



## MONITORING REPORT OF DELFINES CUPICA REDD+ PROJECT

Documento Preparado por:

**BIOFIX CONSULTORÍA S.A.S BIC**

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## Project Information

	<b>Project Design Document</b> <b>DELFINES CUPICA REDD+ PROJECT</b>
<b>PROJECT INFORMATION</b>	
<b>Project name</b>	DELFINES CUPICA REDD+ PROJECT
<b>Version</b>	5
<b>Project Proponents</b>	Community Council Cupica Community Council Los Delfines
<b>Prepared by</b>	BIOFIX CONSULTORIA SAS BIC
<b>Project location</b>	Colombia Bahía Solano and Juradó Chocó
<b>Validation and Verification Body</b>	ICONTEC
<b>Project Lifetime</b>	January 1, 2010, to December 31, 2039. Lifetime of 30 years
<b>Methodology</b>	BioCarbon Registry Methodology NTC 6208 of 2016 <i>“Mitigation Actions in the USCUS Sector at the Rural Level, Incorporating Social and Biodiversity Considerations”</i> ProClima Methodology <i>“Methodological Document for the AFOLU Sector: Quantification of Greenhouse Gas</i>

	<i>Emission Reductions from REDD+ Projects Version 2.2.”</i>
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## 1 Project description

### 1.1 Project Summary

The DELFINES CUPICA REDD+ project commenced in January 2010 with the “*Borders of Jungle and Sea for Peace*” project. This initiative was jointly developed with the Pacific Environmental Research Institute (IIAP) and the European Union. Its objectives included promoting actions for social progress, reducing land use conflicts, and fostering peace. This was achieved through training in agricultural practices, coexistence, and environmental education, as well as territorial planning, infrastructure improvements for production and housing, and enhancements in the provision of services.

Subsequently, a series of projects in collaboration with other organizations were initiated, with objectives such as establishing a biosphere reserve and supporting and strengthening the timber sector with a vision of environmental, social, and economic sustainability. To ensure the continuity of the community councils’ commitment to biodiversity conservation, the formal implementation of the REDD+ project in the territory began. In addition to supporting the development of the aforementioned projects, the REDD+ project defines actions lines that align with the achievement of Sustainable Development Goals and address the needs identified by the communities within the councils.

Among the activities carried out by the community councils throughout the project are, among others, governance strengthening, including activities such as the formulation of ethno-development plans; participatory reforestation, which has been conducted for both community councils, involving the community in actions like setting up nurseries; agricultural sector strengthening, which includes a characterization process, research, and vanilla cultivation; among other. This is how, with the planning and execution of these action lines, the REDD+ project is designed to span 30 years, concluding in the year 2039.

The project area encompasses 113,025 hectares, divided between the two Community Councils:

- Community Council Los Delfines, with the allocation of collective territories for Black communities through Resolution No. 2200 issued by INCORA<sup>1</sup> on December 3, 2002.
- Community Council Cupica, with allocation of collective territories for Black communities through Resolution No. 2700 issued by INCORA on December 21, 2001.

Based on the characterization of the territories and the formulation of the REDD+ project, the following areas are defined:

- The Reference Region for deforestation rate of the project cover an area of 870,250 hectares, of which 614,477 hectares<sup>2</sup> were forested in the year 2000.
- The eligible project area encompasses 103,022 hectares.
- The Leakage Belt covers 101,727 hectares.

Based on the definition of these areas and the objective of reducing emissions from deforestation and degradation, the project was initially formulated under the methodology of the Colombian Technical Standard 6208 *“Mitigation Actions in the Land Use, Land-Use Change, and Forestry (LULUCF) Sector at the Rural Level, Incorporating Social and Biodiversity Considerations”*.

Level 2 was employed using country-specific data, particularly from IDEAM, regarding the amount of carbon stored in the tropical rainforests within the study area.

- The methodology applied to calculate the leakage belt was LK-ASU from the REDD VCS VM0007 methodology concerning Leakage from Unplanned Deforestation Displacement.

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<sup>1</sup> The Colombian Institute for Agrarian Reform (INCORA), which was replaced in 2003 by the Colombian Institute for Rural Development (INCODER), and subsequently in 2015 by the National Land Agency, under the Ministry of Agriculture and Rural Development.

<sup>2</sup> These hectares correspond to the area with information for the years compared, specifically 2000 and 2010, according to the methodology used.



- The methodology applied for the reference area followed the guidelines of REDD VCS VM0007.
- The methodology applied for verifying additionality was defined in accordance with the requirements of Article 43 of Resolution 1447 of 2018.

Furthermore, a validation and first verification process were carried out with the auditing body AENOR, where verification was conducted for the period from 2010 to 2019, resulting in a reduction of emissions by 3,426,050 tons of CO<sub>2</sub>e. This process was developed according to the criteria of NTC 6208. Initially, the project aimed to reduce 11,270,941 tons of CO<sub>2</sub>e over 30 years, equivalent 375,698 tons of CO<sub>2</sub>e per year.

During the time between validation and the first verification, Colombia updated its National Forest Reference Emission Level (NREF) in 2020. This update included changes in biomass content, and the data was stratified by biomes rather than life zones, as initially done. Therefore, in compliance with Resolution 1447 of 2018, which mandates updating the baseline and verifications of REDD+ projects with the most up to date NREF issued by the Ministry of Environment and Sustainable Development (MADS) and validate by the UNFCC, this monitoring report includes this update. The last baseline for the entire project period is 8,242,815 tons of CO<sub>2</sub>e.

Likewise, during this same period, the certification program, which in this case is ProClima, published its own methodology that addressed the analysis gaps present in NTC 6208. In the initial verification, these gaps were complemented with the VCS VM0007 methodology. However, in the second verification, the VCS VM0007 is omitted, and the methodology from the certification program, *“Methodological Document for the AFOLU Sector: Quantification of Greenhouse Gas Emission Reductions from REDD+ Project Version 2.2”*, is applied for constructing the monitoring report of this verification. This was done to cover gaps in leakage analysis, permanence, additionality, deforestation agents and drivers, and to include the quantification of emission reductions due to forest degradation.

Subsequently, the project underwent its second verification, covering the period from January 1, 2019, to December 31, 2020. During this verification, a reduction in emissions due to deforestation of 450,025 tons of CO<sub>2</sub>e and a reduction in emissions due to forest degradation

of 165,681 tons of CO<sub>2</sub>e were confirmed. This resulted in a total of 615,706 tons of CO<sub>2</sub>e for both activities combined.

To achieve a total of 615,706 tons of CO<sub>2</sub>e for both activities, of which 523,350 tons of CO<sub>2</sub>e would be marketable after applying all the discounts in compliance with Resolution 1447 of 2018.

## 1.2 Objectives

The objectives of the DELFINES CUPICA REDD+ project are:

- Mitigate the effects of climate change by adopting measures to reduce and sequester CO<sub>2</sub> emissions avoiding deforestation and promoting the recuperation of degraded forest areas.
- To promote the sustainable management of forests located in the influence area of the project by forest custodians promoting productive activities compatible with the reduction of emissions generated by deforestation.
- To cooperate in biodiversity conservation by protecting ecological connectivity and habitats, especially for species categorized as threatened and those of ecological interest due to their adaptive capacity to climate change, such as marine turtles and mangroves.
- Contribute to the education of gender equity by increasing the capacity for leadership, empowerment, and entrepreneurship of afro Colombian women in the collective territories.

## 2 Project proponents and stakeholders

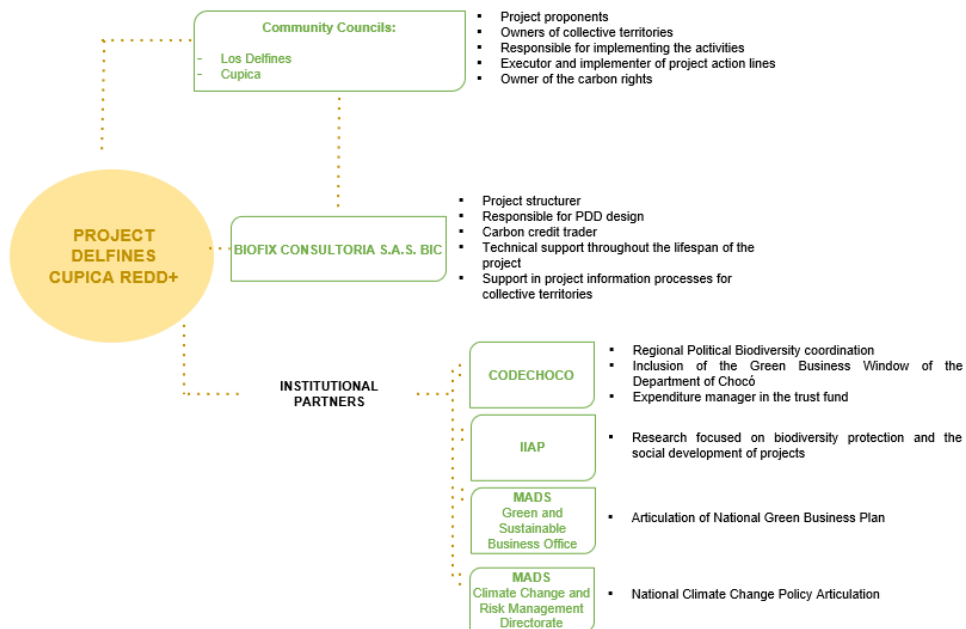
### 2.1 Community Councils

The project proponents are the Community Council Los Delfines and the Community Council Cupica, who have granted the company BIOFIX CONSULTORIA SAS BIC the management of designing the project document, as well as exclusivity for the issuance and commercialization of carbon credits generated in the territory. This partnership was made possible through previous efforts by the Agro Impulso Foundation. Under an umbrella agreement with

the Community Councils, the foundation was entrusted with the task of seeking carbon footprint reduction projects to bring development to the communities. This agreement subsequently allowed the signing of a Temporary Association Contract between BIOFIX BIC and Agro Impulso as a strategic manager in the consolidation and social construction of the project. This contract was ratified by the General Assembly of the two Community Councils. It is worth noting that the strategic manager has since withdrawn from the REDD+ project.

Additionally, the project has had institutional allies such as the Autonomous Regional Corporation for Sustainable Development of Chocó – CODECHOCO, the Institute of Environmental Research of the Pacific – IIAP, the Office of Green and Sustainable Businesses – ONVS, as well as the Office of Climate Change and Risk Management, affiliated with the Ministry of Environment and Sustainable Development.

