementation of sustainable economic alternatives.
- SDG 2 – Zero Hunger: as the income of the communities improves, it is expected that the food security of the members that make them up will be strengthened, in addition to developing actions to strengthen and improve traditional production systems.
- SDG 3 – Good Health and Well-being: Part of the social investment focuses on improving the provision of health services for the community.
- SDG 4 – Quality Education: with the implementation of the project, access to education is strengthened as it is planned to improve the available infrastructure, develop scholarship programs, training programs, among others.
- SDG 5 – Gender Equity: the project promotes the participation of women in the activities to be implemented and their participation in decision-making spaces.
- SDG 6 – Clean Water and Sanitation: The project strengthens access to basic sanitation in family homes.
- SDG 7 – Affordable and Clean Energy: the project promotes access to clean energy and household electricity interconnection.

- SDG 8 – Decent Work and Economic Growth: The project promotes the development of sustainable economic activities that increase the income of families in the community.
- SDG 10 – Reduced Inequalities: the project seeks to contribute to the reduction of inequalities by hoping to generate decent jobs and income-generating alternatives.
- SDG 11 – Sustainable Cities and Communities: the project promotes sustainable communities as it seeks to conserve vegetation and biodiversity in the territory, the development of productive activities compatible with nature, improve economic income and strengthen community well-being.
- SDG 13 – Climate Action: the project seeks to reduce GHG emissions from deforestation and forest degradation in the territory of the Indigenous Reserves.
- SDG 15 – Life on Land: the project seeks to reduce deforestation and degradation of existing forest cover in the territory, thus contributing to the conservation of biodiversity.
- SDG 17 – Partnerships for the Goals: The project promotes partnerships between community-based organizations and the private sector. It has also been articulated with the action plans of the public institutions present at the local and regional level.

To demonstrate compliance and monitor progress in terms of SDG contribution, the Tool for the determination of contributions to the SDGs of GHG Projects defined by BIOCARBON REGISTRY is presented, see *Annex 18*.

11. Environmental and socio-economic aspects

In accordance with the provisions of the BCR Standard, version 3.0, project owners must demonstrate that no damage is generated to the environment, communities, or

society in general as a result of the implementation of the initiative. Since it was not found that the project could generate adverse effects in these aspects, according to the BCR Tool Avoided Damages and Social and Environmental Safeguards, version 1.0 of March 7, 2023, it is not necessary to design or define corrective actions to prevent adverse impacts.

The analysis developed for the aforementioned aspects is presented below:

Environmental aspects:

Aspect	Flora
Expected impact	Positive
Justification	The project consists of an initiative to reduce and avoid deforestation, which contributes to the maintenance of the connectivity, structure and ecological composition of ecosystems. This ensures the availability of ecosystem services and the conservation of species of flora and fauna that are under some degree of threat.

Aspect	Fauna
Expected impact	Positive
Justification	The objectives of the project include the conservation and restoration of forests, which will improve biological connectivity, and the conservation and recovery of the species that support the forests.

Aspect	Ecosystems
Expected impact	Positive
Justification	The project seeks to avoid deforestation, which contributes to the maintenance of the ecological structure and composition.

Socio-economic aspects:

Aspect	Capacity building
Expected impact	Positive
Justification	Activities are contemplated that allow the development and strengthening of capacities in the implementation and management of sustainable production systems, as well as in climate change, forest management, project management, governance, among others.

Aspect	Governance
Expected impact	Positive
Justification	Capacity and governance for the control of the territory with the members of the community is strengthened.

Aspect	Economic conditions
Expected impact	Positive
Justification	The project includes the development of sustainable profitable productive activities. Also, the community receives new sources of income corresponding to the profits from the commercialization of the CCVs generated.

Aspect	Cultural identity
Expected impact	Positive
Justification	The project seeks to generate spaces for the strengthening of cultural identity, including language, medicine, traditional production systems, support for grandparents and maloqueros, and traditional and ancestral knowledge.

Aspect	Access to education
Expected impact	Positive
Justification	Within the framework of the implementation of the REDD+ strategy, it seeks to provide mechanisms and scholarships for community members to access formal education (access to higher education, training).

Aspect	Access to health care
Expected impact	Positive
Justification	Within the framework of the implementation of the REDD+ strategy, it seeks to develop mechanisms and elements to access health services.

Aspect	Housing
Expected impact	Positive
Justification	Within the framework of the implementation of the REDD+ strategy, it is expected to improve access to clean water, basic sanitation, energy and housing conditions.

12. Special Categories

As defined in section 19.2 of version 3.0 of the BCR Standard developed by BioCarbon Registry, considering that the project has positive impacts in the environmental and social spheres, the project is considered to meet the requirements defined in the special category of Wax Palm:

Table 21. Cobenefits - Wax Palm Category.

Criterion	Requirement	Compliance
Biodiversity conservation	It carries out restoration activities for degraded ecosystems.	The project addresses ecosystem restoration actions in previously intervened areas, as defined in activity A-16.
	In the project area there are High Conservation Values.	The project area has High Conservation Values for its biological, social, ecological and cultural characteristics, as described in section 5.1. of the DDA (section c.).
	The project is located in areas with the presence of globally threatened areas (IUCN Red List) and develops actions aimed at the conservation of these species.	The area has ecosystems corresponding to the Tropical Humid Zonobiome, which are in the category of Critically Endangered according to the guidelines defined by the IUCN. Also, species of flora and fauna present in the area that are in the vulnerable, endangered and critically endangered category in the project area have been identified, as indicated in section 5.1. of the DDA (section b., (Etter, Andrade, Amaya, & Arévalo Paulo, 2017) Table 7 and Table 8). Some of the actions aimed at the conservation of these species lie in the reduction of deforestation (objective of the project), restoration of degraded ecosystems with native species and implementation of management measures for biodiversity in production systems.
Benefits to Communities	It implements sustainable production systems, changing production and conservation actions to generate local development.	The development of sustainable productive activities is expected to promote the transition from activities that involve deforestation to productive activities compatible with forest conservation and sustainable local development (activity A-3, indicators A-3.5 and A-3.6).

Criterion	Requirement	Compliance
Gender Equity	It supports actions that give women the right to economic resources on an equal footing, as well as access to ownership and control of land and other assets, financial services, inheritance and natural resources, in accordance with national laws.	The project has defined activities that allow women equal access to economic resources, mainly through the development of productive activities that generate surpluses and improve their economic conditions (activity A-2, indicator A-2.2; activity A-3, indicators A-3.2, A-3.4; activity A-13, indicators A-13.2, A-13.3).

13. Reduction of GHG emissions from REDD+ activities

13.1. Managing Uncertainty

The uncertainty of the project's reduction estimates is related to activity data and emission factors. The data of the activity of the Dabucury REDD+ project (deforestation and forest degradation) were calculated using information from the SMByC, following the methodological approach described in the Digital Image Processing Protocol for the Quantification of Deforestation in Colombia V.2 of the IDEAM (Galindo *et al* 2014). In the same way, emission factors (carbon contents per reservoir) were taken from this study. Therefore, and following the guidance of the BCR0002 methodology, version 3.1 of 2022, the uncertainty associated with these sources of information corresponds to the uncertainty of the estimates of reductions made within the framework of the Dabucury REDD+ Project. Thus, the uncertainty values reported directly by IDEAM in the NREF document were used, which correspond to 9% in activity data, 2.1% in aboveground biomass, and 2% in soil organic carbon (MinAmbiente and IDEAM, 2019). Using the equation for the combination of the uncertainties of various emission sources proposed by the IPCC (2006), the uncertainty of the emission factor was calculated. Using the equation for combination of uncertainties of the emission source, also proposed by the IPCC (2006), the approximate error of the Project reductions was calculated.

A) Reference equation for combining uncertainties from various emission sources:

$$t = \frac{\sqrt{(A \times a)^2 + (B \times b)^2 + (C \times c)^2}}{T}$$

Where:

t: Total uncertainty; T: Total associated greenhouse gas emissions. A=Category A emissions, a=uncertainty of Category A emissions, B=Category B emissions, b=uncertainty of Category B emissions, ... N=Category N emissions, n=uncertainty of Category N emissions.

a) *Uncertainty of the Emission Factor:*

Biomass in the Amazon area: = 444.8 tCO₂/ha/year

Organic carbon in Amazonian soil: 14 tCO₂/ha/year

Uncertainty emission factor = Root((444.8 tCO₂/ha/year * 2.1%)+(14 tCO₂/ha/year))

Uncertainty emission factor = 2.04%

b) *Uncertainty of the activity data:*

Activity data: 9%

B) Reference equation for combining uncertainties of an emission source;

$$U_{total} = \sqrt{U_1^2 + U_2^2 + \dots + U_n^2}$$

Where

Total U: Total uncertainty; U₁ = percentage of uncertainty at each of the sources of uncertainty.

(c) *Uncertainty of project reductions:*

Uncertainty of Project Estimates = Root ((2.04)²+(9)²)

Uncertainty of Project Estimates = 9.3%

This procedure was included in the DDA and in the monitoring report, in the final uncertainty estimation section.

In order to reduce uncertainty, maps with an accuracy of 9% were used to estimate the data values of the activities and the emission factors developed at the national level to report the Reference Level that represent a 10% uncertainty (IDEAM, 2019).

By combining the uncertainties of the activity data and the emission factors, the estimates of emission reductions were estimated to have an uncertainty of 9.3%.

13.2. Activity data

13.2.1. Deforestation

13.2.1.1. *Estimating the Deforestation Rate from the Historical Average*

To estimate the deforestation rate, an analysis of the change from forest to non-forest cover was made between at least two dates, in this case 2008 and 2018 were taken. In addition, gross deforestation was taken for estimation and forest losses after one or more dates without information were omitted in order not to overestimate the rates.

13.2.1.2. *Annual historical deforestation in the reference region*

For the estimation of annual historical deforestation in the reference region, the following equation is used:

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

$$CSB_{año} = \left(\frac{1}{2018 - 2008} \right) \times (820.105,48 \text{ ha} - 741.466,39 \text{ ha})$$

$$CSB_{año} = 7.863,91 \text{ ha}$$

Where:

- $CSB_{año}$ = Annual change in forest cover area in the reference region (ha)
- t_2 = Final year of the reference period
- t_1 = Initial year of the reference period
- A_1 = Forest area of the area under control at the initial time (ha)
- A_2 = Forest area of the area under control at final time (ha)

13.2.1.3. Projected annual deforestation in the REDD+ project scenario

For the estimation of annual historical deforestation in the REDD+ project scenario, the following equation is used:

$$CSB_{proy,año} = CSB_{lb,año} \times \% \text{ aumento por circunstancias nacionales} \times (1 - \%DD)$$

$$CSB_{proy,2019} = 1.109,88 \text{ ha} \times 38,58\% \times (1 - 80\%)$$

$$CSB_{proy,2019} = 1.538,07 \text{ ha} \times 20\%$$

$$CSB_{proy,2019} = 307,61 \text{ ha}$$

Where:

$CSB_{proy,año}$	=	Annual change in forest area under the project scenario (ha)
$CSB_{lb,año}$	=	Annual change in forest cover in the no-project scenario (ha)
$\%DD$	=	Projected decrease in deforestation due to the implementation of REDD+ activities

13.2.1.4. Historical annual deforestation in the leakage area

To estimate deforestation in the leakage area, the following equation is used:

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

$$CSB_{f,año} = \left(\frac{1}{2018 - 2008} \right) \times (34.370,97 \text{ ha} - 33.094,03 \text{ ha})$$

$$CSB_{f,año} = 127,69 \text{ ha}$$

Where:

$CSB_{f,año}$	=	Annual change in forest area in the leakage area, in the no-project scenario (ha)
t_2	=	Final year of the reference period

- t_1 = Initial year of the reference period
- $A_{1,f}$ = Forest area of the leakage area at the beginning of the reference period (ha)
- $A_{2,f}$ = Forest area of the leakage area at the end of the reference period (ha)

13.2.1.5. Projected annual deforestation in the leakage area in the project scenario

To estimate the projected annual deforestation in the leakage area in the REDD+ project scenario, the following equation is used:

$$CSB_{REDD+proy,faño} = CSB_{f,lb} \times (1 + \%Ef)$$

$$CSB_{REDD+proy,f2019} = 122,95 \text{ ha} \times (1 + 10\%)$$

$$CSB_{REDD+proy,f2019} = 135,24 \text{ ha}$$

Where:

- $CSB_{REDD+proy,faño}$ = Annual change in the area covered by forest in the leakage area, in the project scenario (ha)
- $CSB_{f,lb}$ = Annual change in forest area in the leakage area, in the no-project scenario (ha)
- $\%Ef$ = Percentage increase in emissions in the area of leakage due to the implementation of REDD+ activities.

13.2.2. Degradation

The degradation analysis is carried out based on a fragmentation analysis, as provided by the methodology carried out by the SMByC Forest and Carbon Monitoring System office of the Institute of Hydrology, Meteorology and Environmental Studies – IDEAM in 2018.