**Figure 1. Organizational chart of the DELFINES CUPICA REDD+ Project**



**Source: DELFINES CUPICA REDD+ project**

Below are the details of the legal representatives of the community councils as project proponents and carbon rights owners, as well as the contact information of the legal representative of BIOFIX BIC as the project developer and trader of emission reduction certificates.

**Table 1. Project proponents**

<b>Name of institution</b>	Consejo Comunitario Los delfines
<b>Contact</b>	Juan Edilberto Pinilla Flores
<b>Telephone number</b>	+57 3122482827
<b>E-mail address</b>	<a href="mailto:ccdelfinesjuradobahia.org@gmail.com">ccdelfinesjuradobahia.org@gmail.com</a>

<b>Name of institution</b>	Consejo Comunitario Cupica
<b>Contact</b>	Simon Lozano Ruiz
<b>Telephone number</b>	+57 3232344860
<b>E-mail address</b>	<a href="mailto:consejocomunitariocupica@gmail.com">consejocomunitariocupica@gmail.com</a> <a href="mailto:consejocomunitariocupica2023@gmail.com">consejocomunitariocupica2023@gmail.com</a>

Source: DELFINES CUPICA REDD+ project

## 2.2 BIOFIX CONSULTORIA S.A.S BIC

It is a company of society by simplified actions that aims to promote and strengthen sustainable development and social well-being, through the formation and implementation of projects with the approach of nature-based solutions, which seeks to reduce emissions of greenhouse gases.

Thus, in its trajectory it has established nine REDD+ projects which are in the implementation phase. Among these, it should be that they have been carried out in indigenous reserves, territories of black communities and with private actors.

**Table 2. Other project participants**

<b>Name of institution</b>	BIOFIX CONSULTORÍA S.A.S BIC
<b>Contact</b>	Ana Milena Plata Fajardo
<b>Role</b>	Legal Representative
<b>Identification</b>	901.166.791-6
<b>Telephone number</b>	(+57) 3212163744
<b>E-mail address</b>	<a href="mailto:aplata@biofix.com.co">aplata@biofix.com.co</a>
<b>Location</b>	Av. Cra. 45 # 108a – 50 Of. 404, Bogotá, D.C. Colombia

Source: DELFINES CUPICA REDD+ project

## 2.3 Environmental Authorities with jurisdiction in the project area and related planning instruments

The environmental authority with jurisdiction over the region where the municipalities involved in the project are located is the Autonomous Regional Corporation for Sustainable Development of Chocó – CODECHOCO. Among its functions, CODECHOCO is responsible

for directing land use planning processes to mitigate inappropriate land use, such as deforestation.

Among the planning instruments that guide the actions of the Corporation, the highlights include the Action Plan 2016 – 2019 and the Regional Environmental Management Plan (PGAR) 2012 – 2021.

Regarding the Action Plan, its approach includes programs, goals, and strategies: i) The development of green business projects as a biocommerce and sustainable production strategy for biodiversity conservation in the post-conflict scenario, ii) Strengthening the technical capacity of CODECHOCO's Green Entrepreneurship Window, iii) Implementation of initiatives that promote traditional practices for sustainable use and the recovery of ecosystems degraded by anthropic activities in the department, iv) Enhancement of entrepreneurial capacity in grassroots organizations to access markets within the biocommerce framework, and v) The consolidation of the community forest guardians group in collective territories with the purpose of engaging in processes for mitigation and adaptation to climate change and the implementation of REDD+.

Regarding the PGAR, the Autonomous Corporation includes within the environmental vision of the department the coordination of efforts to create green business opportunities, starting with the incorporation of climate change as a cross-cutting axis in both planning and territorial zoning. They propose the creation of the Departmental Observatory of Green Markets and Biocommerce as a strategy to generate information and knowledge about various business lines, with an emphasis on environmental bonds.

In line with this approach, in conjunction with the MADS, CARs, research institutions, and related productive sectors, the Regional Green Business Program: Pacific Region is formulated. This program serves as a crucial tool for environmental authorities and sectors in the region by providing guidelines for planning and decision-making based on regional potentials and competitive advantages. It aims to stimulate economic and social growth while promoting the conservation of natural resources.

### 3 Project Location

The project is located within the properties of the collective territories awarded to the Community Councils of Los Delfines and Cupica. These territories are situated between the municipalities of Bahía Solano and Juradó in the department of Chocó, located between the Gulfs of Cupica and Tribugá.

Bahía Solano is located on the Baudó Range, at 5 meters of elevation, and covers an area of 1,667 km<sup>2</sup>, with the urban area encompassing 95 km<sup>2</sup>. Additionally, it includes 6 townships (Nabugá, Huina, Huaca, Cupica, El Valle, and Mecana), the municipal seat known as Ciudad Mutis, 7 rurals districts (Tebada, Abegá, Cocalito, Paridera, Playa de Potes, Playa de los Cuesta, and Playita de Nabugá), 4 indigenous reserves (Boroboro, Poza Masa, El Brazo, and Villa Nueva Juna), extensive collective territories of black communities, the jurisdiction of the Utría National Natural Park, and 6 Natural Reserves of Civil Society that also form part of special management areas (Alcaldía Municipiopl de Bahía Solano, 2012).

Juradó is located at 5 meters of elevation and covers an area of 1,352 km<sup>2</sup>, with 26.7 km<sup>2</sup> designated as urban land. It is situated 320 kilometers from Bahía Solano. Administratively, it is composed of 6 populated centers (Punta Ardita, Guarín, Curiche, Coredó, Punta Cruces, and Aguacate), 13 smaller settlements (El Morro, Bahía Octavia, Borojó, Castellano, El Cedro, Cucaracha, Patajoná, Juan Ruda, Cahnguerá, San Felipe, Punta Brava, El Roto, and Sor Pacífico), 8 indigenous reserves, and a significant portion of its territory is covered by collective properties of black communities (Alcaldía Municipiopl de Juradó, 2012).

It is important to note that Community Councils are legally established organizational structure for black, Afro-Colombian, Raizal, and Palenquera communities, created by Law 70 of 1993. Under this law, communities belonging to these councils have the right to collective property, which means that the territories granted to these communities enjoy the attributes of being inalienable, imprescriptible, and unseizable. This forms the basis for the protection and care of the territory. Legal land tenure is ensured through the corresponding resolutions. The figure below illustrates location of the project. Here is the geographical location of the Community Councils.

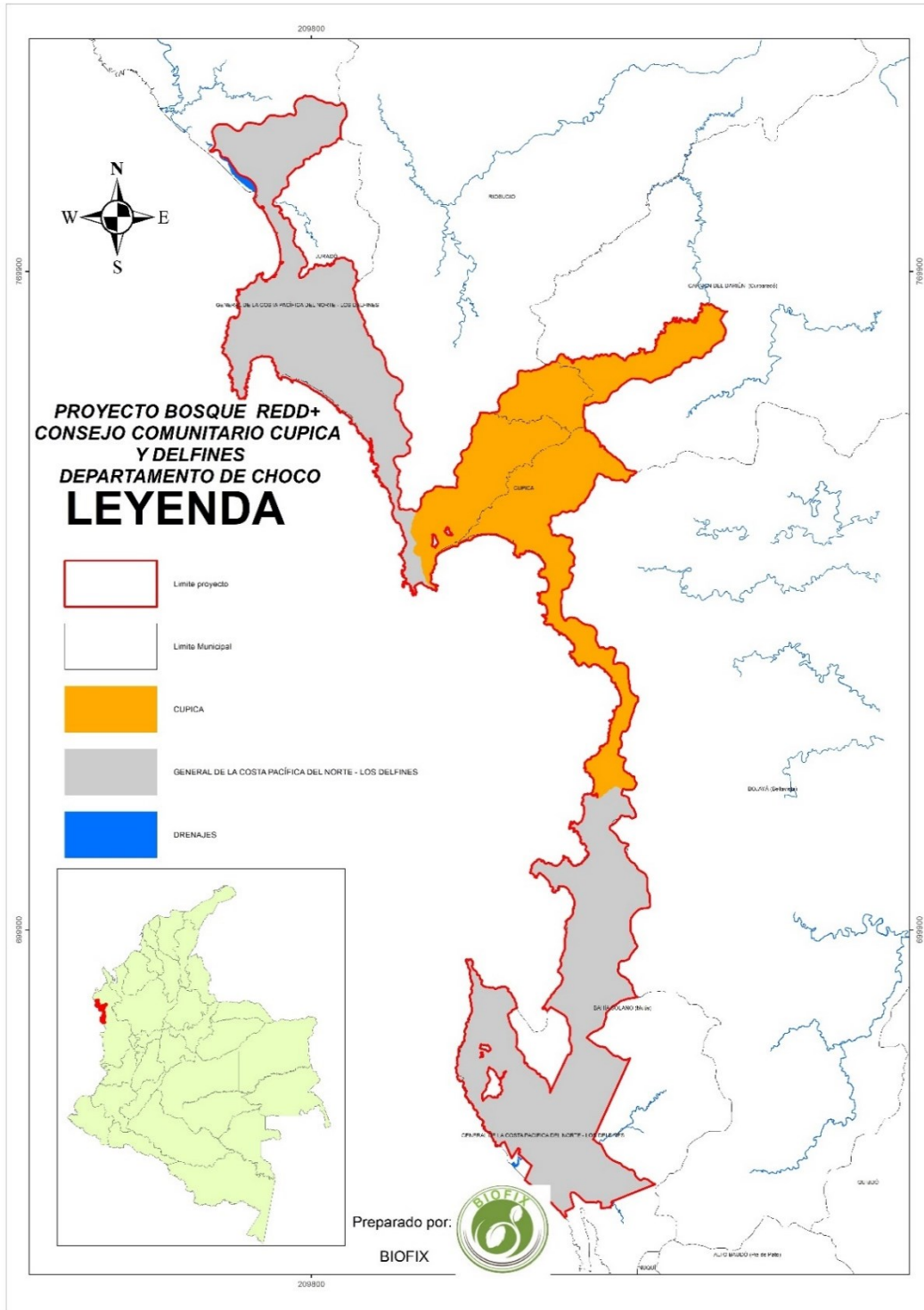
**Table 3. Geographic localization of the Community Councils**

Community council	Municipality	Villages included	Boundaries
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Los Delfines (This is divided in two sectors)	Juradó	<ul style="list-style-type: none"> <li>• Curiche</li> <li>• Coredó</li> <li>• Guarín</li> <li>• Patajona</li> <li>• Aguacate</li> <li>• Octavida</li> <li>• Piña</li> </ul>	<p><b>Indigenous Reserves:</b></p> <ul style="list-style-type: none"> <li>• Peña Blanca</li> <li>• Santa Marta</li> <li>• Uva y Poge</li> <li>• Pichicora, Chicue, Puerto Alegre</li> <li>• Ríos Valle, Boroboro, Posamansa</li> </ul> <p><b>Community Councils:</b></p> <ul style="list-style-type: none"> <li>• Juradó</li> <li>• Truandó medio</li> <li>• Cupica Afluentes:               <ul style="list-style-type: none"> <li>○ Río Partadó</li> <li>○ Río Putumia</li> <li>○ Quebrada Peña</li> <li>○ Quebrada La Calle</li> <li>○ Quebrada La Punta</li> <li>○ Quebrada Piña</li> <li>○ Quebrada Tundo Quebrada Chorro del Cura</li> </ul> </li> </ul> <p><b>Utría National Natural Park</b></p>
	Bahía Solano	<ul style="list-style-type: none"> <li>• Nabuga</li> <li>• Playita de las Flores</li> <li>• Playita de los Potes</li> <li>• Huaca</li> <li>• Mecana</li> <li>• Ciudad Mutis Rural</li> <li>• Punta Huina</li> <li>• Playa de los Cuestas</li> <li>• Juna</li> <li>• El valle</li> </ul>	
Cupica	Bahía Solano	<ul style="list-style-type: none"> <li>• La Pista</li> <li>• Pueblo Nuevo</li> <li>• Tebada</li> </ul>	<p><b>Indigenous Reserves:</b></p> <ul style="list-style-type: none"> <li>• Jagual Río Chintadó</li> <li>• Río Domingodó</li> <li>• Río Opogadó</li> <li>• Río Naipi</li> <li>• Alto Río Cuia</li> <li>• Pichicora, Cicue, Puerto Alegre</li> </ul> <p><b>Community Councils:</b></p> <ul style="list-style-type: none"> <li>• Los Delfines</li> <li>• Truandó</li> </ul>

Source: Municipal governments of Juradó and Bahía Solano

Figure 2. Localization of the project map



Source: DELFINES CUPICA REDD+ project



## 4 Compliance with legal requirements

### 4.1 Analysis of the DELFINES CUPICA REDD+ Project in accordance with Resolution 1447 of 2018

This project complies with the current regulations of the National Emission Reduction Registry, Resolution 1447 of 2018, regarding Article 39, “Use of Methodologies for the Formulation and Implementation of REDD+ Projects”, which stipulates that the project owner of the REDD+ project must use methodologies that meet the following characteristics:

**Follow the guidelines set forth by the UNFCCC related to REDD+:** Both the NTC 6208 methodology from 2016, “Mitigation Actions in the USCUS Rural Sector, Incorporating Social and Biodiversity Considerations”, as indicated in Section “0. Introduction” and as described in the ProClima Methodology document “AFOLU Sector Methodological Document. Quantification of GHG Emission Reductions from REDD+ Projects Version 2.2”, in Section “5. Normative References”.

**Having a mechanism for managing the risk of greenhouse gas emission reduction leakage:** The management of the risk of greenhouse gas emission reduction leakage is carried out through the cross-cutting lines of action in all REDD+ projects developed by BIOFIX BIC, specifically the “Deforestation and Forest Degradation Monitoring and Control Program” and the “Participatory Reforestation of Degraded Ecosystems” line of action, as described in sections 6.1.2 and 6.1.3 of this report.

**Having a mechanism for managing the risk of non-permanence of greenhouse gas emission reductions and removals:** In section 5.3, an additional analysis of permanence risk is conducted. Furthermore, following the guidelines of section “13.1 Uncertainty Management... Within the ProClima Program, uncertainty management is determined by the precision of the maps used to estimate activity values and the application of discounts”. These discounts amount to 15%, as specified in section 11.8 of the ProClima Program.

**Having a mechanism to handle uncertainty in the quantification of the baseline and mitigations results:** In accordance with Section 14.4 “Monitoring of REDD Project Permanence” of the ProClima Methodology Version 2.2, Section 5.4 of this document presents the non-permanence analysis along with the mitigation measures, monitoring indicators, and reporting procedure.

Furthermore, the project complies with the additionality criteria of Article 43 of Resolution 1447 of 2018 regarding:

The project is not the result of compensation activities for environmental licenses, concessions, or requests for timber forest exploitation or the removal of national forest reserves.

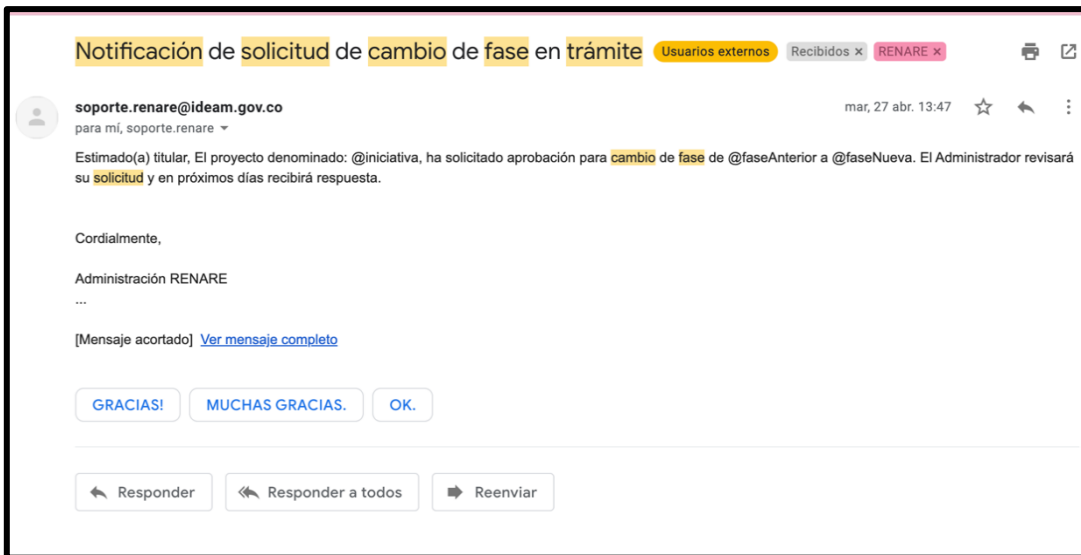
The project is not the result of preservation and restoration activities in strategic areas and ecosystems for which payments for environmental services related to greenhouse gas emissions reduction and capture are made, as established in Chapter 8 of Title 9 of Part 2 of Book 2 of Decree 1076 of 2015.

Regarding the Baseline, Resolution 1447 of 2018 specifies in Article 41, Paragraph 2 that “with the purpose of verifying greenhouse gas emissions reductions and removals generated from January 2020 onwards, that holder of the REDD+ Project that validated its baseline prior to the issuance of this Resolution must adjust and validate its baseline based on the most updated NREF”. The baseline adjustment involves the methodological reconstruction of the most updated NREF applicable to the geographic area of the project. According to the Directorate of Environmental Studies of the Institute of Hydrology, Meteorology, and Environmental Studies (IDEAM), the official institute responsible for estimating the Reference Level, “There is no reference level for the project area as of the year 2018”. Therefore, for this monitoring report, the adjustment was made using the updated values from the “Proposal for the reference level of forest emissions from deforestation in Colombia for REDD+ results-based payments under the UNFCCC – NREF 2019”, as shown in the removal calculations (Annex 26).

Finally, the DELFINES CUPICA REDD+ Project was registered in the National Mitigation Actions Monitoring and Reporting System (RENARE), demonstrating that it did not have any overlap or impediment to its implementation. However, it should be noted that the platform is currently not operational.

Finally, it is declared that the DELFINES CUPICA REDD+ Project is registered in the Monitoring and Verification Reporting System for mitigation actions at the national level - RENARE. As shown in the following link: <http://renare.siac.gov.co/GPY-web/#/gpy/datbas-reddreg/121/2241>, without any overlap or impediment to its implementation.

Figure 3. Initiative Registration Supporting Documents



LISTADO DE INICIATIVAS					
6	y Estudios Ambientales Instituto de Hidrología, Meteorología	PY REDD+	Proyecto de Conservación DELFINES CUPICA REDD+	Formulación	 

Source: DELFINES CUPICA REDD+ project

## 4.2 Analysis of Non-Permanence for the DELFINES CUPICA REDD+ Project

In accordance with Resolution 1447 of 2018, an analysis of non-permanence risk of the project is established, which can be of a natural or anthropogenic nature, for which non-

permanence risk monitoring and reporting procedures are applied. This is in response to potential risks that may arise in the project, including those highlighted in the territory of the Los Delfines and Cupica Community Councils:

- Occurrence of extreme weather events such as tsunamis, hurricanes, earthquakes, etc., leading to coastal erosion or mass movements.
- Forest fires.
- Forced displacement in rural areas of the departments.
- Illegal trade in wildlife and flora, for commerce, pets, hunting, among others.
- Governance deficit due to changes in local government structures.
- Socio-environmental conflicts with private actors within the collective territory.
- Conversion of eligible areas of the REDD+ project into ineligible areas due to uncontrolled forest degradation and deforestation processes.
- General community dissatisfaction with the REDD+ project implementation process due to a lack of ownership of project activities.

Therefore, following the guidelines of section 14.4 Monitoring of Project Permanence in the ProClima Methodological Document Version 2.2, the following monitoring plan table is established for the DELFINES CUPICA REDD+ project.