To estimate forest degradation through fragmentation analysis, the Non-Forest forest cover layers of the study area from the years 2008, 2016, 2018, and 2020 were used, the



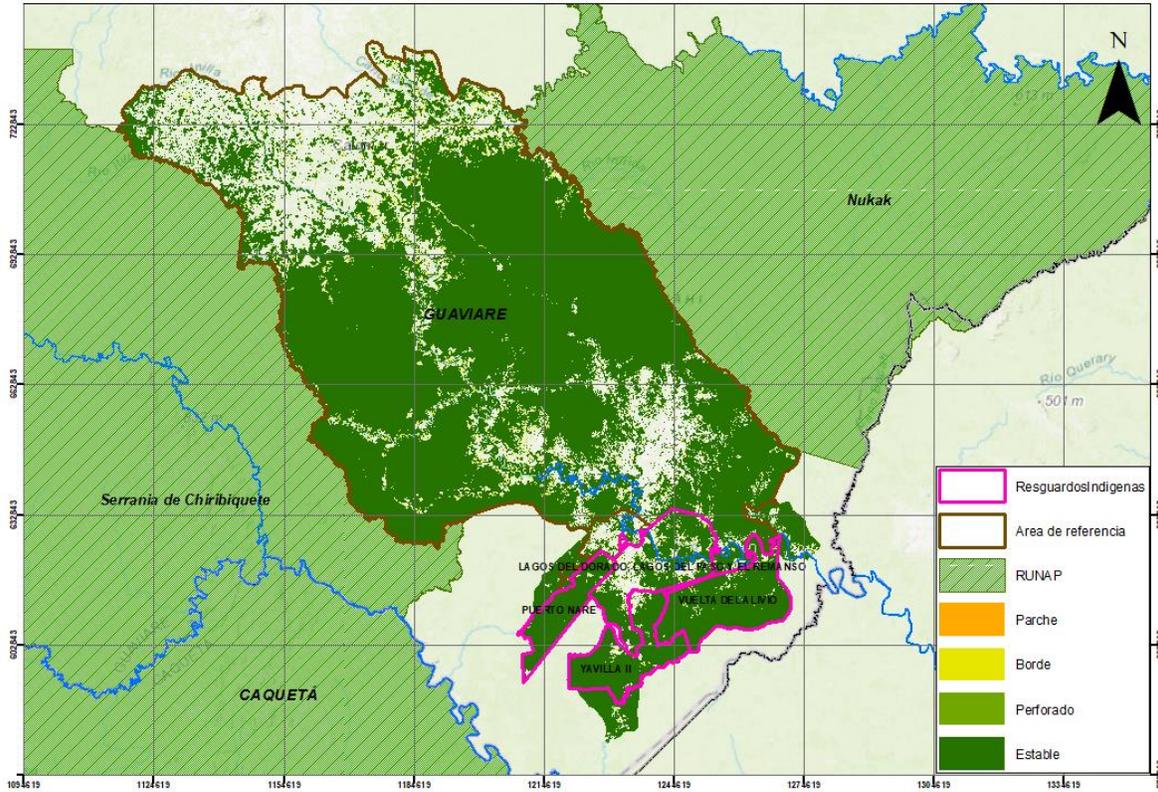
Landscape Fragmentation Tool for ESRI's ArcMap software was used, which performs an analysis of distances to the forest edge.

The selected distance is 50 meters at the edge and a comparison was made between the fragmentation classes of the different periods in order to establish the transitions from one period to another.

For the study, we took into account the transition that exists when going from forest fragments with a minimum area of 200 ha called Nucleus to forest areas with areas less than 100 ha called patch, whose transition is called Primary Degradation, and the transition that occurs when passing from non-forest areas surrounded by forest fragments between 100 and 200 ha called Perforated to patch areas which is called Secondary Degradation.

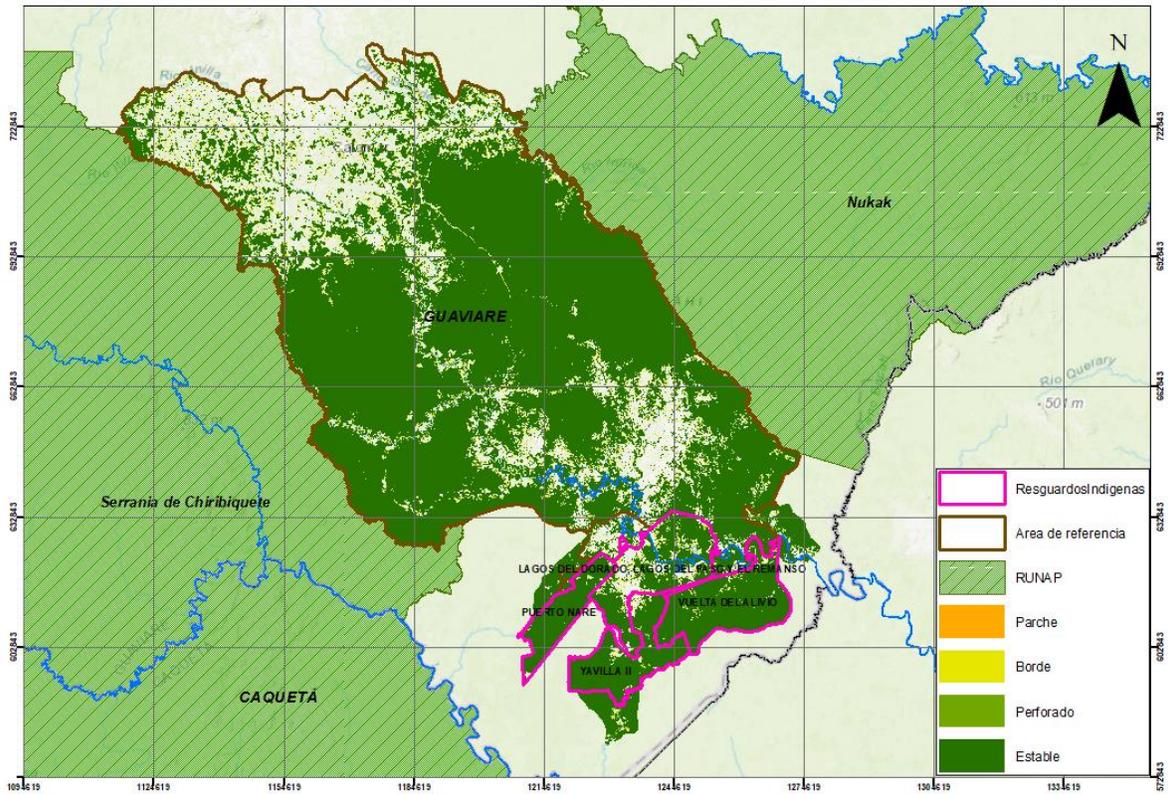
13.2.2.1. Cartographic Information Layer Used

PROYECTO DABUCURY
MAPA DE DEGRADACION AÑO 2008 EN EL ÁREA DE PROYECTO, AREA REFERENCIA Y FUGAS
GUAVIARE - COLOMBIA



Map 21. Degradation in the project area, reference region and leakage area in 2008. Source: Authors.

PROYECTO DABUCURY
MAPA DE DEGRADACION AÑO 2018 EN EL ÁREA DE PROYECTO, AREA REFERENCIA Y FUGAS
GUAVIARE - COLOMBIA



Map 22. Degradation in the project area, reference region and leakage area in 2018. Source: Authors.

13.2.2.2. Fragmentation Classes

Table 22. Fragmentation classes in reference region.

Class	Area (ha)			
	2007 (biomass map)	2008	2016	2018
Nucleus		819.903,78	817.966,22	817.812,12
Perforated		202	2.139,56	154,1
Patch		6	17,35	133,2

13.2.2.3. Precision analysis to reduce uncertainty in forest degradation estimates

The data on forest degradation in the territory of the reserves were calculated using information from the SMByC, following the methodological approach described in the Digital Image Processing Protocol for the Quantification of Deforestation in Colombia V.2 of IDEAM (Galindo et al 2014). This protocol is based on determining the changes in aboveground biomass present in different assigned forest cover classes through a fragmentation analysis. Fragmentation makes it possible to estimate forest degradation, as it involves not only a reduction in forest area, but also the division of the remaining forest into patches that could continue to decrease in size over time. According to the guidance of the BCR0002, version 3.1 of 2022, the uncertainty associated with this source of information is determined by the accuracy of the maps used. Taking into account that the inputs and procedures defined by the SMByC were used to identify forest degradation, the associated uncertainty corresponds to 9% (MinAmbiente and IDEAM, 2019).

13.2.2.4. Transitions Between Fragmentation Classes

Table 23. Transition of fragmentation classes (ha) for the period from 2008 to 2016 in reference region.

Year 1 Class/Year 2 Class	Perforated	Patch
Nucleus	2.139	
Perforated		17

Table 24. Transition of fragmentation classes (ha) for the period from 2016 to 2018 in reference region.

Year 1 Class/Year 2 Class	Perforated	Patch
Nucleus	154	
Perforated		133

13.2.2.5. Annual historical degradation in baseline reference area

For the estimation of the annual historical degradation in the project area in the scenario without a REDD+ project, we start with the use of the following equation:

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

$$DFP_{lb,año} = 172,24 \text{ ha}$$

Where:

- $DFP_{lb,año}$ = Annual historical primary degradation at baseline (ha)
 t_2 = Final year of the reference period
 t_1 = Initial year of the reference period
 $A_{núcleo.lb}$ = Area of the reference region in core class in the year of the start of the reference period (ha)
 $A_{núcleo-par,lb}$ = Area of the reference region that goes from core to patch in the final year of the reference period (ha)

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

$$DFS_{lb,año} = 34,38 \text{ ha}$$

Where:

- $DFS_{lb,año}$ = Annual historical secondary degradation in the no-project scenario (ha)
 t_2 = Final year of the reference period
 t_1 = Initial year of the reference period
 $A_{perforado.lb}$ = Area of the reference region in drilled class in the year of start of the reference period (ha)
 $A_{perforado-par,lb}$ = Area of the reference region that goes from drilled to patch in the final year of the reference period (ha)

13.2.2.6. Annual historical degradation in the area of leakage in the baseline scenario

For the estimation of degradation in the leakage area, in the scenario without a REDD+ project, the following equations are used:

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

$$DFP_{lb,f,año} = 4,29 \text{ ha}$$

Where:

- $DFP_{lb,f,año}$ = Annual primary degradation in the leakage area (ha)
 t_2 = Final year of the reference period

- t_1 = Initial year of the reference period
 $A_{núcleo,lb,f}$ = Leakage area in core class in the year of the start of the reference period (ha)
 $A_{núcleo-par,lb,f}$ = Leakage area that transitions from core to patch in the final year of the reference period (ha)

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

$$DFS_{lb,f,año} = 0,60 \text{ ha}$$

Where:

- $DFS_{lb,f,año}$ = Annual secondary degradation in the leakage area (ha)
 t_2 = Final year of the reference period
 t_1 = Initial year of the reference period
 $A_{perforado,lb,f}$ = Leakage area in drilled class in the year of start of the reference period (ha)
 $A_{perforado-par,lb,f}$ = Leakage area going from drill to patch in the final year of the reference period (ha)

13.2.2.7. *Projected annual degradation in the project area in the REDD+ project scenario*

For the estimation of the projected degradation in the project area, the following equation is used:

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

$$DFP_{REDD+proy,año} = 24,31 \text{ ha} \times (1 - 70\%)$$

$$DFP_{REDD+proy,año} = 7,29 \text{ ha}$$

Where:

- $DFP_{REDD+proy,año}$ = Annual primary degradation in the project area in the project scenario (ha)

DFP_{lb} = Annual historical primary degradation in the no-project scenario (ha)
 $\%DFS$ = Projected decrease in degradation due to the implementation of REDD+ activities

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

$$DFS_{REDD+,proy,año} = 4,85 \text{ ha} \times (1 - \%70)$$

$$DFS_{REDD+,proy,año} = 1,45 \text{ ha}$$

Where:

$DFS_{REDD+,proy,año}$ = Secondary degradation in the project scenario (ha)
 DFS_{lb} = Annual historical secondary degradation in the no-project scenario (ha)
 $\%DFS$ = Projected decrease in degradation due to the implementation of REDD+ activities

13.2.2.8. Projected annual degradation in the area of leaks in the REDD+ project scenario

For the estimation of degradation in the scenario with the REDD+ project, in the leakage area, the following equations are used:

$$DFP_{f,año} = DFP_f \times (1 + \%Ef)$$

$$DFP_{f,año} = 4,73 \text{ ha}$$

Where:

$DFP_{f,año}$ = Annual primary degradation of the leakage area in the project scenario (ha)
 DFP_f = Annual historical primary degradation of the leakage area in the no-project scenario (ha)
 $\%Ef$ = Percentage increase in emissions in the area of leakage due to the implementation of REDD+ activities.

$$DFS_{f,año} = DFS_f \times (1 + \%Ef)$$

$$DFS_{f,año} = 0,66 \text{ ha}$$

Where:

- $DFS_{f,año}$ = Annual secondary degradation of the leakage area in the project scenario (ha)
- DFS_f = Annual historical secondary degradation of the leakage area in the no-project scenario (ha)
- $\%Ef$ = Percentage increase in emissions in the area of leakage due to the implementation of REDD+ activities.

13.3. Emission Factors

13.3.1. Deforestation

13.3.1.1. Carbon Emission Factor in Total Biomass

The estimate of the carbon dioxide equivalent contained in the total biomass is estimated from the seventh equation:

$$CBF_{eq} = BT \times FC \times \frac{44}{12}$$

$$CBF_{eq} = 315 \times 0,47 \times \frac{44}{12}$$

$$CBF_{eq} = 544 \frac{tCO_2e}{ha}$$

Where:

- CBF_{eq} = Carbon dioxide equivalent contained in total biomass (tCO₂e/ha)
- BT = Total biomass (t/ha)
- FC = Dry matter carbon fraction (0.47)

13.3.1.2. Soil Carbon Emission Factor

The estimate of the carbon dioxide equivalent contained in soils is estimated from the following equation:

$$COS_{eq} = \frac{COS}{20} \times \frac{44}{12}$$

$$COS_{eq} = 13 \frac{tCO_2e}{ha}$$

Where:

- COS_{eq} = Carbon dioxide equivalent contained in soils (tCO₂e/ha)
- COS = Soil carbon content (tC/ha)

13.3.1.3. Total Carbon Emission Factor

The total carbon emission factor is estimated from the following equation:

$$CT_{eq} = CBF_{eq} + COS_{eq}$$

$$CT_{eq} = 557,6 \frac{tCO_2e}{ha}$$

Where:

- CT_{eq} = Total carbon dioxide equivalent (tCO₂e/ha)
- CBF_{eq} = Carbon dioxide equivalent contained in total biomass (tCO₂e/ha)
- COS_{eq} = Carbon dioxide equivalent contained in soils (tCO₂e/ha)

13.3.2. Degradation

Table 25. Aboveground biomass by fragmentation class.

Fragmentation Class	Average biomass by class (tCO ₂ /ha)
Nucleus	557
Perforated	331

Patch	255
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Table 26. Difference in aboveground biomass by type of fragmentation.

Transition ID	Transition Classes	Fragmentation	Average difference in aboveground biomass (tCO ₂ /ha)
1	Core – patch		226
2	Perforated – patch		76

13.4. GHG emissions in the period of analysis

13.4.1. Deforestation

The annual emission from deforestation in the baseline scenario is calculated from the following equation:

$$EA_{lb} = DA_{lb} \times CT_{eq}$$

$$EA_{lb,2019} = 1.109,88 \text{ ha} \times 138,58\% (\text{circunstancias nacionales}) \times 557,6 \frac{tCO_2e}{ha}$$

$$EA_{lb,2019} = 857.628 tCO_2e$$

Where:

EA_{lb} = Annual emission in the baseline scenario (tCO₂)

DA_{lb} = Annual historical deforestation in the baseline scenario (ha)

CT_{eq} = Carbon dioxide equivalent contained in soils (tCO₂e/ha)

The annual emission from deforestation in the project scenario is calculated from the following equation:

$$EA_{REDD+proy,año} = DA_{REDD+proy} \times CT_{eq}$$

$$EA_{REDD+proy,2019} = 307,61 \text{ ha} \times 557,6 \frac{tCO_2e}{ha}$$

$$EA_{REDD+proy,2019} = 171.525 \text{ tCO}_2e$$

Where:

$$EA_{REDD+proy,año} = \text{Annual emission in the project scenario (tCO}_2\text{)}$$

$$DA_{REDD+proy} = \text{Annual historical deforestation in the project scenario (ha)}$$

$$CT_{eq} = \text{Total carbon dioxide equivalent (tCO}_2e\text{/ha)}$$

The annual emission from deforestation in the leakage area is estimated from the following equation:

$$EA_{f,año} = DA_f \times CT_{eq}$$

$$EA_{f,año} = 135,24 \text{ ha} \times 557,6 \frac{\text{tCO}_2e}{\text{ha}}$$

$$EA_{f,año} = 75.412 \text{ tCO}_2e$$

Where:

$$EA_{f,año} = \text{Annual emission in the leakage area (tCO}_2\text{/ha)}$$

$$DA_f = \text{Annual historical deforestation in the leakage area (ha)}$$

$$CT_{eq} = \text{Total carbon dioxide equivalent (tCO}_2e\text{/ha)}$$

13.4.2. Degradation

The annual degradation emission in the baseline scenario is calculated from the following equation:

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

$$EA_{d,lb,2019} = 5.896 \text{ tCO}_2$$

Where:

$$EA_{d,lb,año} = \text{Annual emission due to degradation in the baseline scenario (tCO}_2\text{)}$$

$$DFP_{lb,año} = \text{Annual historical primary degradation at baseline (ha)}$$

- $DFS_{lb,año}$ = Annual historical secondary degradation in the no-project scenario (ha)
- $DCBT_{DP}$ = Carbon dioxide equivalent contained in the difference total biomass per hectare in the case of primary degradation (tCO₂e/ha)
- $DCBT_{DS}$ = Carbon dioxide equivalent contained in the difference total biomass per hectare in the case of secondary degradation (tCO₂e/ha)

The annual emission due to degradation in the project scenario is calculated from the following equation:

$$EA_{d,REDD+proy,año} = (DFP_{REDD+proy,año} \times DCBT_{DP}) + (DFS_{REDD+proy,año} \times DCBT_{DS})$$

$$EA_{d,REDD+proy,2019} = 1.761 \text{ tCO}_2$$

Where:

- $EA_{d,REDD+proy,año}$ = Annual emission due to degradation in the project scenario (tCO₂/ha)
- $DFP_{REDD+proy,año}$ = Annual historical primary degradation in the project scenario (ha)
- $DFS_{REDD+proy,año}$ = Annual historical secondary degradation in the project scenario (ha)
- $DCBT_{DP}$ = Carbon dioxide equivalent contained in the difference total biomass per hectare in the case of primary degradation (tCO₂e/ha)
- $DCBT_{DS}$ = Carbon dioxide equivalent contained in the difference total biomass per hectare in the case of secondary degradation (tCO₂e/ha)

The annual emission due to degradation in the leakage area in the project scenario is calculated from the following equation:

$$EA_{d,f,año} = (DFP_{f,año} \times DCBT_{DP}) + (DFS_{f,año} \times DCBT_{DS})$$

$$EA_{d,f,2019} = 1.120 \text{ tCO}_2$$

Where:

$EA_{d,f,año}$	=	Annual emission due to degradation in the leakage area (tCO ₂ e/ha)
$DFP_{f,año}$	=	Annual historical primary degradation in the leakage area (ha)
$DFS_{f,año}$	=	Annual historical secondary degradation in the leakage area (ha)
$DCBT_{DP}$	=	Carbon dioxide equivalent contained in the difference total biomass per hectare in the case of primary degradation (tCO ₂ e/ha)
$DCBT_{DS}$	=	Carbon dioxide equivalent contained in the difference total biomass per hectare in the case of secondary degradation (tCO ₂ e/ha)

13.5. Reduction of GHG emissions expected with the implementation of REDD+ activities

13.5.1. Deforestation

The reduction in emissions from avoided deforestation is estimated from the following equation:

$$RE_{DEF,REDD+proy} = (t_2 - t_1) \times (EA_{DEF,lb,año} - EA_{DEF,REDD+proy,año} - EA_{DEF,f,año})$$

$$RE_{DEF,REDD+proy} = 13.674.393 \text{ tCO}_2e^1$$

Where:

$RE_{DEF,REDD+proy}$	=	Reduction of emissions from deforestation avoided in the project scenario (tCO ₂ e)
t_2	=	Final year of the reference period

¹ La aplicación de la fórmula se realizó para cada uno de los años de implementación, considerando que en la medida que pasa el tiempo hay una reducción en la cobertura de bosque presente cada año (ver anexo 15).

t_1	=	Initial year of the reference period
$EA_{DEF,lb,año}$	=	Annual emission from deforestation in the baseline scenario (tCO ₂ e)
$EA_{DEF,REDD+proy,año}$	=	Annual emission from deforestation in the project area (tCO ₂ e)
$EA_{DEF,f,año}$	=	Annual emission from deforestation in the leakage area (tCO ₂ e)

13.5.2. Degradation

The emission reductions from avoided degradation are estimated from the following equation:

$$RE_{DEG,REDD+proy} = (t_2 - t_1) \times (EA_{DEG,lb,año} - EA_{DEG,REDD+proy,año} - EA_{DEG,f,año})$$

$$RE_{DEG,REDD+proy} = 119.843 \text{ tCO}_2\text{e}^2$$

Where:

$RE_{DEG,REDD+proy}$	=	Reduction of emissions due to degradation avoided in the project scenario (tCO ₂ e)
t_2	=	Final year of the reference period
t_1	=	Initial year of the reference period
$EA_{DEG,lb,año}$	=	Annual emission of degradation in the baseline scenario (tCO ₂ e)
$EA_{DEG,REDD+proy,año}$	=	Annual emission of degradation in the project area (tCO ₂ e)
$EA_{DEG,f,año}$	=	Annual emission of degradation in the leakage area (tCO ₂ e)

13.5.3. Total Reductions

² La aplicación de la fórmula se realizó para cada uno de los años de implementación, considerando que en la medida que pasa el tiempo hay una reducción en la cobertura de bosque presente cada año (ver anexo 15).

The reduction in total avoided emissions is estimated from the following equation:

$$RE_{REDD+proy} = RE_{DEF,REDD+proy} + RE_{DEG,REDD+proy}$$

$$RE_{REDD+proy} = 13.794.236 \text{ tCO}_2e$$

14. Monitoring plan

The monitoring plan lays out the procedures for proper monitoring of project activities, compliance with safeguards, and reduction of GHG emissions at the project level.

The plan envisages collecting relevant information and data to:

- i. Verify the applicability conditions listed in the section 2 Applicability of the methodology.
- ii. Verify changes in the carbon stocks of selected reservoirs.
- iii. Check for project emissions and leaks.

The collected data will be archived for at least a period of two years after the end of the last project period. It will include the data and parameters monitored, the methods used for their generation, their proper collection and archiving, and the processes related to sampling models and quality control.

14.1. Project Boundaries

The monitoring of the project boundaries will be carried out using Geographic Information Systems (GIS) tools based on the georeferencing of the project area, reference region and leakage area of the project, during the development of the project, following the technical specifications required for cartographic products.

The monitoring of the reduction of emissions from deforestation and degradation will be carried out for the geographical areas contemplated in the project. Periodic verification of deforestation and degradation in the project area shall be carried out

following the guidelines set out in section 13.5. Reduction of GHG emissions expected with the implementation of REDD+ .

14.2. Implementation of REDD+ activities

Below is the monitoring plan for the project's activities, including compliance with the Sustainable Development Goals (SDGs):

Activity ID	A-1
Indicator ID	A-1.1
Indicator Name	# of people participating in meetings, surveys or workshops on problem tree and identification of drivers of deforestation and productive systems and governance management
Type	Result
Goal	Workshops or meetings are held in a participatory manner.
SDGs to be met	SDG1 (Carbon Revenues and Productive Projects), SDG2 (Productive Projects), SDG8 (Productive Projects and Governance Activities), SDG13 (Emission Reductions), SDG15 (Forest Habitat Protection),
Unit of Measurement	Number
Monitoring Methodology	For the measurement and reporting of this indicator, the number of participants in the meetings, workshops or surveys carried out is taken into account and the value obtained is reported.
Monitoring Frequency	Annually
Responsible for measurement	Sustainable Carbo Terra Commodities Representative of the communities
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Photographic record and/or videos. • Attendance lists for workshops and meetings convened. • Minutes of meetings and workshops convened. • Surveys applied to community members.
Remarks	Available documentation must be used

Activity ID	A-1
Indicator ID	A-1.2
Indicator Name	# of legal support agreements for the development and implementation of the project, including carbon credit trading
Type	Result
Goal	Development and commercialization agreements in place
Unit of Measurement	Number of agreements

Monitoring Methodology	For the measurement and reporting of this indicator, the signed agreements and the minutes or reports related to their subscription will be reviewed
Monitoring Frequency	Annually
Responsible for measurement	Sustainable Carbo Terra Commodities Indigenous Reservations
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Legal Agreements • Minutes of meetings
Remarks	Available documentation must be used

Activity ID	A-1
Indicator ID	A-1.3
Indicator Name	Registration of a project in an emission reduction certification program
Type	Result
Goal	Project Registration
Unit of Measurement	Registration
Monitoring Methodology	Registration Review on Registration Platform
Monitoring Frequency	Annually
Responsible for measurement	Sustainable Carbo Terra Commodities
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Registration number • Link to field on platform
Remarks	

Activity ID	A-2
Indicator ID	A-2.1
Indicator Name	# of people involved in the development of production systems who participate in training or training sessions for the management of prioritized production systems.
Type	Result
Goal	All the people involved in the development of production systems participate in training or training sessions for the management of the prioritized production systems.
SDGs to be met	SDG1 (productive projects), SDG2 (productive projects), SDG8 (productive projects), SDG13 (emission reduction), SDG15 (forest habitat protection)
Unit of Measurement	Number

Monitoring Methodology	To measure this indicator, the number of community members who attend the training sessions for the management of the prioritized production systems is recorded and the value obtained is reported.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Photographic record and/or videos. • Lists of attendance at training workshops for the management of prioritized production systems. • Meeting Minutes • Meeting Registration • Activity Reports
Remarks	Use available information

Activity ID	A-2
Indicator ID	A-2.2
Indicator Name	# of women involved in the development of production systems who participate in training or training sessions for the management of prioritized production systems.
Type	Result
Goal	All women involved in the development of production systems participate in training or training sessions for the management of the prioritized production systems.
SDGs to be met	SDG1 (productive projects), SDG2 (productive projects), SDG5 (women's participation), SDG8 (productive projects), SDG13 (emission reduction), SDG15 (forest habitat protection)
Unit of Measurement	Number
Monitoring Methodology	Number of women who are part of the community who attend the training sessions for the management of the prioritized production systems and the value obtained is reported.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Photographic record and/or videos. • Lists of attendance at training workshops for the management of prioritized production systems. • Meeting Minutes • Activity Reports
Remarks	Use available information

Activity ID	A-2
Indicator ID	A-2.3
Indicator Name	# Elaborate business plans
Type	Product
Goal	At least one business plan is defined to be implemented
SDGs to be met	SDG1 (productive projects), SDG2 (productive projects), SDG8 (productive projects), SDG13 (emission reduction), SDG15 (forest habitat protection)
Unit of Measurement	Number
Monitoring Methodology	For the measurement and reporting of this indicator, the number of Business Plans prepared by the project implementer and the proponents is taken into account.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Developed Business Plan Documents. • Prioritized Business Plan Documents.
Remarks	

Activity ID	A-3
Indicator ID	A-3.1
Indicator Name	# People employed for the development of productive activities
Type	Impact
Goal	Project activities provide jobs for the community
SDGs to be met	SDG1 (employment), SDG2 (employment), SDG8 (employment), SDG13 (emission reduction), SDG15 (forest habitat protection)
Unit of Measurement	Number
Monitoring Methodology	For the measurement and reporting of this indicator, the number of people employed for the development of productive activities is taken into account.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	Contracts entered into with members of the community. Pay stubs.
Remarks	

Activity ID	A-3
Indicator ID	A-3.2
Indicator Name	# of women employed full-time by project activities
Type	Impact
Goal	Project activities provide jobs for women in the community
SDGs to be met	SDG1 (employment), SDG2 (employment), SDG5 (women), SDG8 (employment), SDG13 (emission reduction), SDG15 (forest habitat protection)
Unit of Measurement	Number
Monitoring Methodology	For the measurement and reporting of this indicator, the number of women employed for the development of productive activities is taken into account.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	Contracts concluded with women members of the community. Pay stubs.
Remarks	

Activity ID	A-3
Indicator ID	A-3.3
Indicator Name	# of people improving their incomes with productive systems
Type	Impact
Goal	The project's activities allow community members to improve their income.
SDGs to be met	SDG1 (productive projects), SDG2 (productive projects), SDG8 (productive projects), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	For the measurement and reporting of this indicator, the number of beneficiaries who receive income from the prioritized production systems is taken into account.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	Contracts concluded with women members of the community. Pay stubs. Income records.