**Table 4. Analysis of Non-Permanence Risks**

Identified Risk	Mitigation Measure	Monitoring Indicators	Reporting Procedure	Evidence of Monitoring Indicators (Annexes)
Occurrence of extreme weather events such as tsunamis, hurricanes, and other events causing coastal erosion or mass removal	Extreme natural events are uncontrollable; however, coastal erosion is addressed through reforestation of areas degraded by this degradation driver	Number of hectares reforested in coastal erosion areas.	Execution reports of projects within the framework of the action plan monitoring of the DELFINES CUPICA REDD+ project	15 and 16

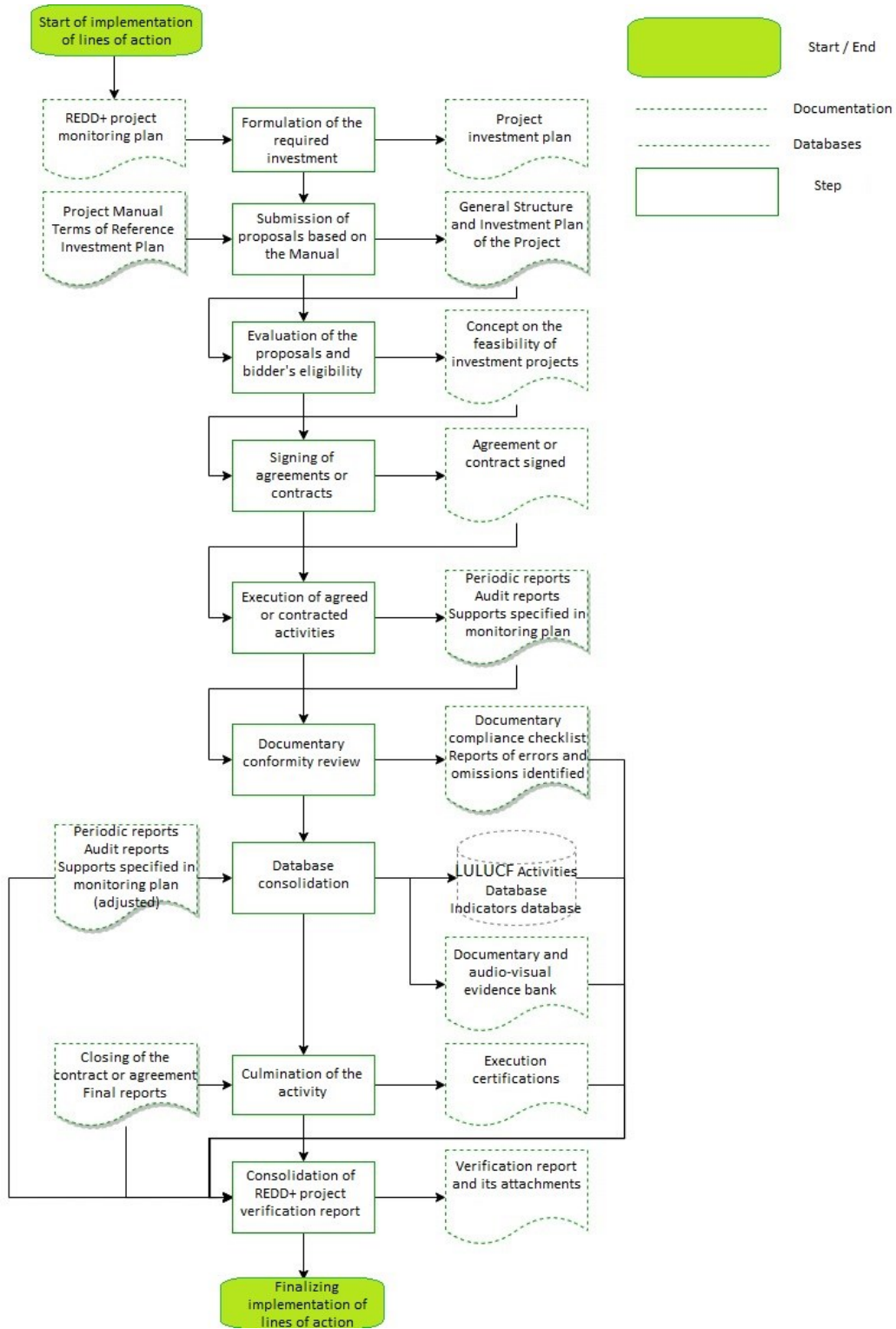
<p>Forest fires</p>	<p>If it is of anthropogenic origin, the cause for the burning will be identified, and if it is different from subsistence activities, emissions will be quantified for the relevant deduction.</p> <p>On the other hand, if it is of natural or unknown origin, these areas will be prioritized for participatory reforestation processes.</p>	<p>Number of hectares rehabilitated or reforested.</p> <p>Tons of carbon dioxide equivalent emissions caused by industrial or semi-industrial activities.</p>	<p>Weekly monitoring by the project developer as part of the deforestation and degradation monitoring action line.</p> <p>Execution reports of industrial or semi-industrial projects generating emissions within the framework of the productive action lines of the DELFINES CUPICA REDD+ project monitoring plan.</p>	<p>17 and 18</p>
<p>Forced displacement in rural areas of the departments.</p>	<p>Armed conflict events are not mitigable by the REDD+ project. The right to life takes precedence over all other project objectives. If it is safe to do so, a security alert will be issued to the relevant state authorities, if this does not jeopardize the community at large.</p>	<p>Number of security alerts generated by illegal armed groups.</p> <p>Number of armed groups identified in the territory.</p>	<p>Joint report from the project proponents with the support of the project developer to the relevant government entities.</p>	<p>There have been no forced displacements.</p>
<p>Illegal wildlife and flora trade, for commerce, pets, hunting, among others.</p>	<p>Include the population interested in harvesting wood for commercial purposes in sustainable forest management schemes in accordance with Colombian regulations.</p> <p>Include the population interested in harvesting genetic resources or fauna in sustainable management plans in accordance with Colombian regulations.</p>	<p>Number of hectares included in sustainable forest management for inclusion in planned deforestation activity.</p> <p>Number of management plans generated for fauna, flora, or genetic resources within the framework of Colombian regulations.</p>	<p>Reports on the execution of productive projects and/or green businesses within the framework of the action lines of the DELFINES CUPICA REDD+ project monitoring plan.</p>	<p>7, 8 and 16</p>

<p>Governance deficit due to changes in local government structures.</p>	<p>Support in annual informative and training assemblies as planned by the community councils.</p>	<p>Number of assemblies and/or training sessions conducted by the project proponents and the project developer.</p>	<p>Reports on the execution of training projects under the governance and institutions strengthening action line.  Minutes of participation in informative, training, accountability, and management meetings held by the community councils proposing the project with the support of the developer.</p>	<p>7 and 8</p>
<p>Socio-environmental conflicts with private actors within the collective territory.</p>	<p>Land parcel regularization within the collective territory.</p>	<p>Number of properties regularized.</p>	<p>Reports of property regularization processes within the framework of the construction of local planning instruments (ethnodevelopment plans, internal statutes, and environmental and social management plans).</p>	<p>7 and 8</p>
<p>Conversion of eligible areas of the REDD+ project into ineligible areas due to uncontrolled processes of forest degradation and deforestation.</p>	<p>Identification, delimitation, and marking of eligible areas of the DELFINES CUPICA REDD+ project in zones at risk of deforestation and degradation due to productive processes or other factors.  Sensitization of actors who potentially pose a risk to eligible areas of the DELFINES CUPICA REDD+ project.</p>	<p>Number of hectares identified and delineated.  Number of signage implemented.  Number of training sessions conducted for stakeholders.</p>	<p>Reports on the implementation of projects for signage and training under the governance and institutions strengthening line of action.</p>	<p>7 and 8</p>
<p>Community dissatisfaction with the REDD+ project implementation due to a lack of ownership of project activities.</p>	<p>Support in annual informative and training assemblies planned by the community councils.</p>	<p>Number of training sessions conducted for stakeholders of interest.</p>	<p>Reports on the execution of training projects within the framework of the</p>	<p>Informational meetings</p>

		<p>Number of assemblies and/or training sessions conducted by the project proponents and the project developer.</p>	<p>governance and institutions strengthening line of action.</p> <p>Minutes of participation in informative, training, and accountability and management meetings by the proponent community councils of the project with the support of developer.</p>	<p>20210228 CC Cupica y 20201217 CC Delfines</p>
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**Source: DELFINES CUPICA REDD+ project**

Now, to ensure the monitoring of project activities and their progress, the following internal procedure has been adopted:

**Figure 4. Procedure for receiving and evaluating REDD+ activity projects**


Source: DELFINES CUPICA REDD+ project



### 4.3 Safeguard Compliance Analysis

In addition to Section "7. COMPLIANCE WITH ENVIRONMENTAL AND SOCIAL SAFEGUARDS" of the PDD of DELFINES CUPICA REDD+ V.4, this monitoring report complements the procedure adapted by BIOFIX BIC for the monitoring of Socioenvironmental Safeguards, as shown in the following table.

**Table 5. Legal requirements management**

Requirements	Evaluation Procedure	Person in charge	Frequency
A) Identification of compliance with legal and environmental requirements (including safeguards)	A technical-legal evaluation will be carried out to assess, using variables and indicators, the ongoing compliance with legal requirements, especially the socio-environmental safeguards and the regulatory framework that guarantees them.	BIOFIX BIC Technical and Legal Departments.	Semi-annually
B) Adjust the baseline according to the latest IDEAM report on the reference level for the Guaviare department in accordance with the provisions of Resolution 1447 of 2018 or any norm that modifies, adds to, or replaces it.	Each time IDEAM updates the reference level for the Pacific region, it will be reviewed and adjusted accordingly within the monitoring reports and their emissions reduction calculation annexes.	BIOFIX BIC Technical Department.	Annually
C) Review compliance with the new Territorial Planning Plans for the municipality of El Retorno.	Periodic review will be conducted to assess the alignment and compliance of project activities with those outlined in the Territorial Planning Schemes applicable to the municipality of Bahía.  Likewise, a periodic review will be conducted to ensure alignment and compliance of project activities with the Departmental Plans, which are valid for the period 2019-2022.	BIOFIX BIC Technical and Legal Departments.	Annually
D) Review any significant modifications that	Documentary review of the administrative acts of	BIOFIX BIC Legal Department.	Annually

affect collective territories (additions or subtractions of territory) and/or changes in legal representation within the territory.	existence and legal representation of the community councils that make up the project.		
E) Holding informational assemblies in the communities about the project's status, applying participation mechanisms within the governance structures of the indigenous reserve.	Receiving concerns, proposals, and potential modifications in accordance with requests from the Afro communities through their traditional authorities, regarding the ratified minutes and commitments, conducting workshops and participatory, informational, and extraordinary assemblies for this purpose.	Social Project Coordination, Communications Department, and Technical Department of BIOFIX BIC.	Annually and when communities request it.
F) Review of normative and policy instruments on the conservation of natural forests and biological biodiversity.	Review of the mentioned instruments to assess the compatibility of measures for forest conservation and biodiversity, ecosystem services, and multiple benefits.	BIOFIX BIC Technical and Legal Departments.	Annually and when new instruments are issued.

**Source: DELFINES CUPICA REDD+ project**

#### 4.3.1 Analysis of Follow-up on Social and Environmental Safeguards

The factors influencing the effectiveness of the application of REDD+ social and environmental safeguards depend on various factors and actors. Some of these factors are under the direct control of the project proponent. Below are the actions for monitoring the safeguards according to the national interpretation and procedure for compliance with the legal requirements of the DELFINES CUPICA REDD+ project as established in Chapter 7 of the PDD.

It is important to mention that the protocol for monitoring REDD+ safeguards in Colombia is currently under construction, as is the coordination with the National Safeguard System (SNS). Therefore, this proposal will be further improved in future deliveries as the country progresses in consolidating the REDD+ Strategy, the National Safeguard System, stakeholder participation and involvement processes, and the implementation of measures and actions to reduce deforestation and degradation.

**Table 6. Monitoring Social and Environmental Safeguards**

Cancun Safeguards	National Interpretation of Cancun Safeguards	Monitoring Action	Person in charge
The complementarity or compatibility of the measures with the objectives of national forest programs and international conventions and agreements on the subject.	Correspondence with the international agreements signed by Colombia regarding forests, biodiversity, and climate change.	A technical-legal evaluation is carried out, including the procedure adopted by BIOFIX Consultancy for the monitoring of socio-environmental safeguards, in the corresponding section of this monitoring report.	BIOFIX BIC Technical and Legal Departments.
The transparency and effectiveness of national forest governance structures, considering national legislation and sovereignty.	Transparency and access to information.	For the realization of this purpose, the Quality Management of Information process was established in Annex 12 referred to in Chapter 6 of the PDD project. This document outlines the procedures and mechanisms that ensure that the information related to the project is transparent and accessible.	Legal Directorate, Financial Directorate, Social Project Coordination, Communications Department, and Technical Department BIOFIX BIC.
	Accountability.	<p>The accountability processes are convened by the project proponent in conjunction with BIOFIX. However, they respect the moments when the community councils, exercising their autonomy, deem it appropriate and within their protocols of self-governance.</p> <p>BIOFIX, as the project manager and ally of the community councils for this purpose, provides technical, social, and legal support in the assemblies convened by the proponents. This ensures participation and transparency of information within the framework of socio-environmental safeguards and addresses queries and requests raised by traditional authorities, institutions, and the general public.</p>	

	Recognition of Forest Governance Structures.	The project actions must be designed in accordance with existing forest governance structures and with the involvement of relevant stakeholders. Documents such as minutes of general assemblies, socialization and informational meetings, contracts with signatures of council authorities, among others, demonstrate respect for and recognition of the communities' own decision-making processes.	
	Strengthening of capacities.	In general terms, the project ensures and promotes the strengthening of technical, administrative, legal, and financial capacities of the involved actors, so that they can make well-documented, analyzed, and informed decisions. The Financial Management provides training to the councils in project structuring so that they can gradually strengthen their production systems and acquire knowledge in areas such as infrastructure, health, education, among others. Additionally, through Institutional Strengthening and Governance, the internal governance structures are strengthened with support for their various traditional authorities.	
Respect for the knowledge and rights of indigenous peoples and members of local communities, taking into consideration relevant international obligations and national circumstances and legislation, while bearing in mind that the United	Free, Prior, and Informed Consent (FPIC)	The project complied with the consultation and approval processes as established by legislation and jurisprudence, and in accordance with the customs and practices of the communities, ensuring the space for their approval and consent, as evidenced in the "Legal" folder.	BIOFIX BIC Technical and Legal Departments.
	Traditional Knowledge		

<p>Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples.</p>	<p>Benefit Sharing</p>	<p>The action lines defined by the communities themselves incorporate, recognize, and respect their knowledge, traditional practices, and traditional knowledge systems.</p> <p>Similarly, in subfolder "2. Safeguards," you will find documents related to information on benefit sharing.</p> <p>The project is designed and developed with recognition and respect for the communities' territorial rights as documented in the respective Resolutions establishing the community councils issued by the competent administrative authorities. Similarly, the project's lines of action include alternatives to ensure sustainable livelihoods for the communities, based on their own traditional knowledge systems.</p>	
<p>Full and effective participation of stakeholders, especially indigenous peoples and local communities, in the measures mentioned in paragraphs 70 and 72 of this decision</p>	<p>Participation</p>	<p>The project conducts an annual review and update of the documents that grant recognition to the councils or traditional authorities, as well as the review of any substantive modifications that may affect collective territories (additions or subtractions of territories).</p> <p>Furthermore, the project ensures the aforementioned right through the conduct of meetings and a general assembly, which constitutes the primary participation forum and the highest decision-making body within the community councils in accordance with national legislation on the subject.</p>	<p>Legal Directorate, Social Project Coordination, Communications Department, and Technical Department BIOFIX BIC.</p>

<p>The compatibility of measures with the conservation of natural forests and biological diversity, ensuring that those indicated in paragraph 70 of this decision are not used for the conversion of natural forests but, instead, serve to incentivize the protection and conservation of these forests and the services derived from their ecosystems, as well as to enhance other social and environmental benefits.</p>	<p>Conservation of forests and their biodiversity.</p>	<p>The project reviews normative and policy instruments related to the conservation of natural forests and biological diversity, in accordance with Chapter 7, "Compliance with Environmental and Social Safeguards," of the DELFINES CUPICA REDD+ Project PDD.</p>	<p>BIOFIX BIC Technical and Legal Departments.</p>
	<p>Promotion of environmental goods and services.</p>	<p>Furthermore, the action lines established by the community indicate a strengthening of the territory's own productive systems that would increase the promotion of environmental goods and services.</p>	
<p>Actions to address reversal risks.</p>	<p>Environmental and Territorial Planning.</p>	<p>The project conducts periodic reviews to ensure compliance and alignment of project activities with the provisions outlined in the "1.9.16 Compliance of activities with territorial planning instruments" chapter of the Project Design Document (PDD).</p>	<p>BIOFIX BIC Technical and Legal Departments.</p>
	<p>Sectoral Planning</p>	<p>The analysis of reversal risks is supplemented in section 5.3 of this document.</p>	
<p>Actions to reduce emissions displacement.</p>	<p>Emissions displacement.</p>	<p>Adjust the baseline according to the latest IDEAM report on the baseline for the Chocó department, in accordance with Resolution 1447 of 2018 or any subsequent regulations that modify, add to, or replace it.</p>	<p>BIOFIX BIC Technical Department.</p>
		<p>The leakage analysis is further complemented in sections 6 and 7 of this document.</p>	

Source: DELFINES CUPICA REDD+ project

## 5 Update of the monitoring plan for DELFINES CUPICA REDD+

With the start of the implementation of the Institutional Strengthening and Governance action line, the community councils proposing the REDD+ project understood that the main roadmap, planning, and safeguarding tool for their territory is the construction of their ethno-development plans and other governance mechanisms such as internal statutes and management plans. During the diagnostic phase of these planning instruments, environmental and socio-economic issues present in the territory were identified in a more participatory manner, using focus groups. When comparing these issues with the initially established action lines in the REDD+ project, it became evident that these lines should be grouped into more general categories that respond to the real needs of the territory.

Therefore, in this verification, specific action lines are constructed that respond to the needs identified in the diagnoses carried out by each of the community councils (see annexes 7 and 8). It's important to clarify that the cross-cutting action lines remain the same, as they are generic for ensuring the permanence of the REDD+ project.

### 5.1 Cross-cutting action lines

#### 5.1.1 Institutional strengthening and governance

Los Delfines and Cupica community councils have been established and strengthened through social networking and the resilience of their communities. Building on this, the councils play a fundamental role in the care and preservation of the ecosystems they inhabit, while also serving as guardians of the culture they have built throughout their history. As part of efforts to characterize the territories and their communities, it has become evident that there is a need to support and strengthen the social fabric by deepening the understanding of culture, traditions, and associated practices. This can be achieved through knowledge exchange and by strengthening the organizational and administrative structure of the councils. Therefore, the following stages are defined:

#### **STAGE I (2020 – 2039)**

- Governance and Leadership Strengthening Program for Afro-Community Leaders.
- Training of the boards of directors and the community in general for the management of the REDD+ project.
- Technical assistance for the consolidation and improvement of the institutions or organizations that have been formed or will be formed in the Councils.
- Provision of communication equipment, badges, and other items.
- Strengthening program, promoting entrepreneurship, fostering partnerships, and providing opportunities for participation for Afro women.

**STAGE II (2021)**

- Productive characterization of the Community Council.
- Design and elaboration of the Ethno-development Plan.
- Design and elaboration of the Territory Management and Planning Plan.
- Construction and equipping of meeting centers for the Community Councils.
- Promotion and strengthening of knowledge exchange.
- Promotion of skills in handicraft production.

**5.1.2 Participatory restoration, recovery, and/or rehabilitation of deforested ecosystems and forest degradation**

The main objective of this activity is to implement strategies for the protection, conservation, and management of riparian zones and native species inhabiting ecosystems that have been most affected by anthropogenic activities (mangroves, rivers, and streams) for both collective territories. Consequently, sub-activities have been planned to collectively achieve this objective and are proposed within two cycles to allow for the growth of planted species and the prioritization of other areas in need:

**STAGE I (CYCLE I – 1<sup>ST</sup> SEMESTER, CYCLE II – 1<sup>ST</sup> SEMESTER 2030)**



- Installation of nurseries in collaboration with the communities, which will allow for mass production of plants while controlling the effects of predators and diseases that could potentially harm the seedlings during their most vulnerable stage.
- The reforestation process of those endangered timber species identified by the project developers will continue, and these species were previously included in the nursery system.
- Involvement of sawmill operators in the restoration and/or reforestation processes, providing them with training and technical tools.

### **STAGE II (CYCLE I – 2<sup>nd</sup> SEMESTER, CYCLE II – 2<sup>nd</sup> SEMESTER 2030)**

- Once the ecological restoration areas are established, monitoring systems will be put in place, utilizing frequent information from remote sensors (optical, radar, and drones) with high spatial resolution, as well as field data. This will be done with the aim of annually assessing the results of the implementation of endangered timber species.