Remarks	
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Activity ID	A-3
Indicator ID	A-3.4
Indicator Name	# of women improving their incomes with productive systems
Type	Impact
Goal	The project's activities allow women members of the community to improve their incomes.
SDGs to be met	SDG1 (productive projects), SDG2 (productive projects), SDG5 (women's participation), SDG8 (productive projects), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	For the measurement and reporting of this indicator, the number of women who receive income from the prioritized production systems is taken into account.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	Contracts concluded with women members of the community. Pay stubs. Income records.
Remarks	

Activity ID	A-3
Indicator ID	A-3.5
Indicator Name	# of hectares of production systems that have special management measures to promote biodiversity
Type	Product
Goal	Management measures are implemented in production systems that favor biodiversity.
SDGs to be met	SDG15 (protection of forest habitats by promoting biodiversity)
Unit of Measurement	Area (ha)
Monitoring Methodology	For the measurement and reporting of this indicator, the productive area that has special management measures to improve biodiversity conditions is identified and estimated, and Geographic Information Systems, satellite images, remote sensors and information taken in situ are used to estimate the area.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative

	Cost-Effective Alternatives Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Visitation report. • Photographic record. • Satellite verification and measurement with GIS tools. • Other
Remarks	

Activity ID	A-3
Indicator ID	A-3.6
Indicator Name	# of hectares of production systems being improved or established
Type	Product
Goal	Productive systems are implemented, or existing production systems are improved.
SDGs to be met	SDG1 (productive projects), SDG2 (productive projects), SDG8 (productive projects), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Area (ha)
Monitoring Methodology	For the measurement and reporting of this indicator, the area that will be allocated to the establishment or improvement of production systems is defined. Subsequently, Geographic Information Systems are used with the help of satellite images, remote sensing and information taken in situ to estimate the area.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Minutes of meetings with the community. • Photographic record. • Report of field visits. • Satellite verification and measurement with GIS tools.
Remarks	

Activity ID	A-4
Indicator ID	A-4.1
Indicator Name	# Records of controls or maintenance carried out
Type	Result
Goal	Production systems receive the required controls or maintenance.
SDGs to be met	SDG1 (Productive Projects), SDG2 (Productive Projects), SDG8 (Productive Projects)
Unit of Measurement	Number

Monitoring Methodology	The beneficiaries in charge of the activities of sustaining the productive systems keep records of maintenance activities. To measure and report this indicator, the number of controls carried out in the production systems is quantified.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Visitation report. • Photographic record. • Records of maintenance activities to production systems
Remarks	

Activity ID	A-4
Indicator ID	A-4.2
Indicator Name	Total quantity of goods or services produced in production systems
Type	Product
Goal	Productive systems are implemented that offer quantifiable goods or services to the community
SDGs to be met	SDG1 (productive projects), SDG2 (productive projects), SDG8 (productive projects), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Units
Monitoring Methodology	<p>To measure and report this indicator, we start from the production obtained per unit area of the established and/or improved production system. To do this, the product quantities that were generated are recorded.</p> <p>In the event that services are generated, the number of services associated with the production system that were generated is quantified and the number is reported.</p>
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Production records obtained in production systems.
Remarks	

Activity ID	A-4
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Indicator ID	A-4.3
Indicator Name	Balance of income and expenditure generated in production systems.
Type	Product
Goal	At least one production system is implemented with a positive balance.
SDGs to be met	SDG ₁ (productive projects), SDG ₂ (productive projects), SDG ₈ (productive projects), SDG ₁₃ (emission reduction), SDG ₁₅ (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Coin
Monitoring Methodology	To measure and report this indicator, the starting point is the recording of costs (associated with production or provision of services: e.g. harvest, post-harvest and transformation, logistics) and income associated with the sale of products or services.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> Records of income and expenditure of the production system.
Remarks	

Activity ID	A-5
Indicator ID	A-5.1
Indicator Name	# of people participating in meetings or workshops on social investment topics
Type	Result
Goal	The processes of identification and prioritization of social investment are carried out in a participatory manner.
SDGs to be met	SDG ₁ (social investment), SDG ₃ (investment in health), SDG ₄ (investment in education), SDG ₆ (investment in water and sanitation), SDG ₁₁ (investment in housing), SDG ₁₃ (emission reduction), SDG ₁₅ (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	Participant Registration Minutes Rapporteurships
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result	

in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Photographic record and/or videos. • Attendance lists for workshops and meetings convened. • Minutes of meetings and workshops convened. • Rapporteurship
Remarks	Available information will be used

Activity ID	A-5
Indicator ID	A-5.2
Indicator Name	# of women participating in meetings or workshops on social investment issues.
Type	Result
Goal	The processes of identification and prioritization of social investment are carried out in a participatory manner.
SDGs to be met	SDG1 (social investment), SDG3 (investment in health), SDG4 (investment in education), SDG5 (women's participation), SDG6 (investment in water and sanitation), SDG11 (investment in housing), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	For the measurement and reporting of this indicator, the number of female participants who attend the meetings, workshops or surveys carried out for the identification and prioritization of social investment to be developed or improved with the project is taken into account.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Photographic record and/or videos. • Attendance lists for workshops and meetings convened. • Minutes of meetings and workshops convened. • Rapporteurships
Remarks	

Activity ID	A-6
Indicator ID	A-6.1
Indicator Name	# of people participating in meetings or workshops on transportation issues
Type	Result
Goal	The processes of identification and prioritization in the field of transport are carried out in a participatory manner.

SDGs to be met	SDG ₁ (social investment), SDG ₃ (transport for health), SDG ₈ (transport for produce), SDG ₁₃ (emission reduction), SDG ₁₅ (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	For the measurement and reporting of this indicator, the number of female participants who attend the meetings, workshops or surveys carried out for the identification and prioritization of aspects related to transport to be developed or improved with the project is taken into account.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Photographic record and/or videos. • Attendance lists for workshops and meetings convened. • Minutes of meetings and workshops convened. • Rapporteurship
Remarks	Available information will be used

Activity ID	A-6
Indicator ID	A-6.2
Indicator Name	# of activities/elements that facilitate the mobilization of people
Type	Product
Goal	Improved mobilization of community members
SDGs to be met	SDG ₁ (social investment), SDG ₃ (transport for health), SDG ₄ (investment in traditional medicine education), SDG ₆ (investment in water and sanitation), SDG ₁₃ (emission reduction), SDG ₁₅ (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	The execution of project resources and the number of activities or acquisition of elements that favor the mobilization of people are verified.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Photographic record • Record of acquisitions made within the framework of the project • Verification of Replaced or Purchased Transport Items
Remarks	

Activity ID	A-7
Indicator ID	A-7.1
Indicator Name	# of people participating in meetings or workshops on education topics
Type	Result
Goal	The processes of identification and prioritization of education are carried out in a participatory manner.
SDGs to be met	SDG1 (social investment), SDG4 (investment in education), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	For the measurement and reporting of this indicator, the number of participants attending the meetings, workshops or surveys carried out for the identification and prioritization of aspects related to education to be developed or improved with the project is taken into account.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Photographic record and/or videos. • Attendance lists for workshops and meetings convened. • Minutes of meetings and workshops convened. • Rapporteurship
Remarks	Available information will be used

Activity ID	A-7
Indicator ID	A-7.2
Indicator Name	# of educational facilities improved/built.
Type	Product
Goal	Improve or construct educational facilities located on reservations
SDGs to be met	SDG1 (social investment), SDG4 (investment in education), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	It is verified on the basis of budget execution and records of construction or improvement activities of educational facilities within the framework of the project.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative

	Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Verification in on-site visits. • Photographic record. • Budget execution. • Records of maintenance and construction activities. • Reports
Remarks	Use available information

Activity ID	A-7
Indicator ID	A-7.3
Indicator Name	# of Instructors Funded
Type	Product
Goal	Improve educational service provision
SDGs to be met	SDG1 (social investment), SDG4 (investment in education), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	The number of instructors funded in IR schools is quantified.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Verification in on-site visits. • Photographic record. • Budget execution. • Records of maintenance and construction activities. • Reports
Remarks	Use available information

Activity ID	A-8
Indicator ID	A-8.1
Indicator Name	# people with access to formal education programs or better quality education
Type	Result
Goal	The quality of education or access to formal education programmes for community members is improved.
SDGs to be met	SDG1 (social investment), SDG4 (investment in education), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number

Monitoring Methodology	The execution of project resources and the people who have access to formal education or a better quality of education are verified.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Execution of project resources. • Development of formal education programs. • Record of actions aimed at improving the education of the community. • Registration of beneficiaries of actions aimed at improving education in the community.
Remarks	

Activity ID	A-8
Indicator ID	A-8.2
Indicator Name	# of women with access to formal education programs or better-quality education
SDGs to be met	SDG1 (social investment), SDG4 (investment in education), SDG5 (women's participation), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Type	Result
Goal	The quality of education or access to formal education programmes for women in the communities is improved.
Unit of Measurement	Number
Monitoring Methodology	The execution of project resources and the women who have access to formal education or a better quality of education are verified.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Execution of project resources. • Development of formal education programs. • Record of actions aimed at improving the education of the community. • Registration of women beneficiaries of actions aimed at improving education in the community.
Remarks	

Activity ID	A-9
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Indicator ID	A-9.1
Indicator Name	# of people participating in meetings or workshops on health issues
Type	Result
Goal	The processes of identification and prioritization in health matters are carried out in a participatory manner.
SDGs to be met	SDG ₁ (social investment), SDG ₃ (health), SDG ₁₃ (emission reduction), SDG ₁₅ (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	<ul style="list-style-type: none"> • Participant Registration • Minutes • Rapporteurships
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Photographic record and/or videos. • Attendance lists for workshops and meetings convened. • Minutes of meetings and workshops convened. • Rapporteurship
Remarks	Available information will be used

Activity ID	A-9
Indicator ID	A-9.2
Indicator Name	# of people with access to health services or improvements in health services.
Type	Result
Goal	Access to health services for community members is improved.
SDGs to be met	SDG ₁ (social investment), SDG ₃ (health), SDG ₁₃ (emission reduction), SDG ₁₅ (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	The execution of project resources and the investments made in improving health services are verified. It quantifies the number of people in the community who have access to health services or improvements in this service.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	

Documents to support the information	<ul style="list-style-type: none"> • Execution of project resources. • Development of health programs. • Record of actions aimed at improving access to health services by the community. • Registration of people accessing health services.
Remarks	

Activity ID	A-9
Indicator ID	A-9.3
Indicator Name	# of health posts built/improved
Type	Result
Goal	Infrastructure to provide health services to community members is improved.
SDGs to be met	SDG1 (social investment), SDG3 (health), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	The execution of project resources and the investments made in the construction and/or adaptation of health posts are verified. The number of health posts built or improved is quantified.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Execution of project resources. • Built and adequate health posts. • Evidence of Contract
Remarks	Use available information

Activity ID	A-10
Indicator ID	A-10.1
Indicator Name	# of people participating in meetings or workshops on housing, energy, waste management, water and sanitation issues
Type	Result
Goal	The processes of identification and prioritization of housing, drinking water and basic sanitation, and energy are carried out in a participatory manner.
Unit of Measurement	Number
Monitoring Methodology	For the measurement and reporting of this indicator, the number of participants attending the meetings, workshops or surveys carried out for the identification and prioritization of housing,

	drinking water and basic sanitation, and energy to be developed or improved with the project is taken into account.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Photographic record and/or videos. • Attendance lists for workshops and meetings convened. • Minutes of meetings and workshops convened. • Rapporteurship
Remarks	Available information will be used

Activity ID	A-10
Indicator ID	A-10.2
Indicator Name	# of people with access to clean water or better water quality
Type	Result
Goal	People in the community have access to clean water or better water quality.
SDGs to be met	SDG1 (social investment), SDG6 (water), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	The execution of project resources and the investments made in water purification and treatment systems are verified. It quantifies the number of people who have access to safe drinking water or improved water quality.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Execution of project resources. • Construction of drinking water treatment systems. • Award contract
Remarks	

Activity ID	A-10
Indicator ID	A-10.3
Indicator Name	# of homes or infrastructure that have electric power systems
Type	Product
Goal	Access to electricity in indigenous reservations is improved.