#### **5.1.3 Deforestation and forest degradation monitoring and control program**

The deforestation monitoring and control program has the following main objectives: a) monitor changes in land cover within the project's area of influence through the processing of deforestation-related images; b) obtain detailed information about the extent of these changes; c) identify the causes and driving factors; and d) promote knowledge transfer through the training of community members to become forest guardians.

Little is known about the changes within different ecosystems in the country, as existing studies are primarily descriptive and limited in their ability to predict future transformation dynamics (Etter et al. 2006b). Therefore, it is important to develop models with a solid theoretical foundation that can be easily implemented in the field by communities and that can better predict change patterns.

In the context of REDD projects, models are often aimed at understanding the quantity or future location of changes in forest cover. Therefore, BIOFIX, through collaborative work between expert trainers and community forest guards, aims to implement methodologies to

determine the presence of deforested or degraded areas once the project has been verified, including:

**STAGE I (2020)**

- Design of deforestation monitoring protocols tailored to the project area and its surroundings. This includes protocols for processing remote sensing data and collecting field data, defining routes, determining potential deforestation actions or evidence, detailed and frequent monitoring of the project area and its surroundings for possible early alert identification using satellite imagery.
- Continuous review of general-scale early warning information published by IDEAM.
- Capture of images and videos of potential areas with deforestation processes as indicated by generated early alerts and in areas defined as vulnerable using drones, and field data collection following established protocols.
- Processing and analysis of information collected with satellite imagery and drones.
- Training forest custodians in the proper use and management of drones in forested areas: This includes courses, protocol familiarization, field data collection, and on-going monitoring of activities carried out.

On this aspect, Decree Law 870 of 2017 specifies that in a voluntary agreement, the aim is to formalize commitments between those interested in environmental services and the beneficiaries of the incentive, for the development of preservation and restoration actions in strategic areas and ecosystems. Therefore, the ownership of avoided emissions within the framework of REDD+ projects depend on those who have the capacity or opportunity to change land use not carrying out the activity and maintaining forest cover in the face of a trend or objective possibility.

#### 5.1.4 Strengthening and Promotion of Education

Considering the characterization exercises that have been carried out in the territories of the community councils, deficiencies have been identified at all levels of education, highlighting shortcomings in infrastructure and the provision of educational institutions. As a result, students themselves experience a lack of quality in the education they receive and the limited

opportunities this may entail for their future. Therefore, it is necessary to comprehensively address the education sector from preschool to university level.

**STAGE I (2020)**

- Reinforcement and educational leveling in secondary institutions for grades 10th and 11th, with a view to taking State Tests.
- Career counseling and guidance for high school graduates and students to prepare for university admission.

**STAGE II (2021)**

- Establishment of a scholarship fund to enable high school graduates to access higher education, providing financial assistance during their studies.
- Support for the university process undertaken by scholarship recipients.
- Improvement of educational facilities in community councils, ensuring the necessary equipment for educational activities.
- Expansion of school meal coverage.

**5.1.5 Biodiversity Conservation Program**

The illegal trafficking of native species in forest-rich areas of the country has become a significant concern for law enforcement and environmental authorities. The extraction of individuals from their natural habitats leads to declines in natural populations, pushing species to critical states of threat and even extinction, and affecting the ecological dynamics of ecosystems.

Additionally, with hunting activities carried out by various actors in the region, first-hand commercial processes have been created in the Pacific region. Therefore, it is necessary to develop awareness strategies for all stakeholders regarding the proper use of ecosystem services and, consequently, the importance of protecting fauna and flora as ecological and natural wealth.

To achieve this, it is essential to identify the values of biodiversity and establish collaborative efforts between communities and academia. This collaboration enables the integration of knowledge and potentially leads to improved utilization and conservation practices.

**STAGE I (2021)**

- Identification of biodiversity values within the community councils and their level of threat.
- Definition of priority intervention actions.

**STAGE II (2022)**

- Biodiversity values training program with leaders, forest rangers, and the general community.
- Initiation of monitoring and measurement of specific variables in priority actions.

**5.1.6 Health Prevention and Care Program**

Health is considered a fundamental right to ensure people's quality of life, and it is also an expression of social well-being and an indicator for measuring multidimensional poverty in Colombia.

Despite these considerations, it is evident that adequate access to this right is not guaranteed in the community councils, thus undermining the differential focus and ethnocultural characteristics of their inhabitants. Additionally, the health infrastructure is in serious disrepair, compounded by the difficulty in providing primary healthcare services due to the distance between urban centers and rural areas. This highlights that the residents of the community councils do not have access to specialized healthcare services tailored to the particularities of the territory.

For this reason, the following is proposed:

**STAGE I (2022)**

- **Adequation and equipping of health posts:** By strengthening, equipping, and improving health posts, the aim is to enhance the conditions under which healthcare

services are provided to community members, benefiting other communities settled in the two municipalities.

- **Permanent medical service:** To ensure that families have access to comprehensive healthcare, the planning and periodic execution of the following are envisaged:
  - Support programs for people with disabilities.
  - Medical assistance programs for the elderly.
  - Medical assistance programs for pregnant and lactating women.
  - Comprehensive nutrition, growth, and development programs for children.
  - Health brigades, vaccination campaigns, and dental care.
  - Training and awareness in sexual and reproductive education, teenage pregnancy, STIs, substance abuse, and alcoholism, among others.
- Availability of both land and water transportation means for the transportation of individuals with specific healthcare needs.
- Promotion and strengthening of mental healthcare.

## 5.2 Specific Action Lines

### 5.2.1 Production, Supply, and Commercialization of Family Agricultural Units

### 5.2.2 Strengthening the Agricultural Productive Sector

The agricultural economy in the communities of Bahía Solano and Juradó relies on subsistence farming, and their production does not ensure the food security demanded by the municipal population. These factors make the region dependent on the economies of other areas because they have not developed their own productive chains. Additionally, non-technified agricultural production puts pressure on forest conservation and leads to deforestation.

To innovate in the productive sector in this region, it is necessary to turn to processes of mechanization and technical assistance to contribute to the subsistence of the communities'

families. This is how the various stages of consolidating agricultural ventures in the collective territories have been evaluated.

### **STAGE I (2022)**

- **Feasibility Study:** With the technical and research support of specialists in productive processes, pilot projects will be established to determine the feasibility of these initiatives from economic, technical, and environmental perspectives, their productivity, market needs, and potential areas for replication.

### **STAGE II (1<sup>ST</sup> SEMESTER 2023)**

- **Registration in the Green Ventures Window:** Since the proposed productive projects are contemplated from an environmental sustainability perspective, they will be registered with CODECHOCO to obtain verification and technical support.
- **Training in transformation processes:** To support processes in agricultural companies and the administration of resources provided to these companies, regular training will be provided to employees and administrators.

### **STAGE III (2<sup>ND</sup> SEMESTER 2023)**

- **Crop Installation:** In its initial stage, areas of the territory will be designated for cultivation by local labor. Crop monitoring will be carried out according to harvest times and will provide a report on the feasibility and operation of these crops. The concept of community agroforestry will be followed, prioritizing areas with potential for utilization without deforestation.

### **STAGE IV (2024)**

- **Construction of collection and processing plants:** To carry out the processing operations of raw materials and the extraction of derivatives, it is necessary to establish collection points for raw materials and processing plants where community members will work.
- **Provision of processing plants and purchases:** To obtain the machinery and necessary equipment for operation, transportation, and marketing, a purchasing plan will be established every five years of productive process operation.

- **Administrative and market program:** Consolidated in order to define the strategies to be used to promote processed products, create the necessary alliances and agreements to close the productive chains. They are formulated with two cycles to add current methodological, operational, or market advances.

#### **STAGE V (2025)**

- **Transformation and marketing of products:** This activity includes both the acquisition of inputs and equipment necessary for transformation activities, the adaptation of spaces to be used, as well as the definition of market chains for marketing, the training of participating residents, and the start-up.

#### **STAGE VI (2028)**

- **Good Agricultural Practices (GAP) Certification:** To produce various agricultural products to meet quality and safety requirements and be competitive in international markets, it is necessary to obtain GAP certification. This will be carried out once the agricultural projects have been consolidated and their administrative management is established.

#### **5.2.3 Strengthening Initiatives for Community Partnership, Cooperation, and Entrepreneurship**

Colombia has promoted community partnership and cooperation since the constitution of 1991, establishing mechanisms to encourage and support organizations related to this goal. As a result, it has been shown that initiatives originating from communities yield positive outcomes in terms of improving the quality of life of their participants. These organizations are oriented towards social purposes rather than capitalist ones.

In this context, community relationships are strengthened, and the principles of the well-known social and solidarity economy are developed. These principles include solidarity, local development, and sustainability, all without seeking profit but rather aiming to improve living conditions for all.

Within these organizations, there is a wide range of associations with different objectives, all seeking social welfare. These include cooperatives, where workers or clients are contributors and managers, and mutual associations, which aim to mutually assist their members

by providing services that meet their needs. It is important to note that these initiatives arise from the community, requiring training and education in the social and solidarity economy, but they always offer the possibility of adapting to the specific needs of the communities.

Building upon this, the following stages are proposed:

### **STAGE I (2021)**

- Training and education in social and solidarity economy, as well as in the different forms of organization that can emerge from it.

### **STAGE II (2022)**

- Consolidation of social and/or solidarity organizations in the community, with guidance on their operation.
- Launching of a community cooperative (community loans).

### **STAGE III (2023)**

- **Development of the Tourism Plan:** Based on the results of the following studies: carrying capacity of the ecosystems to be incorporated and environmental impact assessment; topographic surveys to determine the location of trails and infrastructure for conducting ecotourism activities; market research and economic feasibility, the community will proceed to design the ecotourism plan. This includes cost estimation, definition of activities and services to promote according to the identified potential, and the first approach to interested parties. This stage also involves creating alliances or connections with regional tourism agencies, promoters, government entities, and private sector organizations in the field.
- **Creation of community tourism enterprises:** Providing training to community members participating in entrepreneurship processes and the establishment of community businesses or associations. Additionally, providing training to local community participants in tourist guiding, interpretation and environmental education, communication skills, administration, environmental best practices, among other topics.
- **Strengthening of tourist lodges:** This includes the construction of infrastructure for conducting ecotourism activities or providing associated services; the adaptation of



trails and spaces for wildlife viewing; the acquisition of equipment and supplies required for service provision.

- **Design of the Communications Plan:** This involves disseminating ecotourism activities, schedules, and services (lodging, meals, guiding) at the local, regional, and national levels through mass media. It also includes establishing agreements with educational institutions that have research interests related to biodiversity and environmental studies.

#### **STAGE IV (2024)**

- **Implementation of the Tourism Plan:** Once alliances and communication channels have been established with other stakeholders, initiate the provision of the offered services, with periodic monitoring of the results to improve the process and its quality.

#### **5.2.4 Diversification of Productive Systems for the Establishment and Commercialization of Non-Conventional Agroforestry Products in the Region**

Agricultural diversification promotes the opportunity to ensure food security and sovereignty, thus guaranteeing a better quality of life. Therefore, this line of action aims to explore potential alternative productive systems for self-sufficiency and the commercialization of agroforestry products that are not conventionally found or managed in the region. These initiatives can be evaluated for establishment, innovation in derivatives, and entry into sustainable markets driven by community initiatives.

In the process of consolidating this line of action, the goal is to ensure that the allocation of areas for planting products for internal supply and commercialization outside the community councils meets optimal efficiency levels, is technically viable, and geographically strategic. This is to prevent deforestation of new areas or to ensure their post-exploitation recovery for the reincorporation of forested areas into reduction estimates.

As a result, this will directly reduce the pressure generated by motor 7.1.1 associated with the conversion of forested lands into agricultural lands for farming, while also having a positive indirect impact on reducing the drivers of forest fires in degraded forests (7.1.7) and

illegal commercial timber extraction (7.1.4). These are the activities community members resort to in search of alternative sources of income due to the lack of job opportunities.

In this context, it directly links to REDD+ activities 1. Reduction of emissions from deforestation, 2. Reduction of emissions from degradation, and implicitly aims at 4. Sustainable forest management. The stages to be implemented are as follows:

#### **STAGE I (During the REDD+ Project)**

- **Feasibility Study:** This will be conducted through pilot projects to determine the viability of productive initiatives from economic, technical, and environmental perspectives, their productivity, and market needs.
- **Definition of Intervention Areas:** Using technological, technical, and territorial criteria to specify priority suitable areas without deforestation or forest degradation.

#### **STAGE II (During the REDD+ Project)**

- **Installation and Crop Rotation<sup>3</sup>:** In the initial stage, land will be made available for planting and maintaining crops by local labor, without deforestation of conserved areas. Crop monitoring will be conducted annually, providing a final report on the viability, and functioning of these activities. It includes land preparation, fertilization, seed selection, planting, irrigation, maintenance, harvesting, rest, and rotation.
- **Training and Certification in Good Agricultural and Environmental Practices:** Community training in associative, administrative, and productive processes and the improvement of practices to ensure that agricultural production and the extraction of derivatives meet quality and safety requirements and are competitive in the markets. This training will be conducted periodically to incorporate new initiatives and update community members implementing the project.

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<sup>3</sup> It is planned to consolidate agreements with higher education institutions such as UTCH or others to provide technical support in the implementation and monitoring.

- **Registration in the Green Business Window:** To receive technical support, evaluation of progress, and commitments from the Environmental Authority, the project will be registered through the authority's window.

### **STAGE III (During the REDD+ Project)**

- **Transformation and Commercialization of Products:** This activity includes the acquisition of inputs and equipment necessary for transformation activities, the adaptation of spaces for use, as well as the definition of market chains for commercialization, training of participating residents, and project implementation.

#### **5.2.5 Strengthening the Livestock-Productive Sector: Utilization of Smaller Livestock Species**

The purpose of its implementation is associated with offering protein-based food alternatives (with chickens, poultry, and pigs) and productive options to communities that ensure nutritional security while providing a source of local income within the framework of sustainability (Ministerio de Justicia & UNODC, 2016).

This allows for a transition from traditional activities associated with the drivers of forest land conversion into pastures for cattle (7.1.3), illegal commercial timber extraction (7.1.4), and forest fires associated with degradation (7.1.7), which community members resort to meet their unmet basic needs. This aligns with the implementation of REDD+ activities 1. Reduction of emissions from deforestation and 2. Reduction of emissions from degradation.

It will be carried out following the following stages to achieve the goal of designing a production, utilization, and commercialization system for products derived from smaller livestock species such as laying and fattening poultry, fish, pigs, and others chosen by the community.

### **STAGE I (1<sup>ST</sup> SEMESTER 2024)**

- **Hiring Technical Consulting:** Accompaniment by experts in determining the requirements of productive infrastructure and sanitation; technical and operational concepts of breeding, management, and utilization of smaller species. As well as the formulation of Environmental Management Plans and their management with the relevant environmental authorities.

**STAGE II (2<sup>ND</sup> SEMESTER 2024)**

- **Training in GAP:** Training for the involved community in good livestock practices, safety, and environmental practices associated with the breeding and utilization of smaller species. This will be done periodically (every third year) to ensure the inclusion of new initiatives and the updating of community members who are implementing the project.

**STAGE III (1<sup>ST</sup> SEMESTER 2025)**

- **Construction, adaptation, and equipping of productive spaces:** Building productive infrastructure and acquiring equipment and inputs necessary for the breeding, management, utilization, and processing of species, on a biannual basis.

**STAGE IV (2<sup>ND</sup> SEMESTER 2025)**

- **Establishment of breeding stock:** In accordance with the permits granted and/or the estimates outlined in the feasibility studies.
- **Management, utilization, and commercialization:** Acquisition of inputs and equipment necessary for transformation activities and the incorporation of market chains for commercialization and implementation.

**5.2.6 Strengthening the Livestock-Productive Sector: Sustainable Exploitation of Fisheries**

The socio-cultural appropriation of the sea by the communities settled on the Pacific coast has its origins from pre-Columbian times in terms of communication, transportation, but above all in food supply (Díaz, et al., 2016).

Artisanal fishing in the sea and mangroves is an everyday identity activity of the Afro-descendant communities in the northern Pacific. It represents the main source of protein and, to a lesser extent, allows for economic flow among the inhabitants due to the low technological development and the scale at which it is carried out (Díaz, et al., 2016).

However, the growing demand for external fishing resources or those generated by tourism has led to the use of larger vessels and the adoption of non-selective or environmentally harmonious techniques that have put the availability of these resources at risk. This is the

case with fish species that are caught before reaching their reproductive maturity stage and have seen their populations considerably reduced.

For this reason, the objective of this activity corresponds to the design of a sustainable system for the exploitation and commercialization of fishing resources under the deep-sea fishing model<sup>4</sup>, as an alternative source of income for the community, which includes the following stages:

#### STAGE I (1<sup>ST</sup> SEMESTER 2023)

- **Training in the production process:** Regular training will be provided to participants to support extraction initiatives and participation in the entire production chain, in the management of supplied resources, in legal criteria, and in the ecological, economic, and social importance of its correct implementation.

#### STAGE II (2<sup>ND</sup> SEMESTER 2023)

- **Execution of a pilot project and replication:** This includes the management of the required procedures for its implementation, the definition of operational activities, the acquisition of necessary vessels and tools, the incorporation of cold chains, the acquisition of equipment, and the adaptation of facilities for transformation activities. Also, the production chain with distribution and/or commercialization phases, monitoring of implemented practices, availability of fishing resources, and evaluation and adjustment of actions implemented to mitigate associated impacts. To comply with fisheries legislation, the exercise of the activity is contemplated in the area beyond the Exclusive Zone for Artisanal Fishing - ZEPA, regulated by Resolution 899 of 2013 as a strategy to ensure the availability of fishing resources as a fundamental factor in the food security of local communities, as well as the long-term conservation of the species that inhabit there (Vieira, 2017).

#### 5.2.7 Sustainable Timber and NTFP Forest Utilization

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<sup>4</sup> Deep-sea fishing refers to the practice carried out in open sea with larger vessels equipped to ensure the refrigeration and freezing of the collected fish.

Considering that forestry activity is part of both historical and cultural tradition, local skills and knowledge, and sources of income for the region's inhabitants, tools, methods, or practices that ensure efficient use of resources should be sought. Therefore, sustainable forestry, as framed here, aims to ensure the management and use of forests in a manner and intensity that promotes the maintenance of the region's own biological diversity, the functionality of ecosystems in natural and social areas, forest regeneration and conservation, as well as long-term periodic income for communities.

Hence, it is intended that in the project, families or community members with a sawmill tradition be instructed in what kind of measures should be taken during the different stages of the activity, become aware of the implications and impacts of carrying out the process in the context of illegality and unsustainability, and also be equipped with tools or machinery that allow them to optimize the use of the resource, add value to the product to earn higher incomes, reduce transportation and intermediation costs, minimize health risks, and reduce deforestation rates due to illegal logging.

Therefore, 3 stages are planned for its implementation:

#### **STAGE I (2022)**

- **Legal Requirements Management:** Requires the participation of an expert in forestry and regulatory issues to accompany the process of formulating forest management and utilization plans, as well as to participate in the processing of the necessary authorizations with the relevant environmental authorities.
- **Identification of Intervention Areas:** Referring to those areas that are currently subject to a dynamics of forest extraction or are degraded but have the potential for regeneration, with a focus on not expanding deforested areas.

#### **STAGE II (1<sup>ST</sup> SEMESTER 2024)**

- **Registration in the Green Entrepreneurship Window:** Since the proposed productive projects are contemplated from an environmental sustainability perspective, they will be registered with CODECHOCO to obtain verification and technical support.

- **Training in Transformation Processes:** To support extraction and transformation initiatives throughout the entire production chain, in the concept and application of community forestry, in the administration of provided resources, in related legal criteria, and in the ecological, economic, and social importance of their implementation, regular training sessions will be conducted for participants.

### **STAGE III (2<sup>ND</sup> SEMESTER 2024)**

- **Construction and Equipping of the Timber Transformation Center:** To carry out the operations of raw material transformation, it is necessary to establish a space equipped with points for raw material and final product collection, as well as furnished with technological resources for wood processing and transformation, and its subsequent transport for commercialization.
- **Implementation of Management and Utilization Plans:** As outlined, the execution of improvements in the production process and the necessary work to ensure production chain integration will be carried out.
- **Monitoring of Areas Participating in the Activity:** To ensure no increase in deforested areas within the project area, periodic monitoring of achieved results will be conducted, as well as respective adjustments to measures taken. Similarly, with the participation of Research Institutions, the degrees of impact or contribution of the activity to conservation objectives will be determined.