SDGs to be met	SDG1 (social investment), SDG7 (energy), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	The execution of project resources and the investments made in the installation of energy sources are verified. Households that receive improvements in electricity systems are quantified.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Execution of project resources. • Records of activities involving the installation of non-conventional energy sources in homes. • Records of installation activities of non-conventional energy sources. • Reports
Remarks	

Activity ID	A-10
Indicator ID	A-10.4
Indicator Name	# of actions aimed at strengthening comprehensive waste management
Type	Result
Goal	Actions are implemented to carry out an adequate waste management in the reserves.
SDGs to be met	SDG1 (social investment), SDG3 (Health for better health), SDG6 (sanitation), SDG11 (better and healthier housing), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	The execution of project resources and the investments made in the development of activities that strengthen waste management in the communities are verified.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Execution of project resources. • Records of actions implemented in order to promote comprehensive waste management.

	<ul style="list-style-type: none"> • Contracts • Reports
Remarks	

Activity ID	A-10
Indicator ID	A-10.5
Indicator Name	# of Improved/Built Homes
Type	Result
Goal	Community members' homes are improved or built.
SDGs to be met	SDG ₁ (social investment), SDG ₃ (Health for better health), SDG ₁₁ (better housing), SDG ₁₃ (emission reduction), SDG ₁₅ (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	The execution of project resources and the investments made in the development of housing improvement activities are verified. The number of homes improved or built is reported.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Social Investment Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Project Resource Execution • Records of Home Improvement Activities • On-site visits • Reports
Remarks	

Activity ID	A-11
Indicator ID	A-11.1
Indicator Name	# of people participating in meetings or workshops on governance issues
Type	Result
Goal	The process of building/updating the Life Plans is carried out in a participatory manner.
SDGs to be met	SDG ₁ (social and productive investment), SDG ₂ (social and productive investment), SDG ₃ (investment in health), SDG ₄ (investment in education), SDG ₅ (women's participation), SDG ₆ (investment in water and sanitation), SDG ₈ (better employment and economic growth), SDG ₁₁ (investment in housing), SDG ₁₃ (emission reduction), SDG ₁₅ (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number

Monitoring Methodology	For the measurement and reporting of this indicator, the number of participants in meetings or workshops related to the topics of the Indigenous Life Plans is taken into account.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Photographic and/or video records. • Attendance lists for workshops and meetings convened. • Minutes of meetings and workshops convened. • Reports
Remarks	

Activity ID	A-11
Indicator ID	A-11.2
Indicator Name	# of life plans drawn up or updated
Type	Product
Goal	At least 3 Life Plans are drawn up.
SDGs to be met	SDG1 (social and productive investment), SDG2 (social and productive investment), SDG3 (investment in health), SDG4 (investment in education), SDG5 (women's participation), SDG6 (investment in water and sanitation), SDG8 (better employment and economic growth), SDG11 (investment in housing), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	The number of life plans drawn up or updated is quantified.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Developed Indigenous Life Plan Documents. • Minutes of meetings. • Reports
Remarks	

Activity ID	A-11
Indicator ID	A-11.3
Indicator Name	# Life Plans in Implementation
Type	Result

Goal	The implementation of at least 3 Life Plans begins.
SDGs to be met	SDG ₁ (social and productive investment), SDG ₂ (social and productive investment), SDG ₃ (investment in health), SDG ₄ (investment in education), SDG ₅ (women's participation), SDG ₆ (investment in water and sanitation), SDG ₈ (better employment and economic growth), SDG ₁₁ (investment in housing), SDG ₁₃ (emission reduction), SDG ₁₅ (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	For the reporting of this indicator, the number of Indigenous Life Plans that are in implementation will be taken into account.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> Records of actions for the implementation of the Indigenous Life Plans. Photographic record and/or videos. Reports
Remarks	

Activity ID	A-12
Indicator ID	A-12.1
Indicator Name	# of indigenous land use plans drawn up
Type	Product
Goal	At least 3 Land Use Plans are drawn up.
SDGs to be met	SDG ₁₃ (emission reduction), SDG ₁₅ (forest habitat protection as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	The elaboration of the developed Territorial Planning Plans is verified.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> Documents of Land Use Plans. Reports
Remarks	

Activity ID	A-12
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Indicator ID	A-12.2
Indicator Name	# of land use plans in implementation
Type	Result
Goal	The implementation of at least 3 Land Use Plans begins, one for each reservation.
SDGs to be met	SDG13 (emission reduction), SDG15 (forest habitat protection as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	For the reporting of this indicator, the number of Management Plans that are in implementation will be taken into account.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> Records of actions for the implementation of the Indigenous Life Plans. Photographic record and/or videos. Reports
Remarks	

Activity ID	A-13
Indicator ID	A-13.1
Indicator Name	# of people who participate in trainings, meetings or training sessions for the development of traditional production systems
Type	Result
Goal	Strengthen the capacities of community members for the development of traditional production systems.
SDGs to be met	SDG1 (productive investment), SDG2 (productive investment), SDG8 (better jobs and economic growth), SDG13 (emission reductions), SDG15 (protection of forest habitats as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	The number of community members who attend trainings, meetings or training sessions for the management of traditional production systems is quantified.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> Lists of attendance at training workshops for the management of traditional production systems.

	<ul style="list-style-type: none"> • Minutes of the meeting and photographic record of the training sessions for the management of traditional production systems. • Photographic record and/or videos. • Reports
Remarks	

Activity ID	A-13
Indicator ID	A-13.2
Indicator Name	# of women who participate in trainings, meetings or training sessions for the development of traditional production systems
Type	Result
Goal	Strengthen the capacities of women in the communities for the development of traditional production systems.
SDGs to be met	SDG1 (productive investment), SDG2 (productive investment), SDG5 (women's participation), SDG8 (better employment and economic growth), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	The number of women in the community who attend trainings, meetings or training sessions for the management of traditional production systems is quantified.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Lists of attendance at training workshops for the management of traditional production systems. • Minutes of the meeting and photographic record of the training sessions for the management of traditional production systems. • Rapporteurship or report
Remarks	

Activity ID	A-13
Indicator ID	A-13.3
Indicator Name	# of families that have established and/or improved farms
Type	Result
Goal	Strengthening community members' access to traditional production systems
SDGs to be met	SDG2 (food security), SDG15 (protection of forest habitats by promoting biodiversity)

Unit of Measurement	Number
Monitoring Methodology	The number of families in the community that have established and/or improved traditional production systems (chagras) is quantified and the value is reported.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Visitation report. • Meeting Minutes. • Photographic record.
Remarks	

Activity ID	A-13
Indicator ID	A-13.4
Indicator Name	# of hectares of traditional production systems being improved or established
Type	Product
Goal	Traditional production systems are implemented, or existing production systems are improved.
SDGs to be met	SDG2 (food security), SDG15 (protection of forest habitats by promoting biodiversity)
Unit of Measurement	Area (ha)
Monitoring Methodology	For the measurement and reporting of this indicator, the area of traditional production systems that is established or improved is identified and estimated, and Geographic Information Systems, satellite images, remote sensors and information taken in situ are used to estimate the area.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Visitation report. • Photographic record. • Satellite verification and measurement with GIS tools. • Other
Remarks	

Activity ID	A-13
Indicator ID	A-13.5

Indicator Name	# Built or suitable malocas
Type	Product
Goal	Construct or adapt malocas to strengthen traditional and ancestral culture
SDGs to be met	SDG15 (protection of forest habitats by promoting biodiversity)
Unit of Measurement	Number
Monitoring Methodology	The number of malocas built and/or improved is quantified and the value is reported.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Report or records of construction or adaptations. • Meeting Minutes. • Photographic record.
Remarks	

Activity ID	A-13
Indicator ID	A-13.6
Indicator Name	# of actions carried out to preserve elements of traditional cultural identity
Type	Result
Goal	Promote the preservation of elements of traditional cultural identity
SDGs to be met	SDG3 (good health and well-being), SDG5 (women's participation), SDG13 (emission reduction), SDG15 (forest habitat protection by promoting biodiversity)
Unit of Measurement	Number
Monitoring Methodology	The number of actions carried out to strengthen the cultural identity and traditions of the indigenous reservations is quantified, and the value is reported.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Meeting Minutes. • Attendance lists. • Photographic record. • Reports.
Remarks	

Activity ID	A-14
Indicator ID	A-14.1
Indicator Name	# of people who participate in awareness-raising, meetings or training days, meetings or training sessions in territorial monitoring
Type	Result
Goal	Strengthen the capacities of community members for territorial monitoring and control of deforestation
SDGs to be met	SDG13 (emission reduction), SDG15 (forest habitat protection as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	Number of community members attending awareness-raising, meetings or training sessions on territorial monitoring and deforestation control.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Monitoring Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Lists of attendance at the workshops and awareness-raising sessions for the identification of the causes and agents of deforestation, management of natural resources, management of equipment and techniques for territorial monitoring, conflict resolution. • Minutes of the meeting and photographic record of the training sessions for the identification of the causes and agents of deforestation, management of natural resources, management of equipment and techniques for territorial monitoring, conflict resolution
Remarks	

Activity ID	A-14
Indicator ID	A-14.2
Indicator Name	# of women participating in awareness-raising, meetings or training sessions on territorial monitoring
Type	Result
Goal	Strengthen the capacities of women in the communities for territorial monitoring and control of deforestation
SDGs to be met	SDG5 (women's participation), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number

Monitoring Methodology	Number of women from the community who attend awareness-raising, meetings or training sessions on territorial monitoring and deforestation control.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Monitoring Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Lists of attendance at training sessions for the identification of the causes and agents of deforestation, management of natural resources, management of equipment and techniques for territorial monitoring, conflict resolution. • Minutes of the meeting and photographic record of the training sessions for the identification of the causes and agents of deforestation, management of natural resources, management of equipment and techniques for territorial monitoring, conflict resolution.
Remarks	

Activity ID	A-14
Indicator ID	A-14.3
Indicator Name	Document of constitution or formalization of the Group of Families Protecting the Forest or the Indigenous Guard
Type	Product
Goal	Formalize the group of rangers or the indigenous guard.
SDGs to be met	SDG13 (emission reduction), SDG15 (forest habitat protection as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	The number of documents of constitution and formalization of the Group of Families Protecting the Forest or Indigenous Guard that are generated is quantified.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Monitoring Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Documents formalizing and constituting the Group of Families Protecting the Forest or Indigenous Guard. • Meeting Minutes.
Remarks	

Activity ID	A-14
Indicator ID	A-14.4
Indicator Name	# of members belonging to the Group of Families Protecting the Forest or the Indigenous Guard
Type	Product
Goal	Link community members in the ranger group or indigenous guard
SDGs to be met	SDG13 (emission reduction), SDG15 (forest habitat protection as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	For the measurement and reporting of this indicator, the list of the members of the Group of Forest Ranger and/or Indigenous Guard Families is taken, quantified and the value obtained is reported.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Monitoring Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> List of members of the Group of Families Protecting the Forest or Indigenous Guard. Minutes of the meeting of the constitution of the Group of Forest Ranger Families and/or Indigenous Guard.
Remarks	

Activity ID	A-14
Indicator ID	A-14.5
Indicator Name	Programming of the activities of the Forest Ranger Group or the Indigenous Guard in implementation
Type	Product
Goal	Implement the scheduling of the monitoring activities of the group of rangers or the indigenous guard.
SDGs to be met	SDG13 (emission reduction), SDG15 (forest habitat protection as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	It is verified if there is evidence of the implementation of the programming of the activities of the Group of Forest Ranger and/or Indigenous Guard Families and the number of programs in implementation is reported.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Monitoring Coordinator – REDD+ Committee
Indicator Result in the reporting period	

Documents to support the information	<ul style="list-style-type: none"> • Evidence of the implementation of the activities programmed for the Group of Forest Ranger Families and/or Indigenous Guard. • Minutes of the meeting to define the schedule of activities to be carried out by the Group of Forest Ranger Families and/or Indigenous Guard. • Programs of activities of the Group of Forest Ranger Families and/or Indigenous Guard. • Reports
Remarks	

Activity ID	A-15
Indicator ID	A-15.1
Indicator Name	# of hectares of forest standing in the project area
Type	Impact
Goal	Conserve the forests present in indigenous reserves and monitor the progress of deforestation
SDGs to be met	SDG13 (emission reduction), SDG15 (forest habitat protection as it discourages deforestation)
Unit of Measurement	Area (ha)
Monitoring Methodology	Evaluation of forest and non-forest maps according to the BCR methodology
Monitoring Frequency	Annually
Responsible for measurement	Sustainable Carbo Implementing Organization Community Representative Monitoring Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Deforestation analysis from maps • Deforestation Rate Calculations
Remarks	

Activity ID	A-15
Indicator ID	A-15.2
Indicator Name	# of tonnes of CO ₂ e avoided
Type	Impact
Goal	Reduce Carbon Emissions
SDGs to be met	SDG13 (emission reduction), SDG15 (forest habitat protection as it discourages deforestation)
Unit of Measurement	Tonnes (tCO ₂ e)
Monitoring Methodology	To measure and report this indicator, the area of standing forest present in the territory of the indigenous reserves is identified and estimated using Geographic Information Systems and satellite

	images from remote sensors. Subsequently, the corresponding emission factor is applied.
Monitoring Frequency	Annually
Responsible for measurement	Sustainable Carbo
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Use of IDEAM Non-Forest Maps (SMByC) • Use of NREF Emission Factors • Calculation Supports
Remarks	

Activity ID	A-15
Indicator ID	A-15.3
Indicator Name	# of people employed for community monitoring
Type	Impact
Goal	Employ community members in deforestation monitoring and follow-up activities
SDGs to be met	SDG13 (emission reduction), SDG15 (forest habitat protection as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	Number of people employed for project activities related to the monitoring component.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Monitoring Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Contracts entered into with members of the community. • Payment records.
Remarks	

Activity ID	A-15
Indicator ID	A-15.4
Indicator Name	# of hectares of forest standing in the leakage area
Type	Impact
Goal	Monitor the progress of deforestation and its changes in the coverage of the leakage area
SDGs to be met	SDG13 (emission reduction), SDG15 (forest habitat protection as it discourages deforestation)
Unit of Measurement	Area (ha)
Monitoring Methodology	Evaluation of forest and non-forest maps according to BCR methodology
Monitoring Frequency	Annually

Responsible for measurement	Sustainable Carbo Implementing Organization Community Representative Monitoring Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Deforestation analysis from maps • Deforestation Rate Calculations
Remarks	

Activity ID	A-16
Indicator ID	A-16.1
Indicator Name	# of people participating in awareness-raising, meetings or training sessions on restoration
Type	Result
Goal	Strengthen the capacities of community members for the development of restoration actions
SDGs to be met	SDG13 (emission reduction), SDG15 (forest habitat protection as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	Number of community members attending awareness-raising, meetings or training sessions on the development of restoration actions.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Monitoring Coordinator – REDD+ Committee Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Lists of attendance at the workshops, the awareness days for the implementation of restoration actions. • Meeting minutes and photographic record of the training sessions for the implementation of restoration actions.
Remarks	

Activity ID	A-16
Indicator ID	A-16.2
Indicator Name	# of women participating in awareness-raising, meetings or training sessions on restoration
Type	Result
Goal	Strengthen the capacities of women in the communities for the development of restoration actions

SDGs to be met	SDG5 (women's participation), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation)
Unit of Measurement	Number
Monitoring Methodology	Number of women in the community who attend awareness-raising, meetings or training sessions on restoration actions.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Monitoring Coordinator – REDD+ Committee Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Lists of attendance at the workshops, the awareness days for the implementation of restoration actions. • Meeting minutes and photographic record of the training sessions for the implementation of restoration actions.
Remarks	

Activity ID	A-16
Indicator ID	A-16.3
Indicator Name	# of hectares subject to restoration actions
Type	Impact
Goal	Develop restoration actions in intervened areas
SDGs to be met	SDG13 (emission reduction), SDG15 (forest habitat protection as it discourages deforestation)
Unit of Measurement	Area (ha)
Monitoring Methodology	For the measurement and reporting of this indicator, the area in which restoration actions are carried out is identified and quantified using Geographic Information Systems, satellite images, remote sensors and information taken in situ.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Monitoring Coordinator – REDD+ Committee Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Social mapping. • Minutes of meetings with the community. • Photographic record. • Report of field visits. • Satellite verification and measurement with GIS tools.
Remarks	

14.3. REDD+ safeguards

The monitoring plan for each applicable safeguard is presented below:

ID Safeguard	SVG-1
Indicator ID	SVG-1.1
Indicator Name	Correspondence with national legislation
Type	Result
Goal	100%
Unit of Measurement	Percentage
Monitoring Methodology	<p>The verification of the current regulations is carried out and it is verified that the proposed activities comply with them. The following equation will be used to monitor and report this indicator:</p> $\frac{\# \text{ de actividades que cumplen la normatividad}}{\# \text{ de actividades totales}} \times 100\%$
Monitoring Frequency	Annually or when a change in project activities is proposed
Responsible for measurement	Implementing Organization
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Regulatory support documents. • Analysis of legal correspondence by project activities. • Attendance lists, meeting minutes, photographic record, and recordings of community meetings.
Remarks	All the activities of the project have been carried out in compliance with the relevant regulations and legal aspects.

ID Safeguard	SVG-2
Indicator ID	SVG-2.1
Indicator Name	Transformation and access to information
Type	Result
Goal	100%
Unit of Measurement	Percentage
Monitoring Methodology	<p>Access to information in community-appropriate language and media will be verified. The number of community leaders who have access to the developed documents will be verified. The following equation will be used to monitor this safeguard and report this indicator:</p> $\frac{\# \text{ de líderes de la comunidad con acceso a información}}{\# \text{ de líderes totales de la comunidad}} * 100\%$
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization

Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Meeting Minutes • Socialization Minutes • Workshop Attendance Lists • Community Interviews & Surveys
Remarks	The 5 captains of the indigenous reservations (3 from the RI Lagos El Dorado, 1 from the RI Yavilla II and 1 from the RI Vuelta del Alivio) who participate in the project have information in appropriate language and media.

ID Safeguard	SVG-3
Indicator ID	SVG-3.1
Indicator Name	Accountability
Type	Product
Goal	Submit an accountability report within 6 months of the verification process.
Unit of Measurement	Number
Monitoring Methodology	For the measurement of this indicator, the generation of accountability reports by the project implementer will be taken into account. In the same way, reporting and accountability days will be held with the interested actors.
Monitoring Frequency	Within 6 months of verification processes
Responsible for measurement	Implementing Organization
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Meeting minutes, attendance list and photographic record of the information spaces. • Accountability reports.
Remarks	

ID Safeguard	SVG-4
Indicator ID	SVG-4.1
Indicator Name	Recognition of forest governance structures
Type	Impact
Goal	Recognize compliance with the forest governance structures established by the authorities of the reserves and their concordance with those established by other institutions present in the territory.
Unit of Measurement	Compliance
Monitoring Methodology	It will be verified that REDD+ actions are developed in accordance with the forest governance structure associated with territorial jurisdiction by indigenous reservations, and the forest governance structures provided by other institutions present in the territory.
Monitoring Frequency	Annually

Responsible for measurement	Implementing Organization
Indicator Result in the reporting period	
Documents to support the information	Forest governance structure documents for each reservation Meeting minutes and attendance lists. Institutional documents on forest governance. Administrative acts of territorial planning
Remarks	Currently, each reservation has a forest governance structure.

ID Safeguard	SVG-5
Indicator ID	SVG-5
Indicator Name	Capacity building
Type	Result
Goal	Increase the technical, legal and administrative capacities of members of indigenous reservations
Unit of Measurement	Number of days worked
Monitoring Methodology	Thematic training sessions (technical, legal and administrative) will be held, and tests will be applied at the end of the training sessions in order to evaluate the adoption of knowledge by community members, and the results obtained will be reported.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> Community Questionnaires Photographic record of property visits Training Workshop Attendance Lists, Meeting Minutes, and Photo Record
Remarks	Although the capacity building programmes for community members are not currently being implemented, they will be implemented within the framework of the project.

ID Safeguard	SVG-6
Indicator ID	SVG-6.1
Indicator Name	Free, Prior and Informed Consent
Type	Result
Goal	Comply with the provisions of current regulations regarding consultation and relations with indigenous communities.
Unit of Measurement	Number
Monitoring Methodology	Consultation sessions will be held with interested parties and the number of sessions will be reported.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization
Indicator Result	

in the reporting period	
Documents to support the information	Evidence of relationship and consultation with the communities (minutes of meetings, lists of participants, photographic record)
Remarks	

ID Safeguard	SVG-7
Indicator ID	SVG-7.1
Indicator Name	Respect for traditional knowledge
Type	Result
Goal	Ensure that the ways of understanding and relating to the environment of the communities have been taken into consideration and respected, so that the traditions, uses and customs of the communities are not affected
Unit of Measurement	Number
Monitoring Methodology	The days of consultation with the interested parties will be quantified, the proposal for the development of the deforestation initiative will be validated with the community and the number of days carried out will be reported.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization
Indicator Result in the reporting period	
Documents to support the information	Evidence of relationship and consultation with the communities (minutes of meetings, lists of participants, photographic record)
Remarks	

ID Safeguard	SVG-8
Indicator ID	SVG-8.1
Indicator Name	Profit Sharing
Type	Impact
Goal	Guarantee the distribution of 100% of the benefits derived from the implementation of policies, measures and actions to reduce deforestation and that are generated from traditional knowledge, innovations and practices for the conservation and sustainable use of forests, their diversity and ecosystem services are distributed fairly and equitably to the members of the indigenous reserves linked to the project.
Unit of Measurement	Coin
Monitoring Methodology	Considering that there is a previously defined distribution mechanism for resources, a record will be kept of the resources received by the indigenous reserves and their member population
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Representatives of the indigenous reservations

Indicator Result in the reporting period	
Documents to support the information	Resource Sharing Agreement Defined and Signed
Remarks	The distribution of resources will be made once the operational expenses of the project are covered

ID Safeguard	SVG-9
Indicator ID	SVG-9.1
Indicator Name	Territorial rights
Type	Result
Goal	Guarantee respect for the collective and individual territorial rights of indigenous reservations. As well as its cultural, economic and spiritual use and significance.
Unit of Measurement	Compliance or non-compliance
Monitoring Methodology	The regulations issued on territorial rights for each of the reservations are reviewed and their compliance is verified.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization
Indicator Result in the reporting period	
Documents to support the information	Resolutions titling the territory in favor of the indigenous reservations participating in the project.

ID Safeguard	SVG-10
Indicator ID	SVG-10.1
Indicator Name	Participation
Type	Result
Goal	Ensure the full and effective participation of stakeholders to ensure governance and adequate decision-making on REDD+
Unit of Measurement	Compliance or non-compliance
Monitoring Methodology	The participation of the actors involved will be verified to ensure adequate governance and decision-making in the spaces designated for this purpose, in accordance with the provisions of national regulations and local forms of participation
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization
Indicator Result in the reporting period	
Documents to support the information	Evidence of relationship, participation and consultation with the communities (minutes of meetings, lists of participants, photographic record)
Remarks	

ID Safeguard	SVG-11
Indicator ID	SVG-11.1
Indicator Name	Conservation of forests and their biodiversity
Type	Impact
Goal	Ensure that the project does not undermine the conservation of forests and the biodiversity they support.
Unit of Measurement	Compliance or non-compliance
Monitoring Methodology	The area of forest present in the project area will be verified through the use of Geographic Information Systems.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Generation of cartographic products • On-site observations
Remarks	

ID Safeguard	SVG-12
Indicator ID	SVG-12.1
Indicator Name	Provision of environmental goods and services
Type	Impact
Goal	Ensure that ecosystem services (supply, support, regulation and cultural) are not directly or indirectly affected, e.g. water supply, soil, biodiversity, among others by the implementation of project activities
Unit of Measurement	Compliance or non-compliance
Monitoring Methodology	The forest cover present in the territory of the indigenous reserves participating in the project will be monitored. In addition, biodiversity monitoring activities will be carried out and reports will be generated as a result of these activities.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Generation of cartographic products • Territorial Monitoring Reports • On-site observations
Remarks	

ID Safeguard	SVG-13
Indicator ID	SVG-13.1
Indicator Name	Environmental and territorial planning

Type	Result
Goal	Guarantee the consolidation of territorial and environmental planning instruments under a focus on conservation and sustainable management of the forest, recognizing the forms of land management of indigenous reserves and territorial planning defined by other institutions.
Unit of Measurement	Compliance
Monitoring Methodology	It will be verified that the project promotes the consolidation of environmental and territorial planning instruments under a focus on conservation and sustainable management of the forest, complying with the forms of government and interests of the communities of the indigenous reserves that participate in the project and the forms of planning identified in the territorial context.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization
Indicator Result in the reporting period	
Documents to support the information	Developed Land Use Plan Documents Indigenous Life Plans Meeting minutes and attendance lists. Institutional documents on forest governance. Administrative acts of territorial planning
Remarks	These activities will be carried out within the framework of the project.

ID Safeguard	SVG-14
Indicator ID	SVG-14.1
Indicator Name	Sectoral planning
Type	Result
Goal	Ensure that REDD+ actions are articulated with legislation related to forests and their biodiversity
Unit of Measurement	Compliance
Monitoring Methodology	Members of the community and the implementing organization will verify that REDD+ actions are articulated with legislation related to forests and their biodiversity
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Municipal Development Plan • Departmental Development Plan • Action Plan of the Environmental Authorities
Remarks	Monitoring activities will be carried out within the framework of the project.

ID Safeguard	SVG-15
Indicator ID	SVG-15.1
Indicator Name	Forest control and surveillance to prevent the displacement of emissions
Type	Result
Goal	Ensure the development of community monitoring and control actions to reduce the displacement of emissions and identify the events that cause them
Unit of Measurement	Number
Monitoring Methodology	Community members will conduct tours and activities to identify events that may result in emissions displacement. Likewise, the protocols that are defined will be executed with the aim of mitigating the situation
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Reports of the routes carried out • Logs of Identified Emission Displacement Events • Protocol Execution Reports to Address Emission Displacement Events • Georeferenced satellite imagery
Remarks	Monitoring activities will be carried out within the framework of the project.

14.4. Environmental and socio-economic aspects

Considering that the project does not generate adverse effects, the monitoring will focus on verifying that the environmental and socioeconomic impacts associated with the implementation of the project remain positive.

Aspect	Reporting Measure	Responsible
Environmental		
Flora	Positive/Negative	CARBO-TERRA
Fauna	Positive/Negative	CARBO-TERRA
Ecosystems	Positive/Negative	CARBO-TERRA
Socio-economic		
Capacity building	Positive/Negative	CARBO-TERRA
Strengthening governance	Positive/Negative	CARBO-TERRA
Economic conditions	Positive/Negative	CARBO-TERRA
Cultural identity	Positive/Negative	CARBO-TERRA

Aspect	Reporting Measure	Responsible
Access to education	Positive/Negative	CARBO-TERRA
Health Services	Positive/Negative	CARBO-TERRA
Housing conditions	Positive/Negative	CARBO-TERRA

14.5. Special Categories

Below are the monitoring indicators for the project's co-benefits:

Criterion	Biodiversity conservation
Requirement to which it applies	Carry out restoration activities for degraded ecosystems
Indicator ID	SC-1.1
Indicator Name	# of hectares subject to restoration actions
Type	Impact
Unit of Measurement	Area (ha)
Monitoring Methodology	For the measurement and reporting of this indicator, the area in which restoration actions are carried out is identified and quantified using Geographic Information Systems, satellite images, remote sensors and information taken in situ.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Monitoring Coordinator – REDD+ Committee Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Social mapping. • Minutes of meetings with the community. • Photographic record. • Report of field visits. • Satellite verification and measurement with GIS tools.
Remarks	

Criterion	Biodiversity conservation
Requirement to which it applies	In the project area there are High Conservation Values.
Indicator ID	CE-1.2
Indicator Name	# of High Conservation Values identified in the project area
Type	Impact
Unit of Measurement	Number

Monitoring Methodology	The number of High Conservation Values identified in the project area is quantified according to criteria defined by the HCV Network and the value is reported.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Monitoring Coordinator – REDD+ Committee Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Minutes of meetings with the community. • Photographic record. • Community reports.
Remarks	Include a description of the actions aimed at protecting the High Conservation Values developed during the monitoring period.

Criterion	Biodiversity conservation
Requirement to which it applies	The project is located in areas with the presence of globally threatened areas (IUCN Red List) and develops actions aimed at the conservation of these species.
Indicator ID	EC-1.3
Indicator Name	# of globally threatened species identified in the project area
Type	Impact
Unit of Measurement	Number
Monitoring Methodology	The number of globally threatened species identified in the project area is quantified according to the information generated by the IUCN (Red Lists) and the value is reported.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Monitoring Coordinator – REDD+ Committee Governance Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Sources - IUCN
Remarks	

Criterion	Biodiversity conservation
Requirement to which it applies	The project is located in areas with the presence of globally threatened areas (IUCN Red List) and develops actions aimed at the conservation of these species.
Indicator ID	EC-1.4

Indicator Name	# of hectares of forest standing in the project area
Type	Impact
Unit of Measurement	Area (ha)
Monitoring Methodology	Evaluation of forest and non-forest maps according to BCR methodology
Monitoring Frequency	Annually
Responsible for measurement	Sustainable Carbo Implementing Organization Community Representative Monitoring Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Deforestation analysis from maps • Deforestation Rate Calculations
Remarks	

Criterion	Benefits to Communities
Requirement to which it applies	It implements sustainable production systems, changing production and conservation actions to generate local development.
Indicator ID	CE-2.1
Indicator Name	# of hectares of production systems that have special management measures to promote biodiversity
Type	Product
Unit of Measurement	Area (ha)
Monitoring Methodology	For the measurement and reporting of this indicator, the productive area that has special management measures to improve biodiversity conditions is identified and estimated, and Geographic Information Systems, satellite images, remote sensors and information taken in situ are used to estimate the area.
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative Cost-Effective Alternatives Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	<ul style="list-style-type: none"> • Visitation report. • Photographic record. • Satellite verification and measurement with GIS tools. • Other
Remarks	

Criterion	Gender Equity
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Requirement to which it applies	It supports actions that give women the right to economic resources on an equal footing, as well as access to ownership and control of land and other assets, financial services, inheritance and natural resources, in accordance with national laws.
Indicator ID	CE-3.1
Indicator Name	# of women who improve their income with the development of the project's actions
Type	Impact
Unit of Measurement	Number
Monitoring Methodology	Number of women who receive income from the development of the project's actions
Monitoring Frequency	Annually
Responsible for measurement	Implementing Organization Community Representative REDD+ Committee Coordinator Cost-Effective Alternatives Coordinator – REDD+ Committee Governance Coordinator – REDD+ Committee Monitoring Coordinator – REDD+ Committee
Indicator Result in the reporting period	
Documents to support the information	Contracts concluded with women members of the community. Pay stubs. Income records.
Remarks	

14.6. Permanence of the project

The following table presents the non-permanence risks identified, as well as the level of risk, mitigation measures, monitoring indicators and the reporting procedure in case any of these situations occur.

Table 27. Permanence risk analysis.

Risk	Level of Risk	Mitigation Measures	Monitoring Indicators	Reporting Procedure	Monitoring Frequency
Fires	Low	<ul style="list-style-type: none"> - Visual detection of fires during tours conducted by community members. - Interpretation of satellite images. - Define a mechanism for communication and 	<ul style="list-style-type: none"> M.1. # of fires detected M.2. # of hectares affected by fires 	<ul style="list-style-type: none"> 1. Inform the Captain of the Reservation of the detection of a fire, its location and approximate extent. 2. Record the information of the fire in a document: People who detected the fire, Date of Occurrence, Location, Extent, Duration of the event. 3. Report of the 	Annual

Risk	Level of Risk	Mitigation Measures	Monitoring Indicators	Reporting Procedure	Monitoring Frequency
		request for support with entities that deal with emergencies (CDA, Firefighters, Army, National Unit for Disaster Risk Management - UNGRD).	M.3. tCO ₂ emitted by fires. M.4. tCH ₄ emitted by fire incidence.	event to the implementing organization and local emergency response institutions (CDA, UNGRD, Fire Department, etc.). 4. Estimation of the affected area by means of satellite imagery and field verification (if possible).5. Quantification of CO ₂ and CH ₄ emissions associated with the fire.	
Floods	Low	- Visual detection of flooding during displacements of community members. - Interpretation of satellite images. - Define a mechanism for communication and request for support with entities that deal with emergencies (CDA, Firefighters, Army, National Unit for Disaster Risk Management - UNGRD).	M.5# hectares affected by flooding	1. Inform the Captain of the Reservation of the detection of a flood, its location and approximate extent. 2. Record the flood information in a document: People who detected the event, Date of Occurrence, Location, Extent.3. Report of the event to the implementing organization and local emergency response institutions (CDA, UNGRD, Fire Department, etc.), if necessary.4. Estimation of the affected area by means of satellite imagery and field verification (only if possible).5. Quantification of CO ₂ emissions associated with flooding.	Annual
Land tenure disputes	Low	- Definition of a forum for dialogue and mechanisms for the resolution of conflicts over land tenure.	M.6# of hectares disputed over land tenure	1. The Captain of the Indigenous Reservation shall identify the actors who wish to claim the rights to the lands titled as territory of the Indigenous Reservation. 2. Report to the Ministry of the Interior, to the indigenous liaisons of the local mayors and the respective governor's office,	Annual

Risk	Level of Risk	Mitigation Measures	Monitoring Indicators	Reporting Procedure	Monitoring Frequency
				and to the implementing organization the intention of a third party to claim the rights to the titling of the land. 3. Attend to regular procedures and channels for settling land tenure disputes. 4. Record the information in the project's monitoring and verification reports.	
Conflicts between project actors	Middle	- Definition of an instance of dialogue and mechanisms for the resolution of conflicts between the actors of the project.	M.7 # of hectares deforested due to conflicts between project actors.	1. The Captain and/or Governor of the IR will report to the implementing organization and to the defined dialogue body the conflict situation, the actors involved and the possible implications on forest cover. 2. Address the conflict situation by following the mechanisms for conflict resolution between project actors. 3. Calculate the areas of deforested forest that are associated with the conflict.	Annual
Non-appropriation of project activities	Middle	- Implementation of the activities defined and agreed with the community, according to the stages that are defined. - Monitoring of progress and expected results at each stage. - Definition and implementation of improvement actions to address the problems of appropriation of the activities identified. - Provide constant support to the actors involved in the project.	M.8. # of REDD+ activities that cannot be implemented due to low ownership by project actors. M.9. # hectares of forest deforested due to low appropriation of project activities.	1. Review the results obtained from the activities and implementation stages and identify problems of ownership by the project actors. 2. Quantify the hectares of forest deforested and estimate the CO ₂ emissions associated with the non-appropriation of project activities.	Annual

Risk	Level of Risk	Mitigation Measures	Monitoring Indicators	Reporting Procedure	Monitoring Frequency
Governance deficit	Middle	<ul style="list-style-type: none"> - Updating or elaboration of Indigenous Life Plans and implementation of prioritized activities. - Development of Land Use Plans for Indigenous Reservations. - Strengthening capacities for the management of traditional production systems. 	M.10. # of hectares of forest deforested due to low territorial governance.	<ol style="list-style-type: none"> 1. Review the results obtained from the activities associated with the territorial governance component and implementation stages and identify problems of appropriation by the project actors. 2. Quantify the hectares of forest deforested and estimate the CO₂ emissions associated with the governance deficit. 	Annual
Community Engagement	Middle	<ul style="list-style-type: none"> - Ensure the active participation of all community members who are involved in the project's activities. - Socialize the progress of the project activities according to the defined plan. - Ensure the participation of community members who are required in the decision-making bodies of the project. 	<p>M.11. # of community members involved in project activities</p> <p>M.12. # of hectares of forest deforested due to lack of community participation.</p>	<ol style="list-style-type: none"> 1. Verify the participation of community members in socialization, training, and decision-making spaces. 2. Quantify the hectares of forest deforested and estimate the CO₂ emissions associated with low community participation in the REDD+ project. 	Annual

14.7. Project Emissions

During the implementation of the project, activity data and emission factors are monitored as set out in section 13.1. Managing Uncertainty. The project's emissions will be estimated following the procedure and equations presented in the 13.4. GHG emissions in the period of analysis.

14.7.1. Activity data

14.7.1.1. Annual deforestation in the project area

It is estimated with the following equation:

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

Where:

$CSB_{proy,año}$	=	Annual change in forest area covered in the project area (ha)
t_2	=	Final year of the monitoring period
t_1	=	Initial year of the monitoring period
$A_{REDD+proy,1}$	=	Forest area in the project area at the start of the monitoring period (ha)
$A_{REDD+proy,2}$	=	Forest area in the project area at the end of the monitoring period (ha)

14.7.1.2. Annual deforestation in the leakage area

It is calculated from the following equation:

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

Where:

$CSB_{f,año}$	=	Annual change in forest area covered in leakage area (ha)
t_2	=	Final year of the monitoring period
t_1	=	Initial year of the monitoring period
$A_{f,1}$	=	Forest area, in the area of leakage at the beginning of the monitoring period (ha)

$A_{f,2}$ = Forest area, in the area of leakage at the end of the monitoring period (ha)

14.7.1.3. Annual degradation in the project area

It is estimated with the following equations:

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

Where:

$DFP_{REDD+proy,año}$ = Annual primary degradation in the project area (ha)
 t_2 = Final year of the monitoring period
 t_1 = Initial year of the monitoring period
 $A_{núcleo}$ = Project area in core class at the start of the monitoring period (ha)
 $A_{núcleo-parche}$ = Project area that changes from kernel to patch at the end of the monitoring period (ha)

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

Where:

$DFS_{REDD+proy,año}$ = Annual secondary degradation in the project area (ha)
 t_2 = Final year of the monitoring period
 t_1 = Initial year of the monitoring period
 $A_{núcleo}$ = Project area in drilled class at the start of the monitoring period (ha)
 $A_{núcleo-parche}$ = Project area that changes from drill to patch at the end of the monitoring period (ha)

14.7.1.4. Annual degradation in the leakage area

It is estimated with the following equations:

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

Where:

$DFP_{f,año}$	=	Annual primary degradation in the leakage area (ha)
t_2	=	Final year of the monitoring period
t_1	=	Initial year of the monitoring period
$A_{núcleo,f}$	=	Leakage area in core class at the start of the monitoring period (ha)
$A_{núcleo-parche,f}$	=	Leak area that changes from core to patch at the end of the monitoring period (ha)

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

Where:

$DFS_{f,año}$	=	Annual secondary degradation in the leakage area (ha)
t_2	=	Final year of the monitoring period
t_1	=	Initial year of the monitoring period
$A_{núcleo,f}$	=	Leakage area in drilled class at the start of the monitoring period (ha)
$A_{núcleo-parche,f}$	=	Leak area changing from perforated to patched at the end of the monitoring period (ha)

14.7.2. GHG emissions in the monitoring period

14.7.2.1. Deforestation

The annual emission from deforestation in the project area is calculated from the following equation:

$$EA_{REDD+proy,año} = DEF_{REDD+proy,año} \times tCO_{2eq}$$

Where:

$$\begin{aligned} EA_{REDD+proy,año} &= \text{Annual emission in the project area (tCO}_2\text{/ha)} \\ DEF_{REDD+proy,año} &= \text{Annual deforestation in the project area (ha)} \\ tCO_{2eq} &= \text{Total carbon dioxide equivalent (tCO}_2\text{e/ha)} \end{aligned}$$

The annual emission from deforestation in the leakage area is calculated from the following equation:

$$EA_{f,año} = (DEF_{f,año} \times tCO_{2eq}) - EA_{lb,f,año}$$

Where:

$$\begin{aligned} EA_{Rf,año} &= \text{Annual emission in the leakage area (tCO}_2\text{/ha)} \\ DEF_{f,año} &= \text{Annual deforestation in the leakage area (ha)} \\ tCO_{2eq} &= \text{Total carbon dioxide equivalent (tCO}_2\text{e/ha)} \\ EA_{lb,f,año} &= \text{Annual emission from deforestation in the leakage area in the baseline scenario (tCO}_2\text{e)} \end{aligned}$$

14.7.2.2. Degradation

The annual degradation emission in the project area is calculated from the following equation:

$$\begin{aligned} EA_{REDD+proy,año} &= (DFP_{REDD+proy,año} \times DTBCO_{2eq,1}) \\ &+ (DFS_{REDD+proy,año} \times DTBCO_{2eq,2}) \end{aligned}$$

Where:

$EA_{REDD+proy,año}$	=	Annual emission in the project area for the monitored period (tCO ₂ /ha)
$DFP_{REDD+proy,año}$	=	Annual primary degradation in the project area (ha)
$DTBCO_{2eq,1}$	=	Carbon dioxide equivalent contained in the difference total biomass per hectare in the primary degradation class (tCO _{2e} /ha)
$DFS_{REDD+proy,año}$	=	Annual secondary degradation in the project area (ha)
$DTBCO_{2eq,2}$	=	Carbon dioxide equivalent contained in the difference total biomass per hectare in secondary degradation class (tCO _{2e} /ha)

The annual emission from degradation in the leakage area is calculated from the following equation:

$$EA_{f,año} = (DFP_{f,año} \times DTBCO_{2eq,1}) + (DFS_{f,año} \times DTBCO_{2eq,2})$$

Where:

$EA_{f,año}$	=	Annual emission in the leakage area for the monitored period (tCO ₂ /ha)
$DFP_{f,año}$	=	Annual primary degradation in the leakage area (ha)
$DTBCO_{2eq,1}$	=	Carbon dioxide equivalent contained in the difference total biomass per hectare in the primary degradation class (tCO _{2e} /ha)
$DFS_{f,año}$	=	Annual secondary degradation in the leakage area (ha)
$DTBCO_{2eq,2}$	=	Carbon dioxide equivalent contained in the difference total biomass per hectare in secondary degradation class (tCO _{2e} /ha)

14.7.3. Quantification of the project's emission reductions

14.7.3.1. Deforestation

The reduction of emissions from avoided deforestation, in the monitoring period, is estimated according to the equation:

$$RE_{DEF,REDD+proy} = (t_2 - t_1) \times (EA_{DEF,lb,año} - EA_{DEF,REDD+proy,año} - EA_{DEF,f,año})$$

Where:

$RE_{DEF,REDD+proy}$	=	Reduction of emissions from deforestation avoided in the project scenario (tCO ₂ e)
t_2	=	Final year of the reference period
t_1	=	Initial year of the reference period
$EA_{DEF,lb,año}$	=	Annual emission from deforestation in the baseline scenario (tCO ₂ e)
$EA_{DEF,REDD+proy,año}$	=	Annual emission from deforestation in the project area (tCO ₂ e)
$EA_{DEF,f,año}$	=	Annual emission from deforestation in the leakage area (tCO ₂ e)

14.7.3.2. Degradation

The emission reductions from avoided degradation are estimated from the following equation:

$$RE_{DEG,REDD+proy} = (t_2 - t_1) \times (EA_{DEG,lb,año} - EA_{DEG,REDD+proy,año} - EA_{DEG,f,año})$$

Where:

$RE_{DEG,REDD+proy}$	=	Reduction of emissions due to degradation avoided in the project scenario (tCO ₂ e)
t_2	=	Final year of the reference period
t_1	=	Initial year of the reference period
$EA_{DEG,lb,año}$	=	Annual emission of degradation in the baseline scenario (tCO ₂ e)
$EA_{DEG,REDD+proy,año}$	=	Annual emission of degradation in the project area (tCO ₂ e)
$EA_{DEG,f,año}$	=	Annual emission of degradation in the leakage area (tCO ₂ e)

14.7.3.3. Total project emissions reduction

The total reduction in emissions from avoided deforestation and degradation is estimated from the following equation:

$$RE_{tot+proy} = RE_{DEF,REDD+proy} + RE_{DEG,REDD+proy}$$

Where:

$RE_{tot+proy}$	=	Reduction of total emissions from deforestation and degradation avoided in the project scenario (tCO ₂ e)
$RE_{DEF,REDD+proy}$	=	Reduction of emissions from deforestation avoided in the project scenario (tCO ₂ e)
$RE_{DEG,REDD+proy}$	=	Reduction of emissions due to degradation avoided in the project scenario (tCO ₂ e)

14.8. Quality Control and Assurance Procedures

In Annex 6, file 6.1. *Procedure QC-QA Dabucury.pdf*, the procedure to be carried out to ensure the quality of the information and that the estimates of GHG emissions reflect the characteristics of the project, in an accurate, consistent, complete and transparent manner, are presented.

15. System of Petitions, Complaints and Grievances (PQR)

The Petitions, Complaints and Grievances (PQR) system is part of the REDD+ Committee and allows us to know the concerns and manifestations that the stakeholders of the REDD+ project have in order to have the opportunity to strengthen the development and implementation of the project and maintain the continuous improvement approach.

Any user (whether individual or group of people) can submit their application to the member of the REDD+ Committee in charge of managing PQR. According to the nature of the PKR, they can be described as follows:

- **Request or suggestion:** It is an action by means of which the user, in a respectful manner, requests from the Project any information related to the development of the activities or describes a suggestion.
- **Complaint:** It is the expression or manifestation that the user makes to the Project for the dissatisfaction generated by the development of the activities.
- **Complaint:** It is the opposition or contrariety presented by the user, in order for the Project to review and evaluate an action related to the development of the activities in economic terms.

In each reservation, the REDD+ project management scheme is based on a REDD+ Committee that has people with specific positions and functions that aim to ensure effective articulation and integration of project activities, community members, and third parties who may be related to the project.

The duties of the PQR Care Officer are:

- Be a channel between the DABUCURY REDD+ project and the community to receive questions, complaints and suggestions (PQRS). Recording these with the following information:
 - Date received.
 - Category (Complaint, Claim or Suggestion)
 - Investment Area (Productive Profitable Alternatives, Governance, Monitoring, Social Investment and Others)
 - Involved
 - Situation
 - Response Date
 - Answer
 - Upshot
- Support the response process with stakeholders to make it timely.
- Inform the complainant of the response.
- Record and monitor PQRs submitted by the REDD+ Project community.
- Support the preparation of the REDD+ Committee's report every four months.
- Disseminate and socialize the objectives of the REDD+ Project.
- Support the awareness process of the REDD+ project in relation to the daily activities of the reserve, in order to achieve the conservation of the forest.

The procedure for the registration, monitoring and management of PQRs is:

Table 28. Procedure for the care and management of PQR.

Step	Description of the activity	Responsible	Generated Document
1	Register the PQR in the format provided (writing, rapporteurship, etc.) and deliver it to a member of the REDD+ Committee.	Person interested in filing a PQR	PQR Filing Format
2	The PQR manager reviews and records the PQR.	PQR Member of the REDD+ Committee	PQR Registration & Tracking
3	The PQR Officer determines whether the PQR needs to be answered, as appropriate.	PQR Member of the REDD+ Committee	
4	(a) If the PQR does not proceed, the user who performed the PQR must be informed of the justification as to why the PQR is not appropriate, and the action performed must be recorded in the PQR record. (b) If the PQR is appropriate, it should analyze the characteristics of the PQR and define the route to attend and respond appropriately.	PQR Member of the REDD+ Committee	PQR Registration & Tracking
5	(a) If the PQR corresponds to a Request or Suggestion, it should be reviewed for any relationship to the risks in section 11.4 of the PDD and appropriate preventive actions taken. If the PQR is not related to these risks, it must be defined what action to take to respond to the user and implement the necessary activities. (b) If the PQR corresponds to a Complaint or Claim, it must be defined what action must be taken to attend or respond to the user and implement the necessary activities.	PQR Member of the REDD+ Committee	
6	The PQR manager reviews whether the implementation of preventive actions or actions to attend to or respond to the user have been effective and satisfactory.	PQR Member of the REDD+ Committee	
7	If the actions have been appropriate, the PQR is closed and the actions are recorded in the monitoring log. If the actions have not been effective, then the actions should be replanned	PQR Member of the REDD+ Committee	PQR Registration & Tracking

Step	Description of the activity	Responsible	Generated Document
	to prevent or address the user's PQR, and implement the new activities, and return to Step 5. The goal of attending or responding to a PQR is to ensure that the response to the PQR is effective and appropriate.		
8	The person in charge of PQR must keep track of each of the PQRs that are carried out to the REDD+ Project.	PQR Member of the REDD+ Committee	PQR Registration & Tracking
9	Each time the REDD+ Committee meets, the PQR officer must submit to the Committee a report on the management of PQRs, including the PQRs that are pending to be addressed and the results obtained against the PQRs served.	PQR Member of the REDD+ Committee	PQR Registration & Tracking

16. Risk Management

16.1. Risk Identification and Classification

The risk assessment was carried out based on the *PMBOK® Guide* (Guide to the Fundamentals of Project Management) for the social, environmental and financial dimensions. The following is an assessment of the risks identified, considering their likelihood and impact:

Table 29. Probability and impact matrix.

Qualification (Probability x Impact)	Risk Classification	
	Value	Level
9	3	High
6	3	High
4	2	Middle
3	2	Middle
2	1	Low
1	1	Low

The probability of social risks was estimated taking into account the historical and social context of the communities that make up the project according to the observations and evidence generated during the development of the workshops, as well as the social and cultural dynamics identified in each of the indigenous reserves, recorded in the documents of interest of each IR (see folder *Documents of General Interest*). On the other hand, for environmental risks, the probability was determined based on the information obtained from official sources consulted (IDEAM, UNGRD, Colombian Geological System), the deforestation analyses carried out and the observations generated during the development of the workshops. The probability of financial risks was determined based on the information contained in the project's financial model, observed market trends, and the experience of the owners in implementing projects. On the other hand, the impact was estimated taking into account the effect that the materialization of the risk would have on the execution of the project and the sustainability of the expected results.

Table 30. Project risk analysis.

Dimension	Risk	Probab.	Impact	Qualification	Classification
Social	Forced displacement of community members	1	3	3	Middle
	Weakening of governance structures defined by indigenous reservations	1	3	3	Middle
	Community dissatisfaction with the implementation of the REDD+ project	1	3	3	Middle
	Economic dependence on the income generated by the commercialization of the CCVs	1	2	2	Low
	Cultural changes (e.g. loss of traditional IR practices)	1	2	2	Low
Environmental	Extreme weather events (e.g. floods, mass removal events, etc.)	3	2	6	High
	Displacement of deforestation actions due to project implementation	1	3	3	Middle
	Fires of anthropic origin	1	2	2	Low
	Expansion of the agricultural frontier	2	2	4	Middle
	Pests and diseases in production systems	1	2	2	Low

Dimension	Risk	Probab.	Impact	Qualification	Classification
	Changes in land use in the project area	1	2	2	Low
Financial	The project reaches the break-even point after more than 7 years	1	2	2	Low
	Market Price Sensitivity	1	3	3	Middle
	Annual Budget Deficit	1	3	3	Middle
	Delays in the implementation of project activities due to poor budget programming	1	2	2	Low
	The project secures a financing percentage of less than 50%	1	3	3	Middle
	Financial viability of the project	1	2	2	Low

16.2. Mitigation measures

Below are the mitigation measures defined to mitigate the identified risks:

Table 31. Mitigation measures for risk management.

Risk	Mitigation measures
Forced displacement of community members	<ul style="list-style-type: none"> Strengthening governance structures defined by IRs Operation of the PQR Attention Mechanism (Early Warnings) Strengthening capacities for conflict management with community members
Weakening of governance structures defined by indigenous reservations	Implementation of the Governance component, whose actions are aimed at strengthening governance structures
Community dissatisfaction with the implementation of the REDD+ project	Operation of the PQR Attention Mechanism (early warnings and design of actions that allow the pertinent adjustments to be made)
Economic dependence on the income generated by the commercialization of the CCVs	The development of an alternative livelihood component ensures that there is no room for economic dependency
Cultural changes (e.g. loss of traditional IR practices)	Implementation of activities aimed at strengthening traditional practices and knowledge transfer (e.g.

Risk	Mitigation measures
	strengthening traditional medicine, conservation of indigenous languages, among others)
Extreme weather events (e.g. floods, mass removal events, etc.)	<ul style="list-style-type: none"> • Project Area Monitoring
Displacement of deforestation actions due to project implementation	<ul style="list-style-type: none"> • Monitoring of vegetation cover in the leakage area defined for the project
Fires of anthropic origin	<ul style="list-style-type: none"> • Project Area Monitoring • Early Warning and Detection System
Expansion of the agricultural frontier	<ul style="list-style-type: none"> • Land-use planning • Activities to improve the yield per unit area of production systems • Community Agreements
Pests and diseases in production systems	Technical assistance for the management of production systems
Changes in land use in the project area	<ul style="list-style-type: none"> • Project Area Monitoring • Land-use planning
The project reaches the break-even point after more than 7 years	The project reaches break-even point before the seventh year of implementation
Market Price Sensitivity	Regulated prices for the management of the carbon tax
Annual Budget Deficit	Within the framework of the implementation of the project, it was defined that the Annual Investment Plan is prepared annually, the ceiling of which must not exceed the available budget amount
Delays in the implementation of project activities due to poor budget programming	Within the framework of the implementation of the project, it was defined that the Annual Investment Plan is prepared annually, the ceiling of which must not exceed the available budget amount
The project secures a financing percentage of less than 50%	The project has secured more than 85% of the required financing
Financial viability of the project	The project presents positive financial indicators and presents a sustainable cash flow for its implementation period.

17. Double Counting

To ensure robust and transparent accounting, and to avoid overestimation of benefits related to the Project, the following criteria were evaluated:

Table 32. Verification of no double counting.

Criterion	Happens?	Justification
A ton of CO _{2e} is counted more than once to demonstrate meeting the same GHG mitigation goal.	No	A tonne of CO _{2e} is not counted more than once.
One ton of CO _{2e} is counted to demonstrate the fulfillment of more than one GHG mitigation target.	No	A tonne of CO _{2e} is not counted more than once.
A tonne of CO _{2e} is used more than once for remuneration, benefits or incentives.	No	The serial guarantees that a CCV will not be issued more than once.
A ton of CO _{2e} is verified, certified or accredited through the implementation of more than one GHG Project.	No	No other Projects are being implemented within the Dabucury REDD+ project area.

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