#### **5.2.8 Community Facilities**

Among the most pressing needs identified by the communities, the first is related to the condition of housing, which is not suited to the cultural and climatic requirements of the area. As a result, many houses are in an advanced state of disrepair. This reflects a decrease in the quality of life for families within the councils.

In addition, there has been a need expressed for spaces to promote recreation and sports, as these provide opportunities for relaxation and contribute to education by instilling values that can be learned through sports practice.

The following stages are proposed:

**STAGE I (2021)**

- Diagnosis and improvement of housing.

**STAGE II (2022)**

- Establishment of recreation and sports centers.
- Strengthening of basic sanitation and public services.

**5.2.9 Connectivity Program**

The communities within the community councils have voiced the challenges they face due to a lack of connectivity, particularly concerning the internet. This is because they lack the necessary infrastructure and capacity to address local territorial dynamics. As a result, people, especially young students, face difficulties in using computer tools.

Based on this pressing need, a series of actions have been formulated aimed at establishing and improving both the infrastructure and the abilities of council residents to access the benefits provided in terms of connectivity. The following stages are proposed:

**STAGE I (2021)**

- Construction and equipping of computer rooms with internet service.

**STAGE II (2022)**

- Awareness-raising, outreach, and training for council members on the use of ICTs.

**5.2.10 Mobility Improvement Program**

The biophysical conditions of the community council territories make it crucial for mobility to function effectively, both on land and through rivers and the sea. This provides greater possibilities for delivering healthcare services, ensuring the supply and marketing of products, and even facilitating communication between communities.

Communities have emphasized the importance of restoring the council's roads and docks, maintaining the mobility infrastructure in good condition.

**STAGE I (2020)**



- Acquisition of heavy machinery for the repair of mobility infrastructure.
- Infrastructure diagnostics associated with mobility, for subsequent repair.
- Maintenance of the prioritized roads and docks for repair.

### 5.3 Monitoring plan

**Table 7. DELFINES CUPICA REDD+ Monitoring Plan**

Action line	Communi- city Coun- cil	Objective	Sub-activities	Indicators / Supports	Measure- ment Fre- quency	Related Actors
<b>CROSS-CUTTING ACTION LINES</b>						
<b>Institutional Strengthening and Governance</b>	LOS DELFINES & CUPICA	Implement training, provision, and strengthening actions for the traditional authorities of the Community Councils Los Delfines and Cupica	<b>Training of traditional authorities:</b>  Training for members of the General Assembly, Board of Directors, presidents of Local Councils, and other leaders, in the field of: <ul style="list-style-type: none"> <li>- Community Governance and Leadership</li> <li>- Public Policies and Management</li> <li>- Administration and Finance</li> <li>- Self-recognition of ethnic and cultural identity</li> </ul>	<b>Indicators:</b> <ul style="list-style-type: none"> <li>● Number of trained community leaders.</li> <li>● Number of items and equipment acquired.</li> <li>● Number of women trained in leadership and governance processes.</li> <li>● Number of facilities constructed</li> <li>● Number of associations and enterprises strengthened and promoted.</li> </ul> <b>Supports:</b> <ul style="list-style-type: none"> <li>● Results of collaborative construction processes</li> <li>● Productive characterization report</li> <li>● Ethnodevelopment plan</li> <li>● Management and zoning plan</li> <li>● Construction and improvement plans</li> </ul>	<b>Anually</b>	<ul style="list-style-type: none"> <li>● SENA</li> <li>● Community Councils Los Delfines and Cupica</li> <li>● Ministry of the Interior: Directorate of Ethnic Affairs</li> <li>● Municipal governments</li> </ul>
			<b>Provision and infrastructure for traditional authorities:</b>  Construction and/or improvements to local equipment for authorities; acquisition of communication equipment, insignia, uniforms, and other necessary items to enhance their operability.			
			Technical assistance for the consolidation of internal organizations and institutions			

Action line	Community Council	Objective	Sub-activities	Indicators / Supports	Measurement Frequency	Related Actors
			<p>Productive characterization of the Community Council.</p> <p>Design and development of local planning instruments, ethno-development plans, and territorial management and planning plans.</p> <p><b>Afro Women's Program:</b></p> <p>It includes strengthening, promoting entrepreneurship, fostering associations, and providing opportunities for participation for Afro women.</p>	<ul style="list-style-type: none"> <li>• Purchase plans and supporting documents</li> <li>• Training process records</li> <li>• Attendance lists for training or meeting sessions</li> </ul>		
<b>Participatory restoration, recovery, and/or rehabilitation of deforested ecosystems and forest degradation</b>	LOS DELFINES & CUPICA	Carry out reforestation and native vegetation recovery processes in riparian areas and degraded soils due to land use conflicts with the participation of local communities.	<p><b>Installation of nurseries:</b></p> <p>Construction of systems for mass production of seedlings of native timber and non-timber species at risk to carry out reforestation processes.</p> <p>From the beginning, the aim is to involve those who have historically worked as sawmill operators in projects associated with this line of action.</p> <p><b>Prioritization and definition of areas to intervene:</b></p> <p>Use of technological, technical, and territorial criteria to specify priority areas.</p>	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>• Points identified for reforestation.</li> <li>• Percentage of points for reforestation completed.</li> <li>• Number of individuals planted per species.</li> <li>• Total number of reforested hectares.</li> <li>• Number of alerts generated during monitoring per year.</li> </ul> <p><b>Supports:</b></p> <ul style="list-style-type: none"> <li>• Results reports.</li> <li>• Purchase records.</li> <li>• Signed contracts.</li> <li>• Deforestation or degradation alert reports.</li> </ul>	<b>Annually</b>	<ul style="list-style-type: none"> <li>• Community Councils Los Delfines and Cupica</li> <li>• UMATA of Bahía Solano and Juradó</li> <li>• Municipal governments of Bahía Solano and Juradó</li> <li>• CODECHOCO</li> <li>• IIAP</li> </ul>

Action line	Community Council	Objective	Sub-activities	Indicators / Supports	Measurement Frequency	Related Actors
			<p><b>Participatory Reforestation Program:</b></p> <p>It includes pre-training, transportation, land preparation, planting of both timber and non-timber species, as well as their subsequent maintenance.</p> <p><b>Monitoring of reforested areas:</b></p> <p>Monitoring using remote sensors or drones and information obtained in the field.</p>			
<b>Deforestation monitoring and control program</b>	LOS DELFINES & CUPICA	Monitor changes due to deforestation in the project's influence area through the processing of satellite images and/or images taken for the project.	<p><b>Monitoring of deforestation areas:</b></p> <p>In accordance with early deforestation alerts from IDEAM.</p> <p><b>Image capture and processing:</b></p> <p>Use of drones for image capture, subsequent georeferencing, and spatial information analysis.</p> <p><b>Identification of the causes and agents generating changes in land cover:</b></p> <p>Based on primary information provided by the community.</p> <p><b>Execution of a study on forest deforestation:</b></p>	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>• Total hectares affected by deforestation.</li> <li>• New and recurring agents and actors identified.</li> <li>• New and recurring causes identified.</li> <li>• Number of alerts reported per year.</li> </ul> <p><b>Monitoring parameters:</b></p> <ul style="list-style-type: none"> <li>• Project area size, leakage area, reference region, and forest area in the reference region.</li> <li>• Hectares of transition in the post-deforestation scenario.</li> </ul>	<b>Quarterly</b>	BIOFIX will be responsible for conducting the monitoring program through collaborative work between expert trainers and community forest rangers.

Action line	Community Council	Objective	Sub-activities	Indicators / Supports	Measurement Frequency	Related Actors
			To complement the primary project information related to the drivers and quantification of deforestation-affected areas, as well as the generation of the respective GIS layer.	<ul style="list-style-type: none"> <li>Transition area by stratum or land use for year t.</li> </ul> <p><b>Supports:</b></p> <ul style="list-style-type: none"> <li>Satellite images</li> <li>Images taken with drones</li> <li>Images and videos taken in the field.</li> <li>Early alerts reported by IDEAM</li> <li>Periodic monitoring reports</li> <li>Attendance lists for training sessions</li> </ul>		
		Transfer the knowledge on monitoring to the forest custodians.	<p><b>Training for forest custodians:</b></p> <p>Training on the use of drones for monitoring and reporting of information.</p>			
<b>Strengthening and Promotion of Higher Education</b>	LOS DELFINES & CUPICA	Promoting access to higher education for high school graduates.	Improvement of state test scores (Saber) in secondary institutions through educational reinforcement and leveling.	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>Percentage of students and high school graduates benefiting</li> <li>Variation in overall results in state exams</li> <li>Number of partnerships created with secondary institutions.</li> <li>Number of partnerships created with higher education institutions.</li> <li>Number of scholarships awarded per year.</li> </ul> <p><b>Supports:</b></p> <ul style="list-style-type: none"> <li>Resource allocation report</li> <li>Study certificates</li> </ul>	<b>Annually</b>	<ul style="list-style-type: none"> <li>Municipal governments</li> <li>Community Councils Los Delfines and Cupica</li> <li>Teaching staff.</li> <li>Universities</li> <li>IES</li> </ul>
			Program for vocational counseling and guidance for high school graduates.			
			Creation of a scholarship fund to enable high school graduates to access higher education.			
			Program for accompanying the university process of scholarship recipients.			
			Improvement of educational facilities in community councils.			
			Expansion of school cafeteria coverage.			

Action line	Community Council	Objective	Sub-activities	Indicators / Supports	Measurement Frequency	Related Actors
<b>Biodiversity Conservation Program</b>	LOS DELFINES & CUPICA	To understand and define the values to be conserved by the community councils for their protection in the territory with the contribution of all inhabitants.	Identification of the biodiversity values of the community councils and their degree of threat.	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>Percentage of trained and certified population</li> <li>Biodiversity figures obtained from studies (number of species, individuals, density...)</li> </ul> <p><b>Supports:</b></p> <ul style="list-style-type: none"> <li>Satellite images</li> <li>Images taken with drones</li> <li>Images and videos taken in the field.</li> <li>Early warnings reported by IDEAM</li> <li>Periodic monitoring reports</li> <li>Attendance lists for training sessions</li> </ul>	<b>Anually</b>	<ul style="list-style-type: none"> <li>Community Councils Los Delfines and Cupica</li> <li>IIAP</li> <li>CODECHOCO</li> </ul>
			Definition of priority intervention actions.			
<b>The program for the prevention and health care</b>	LOS DELFINES & CUPICA	Promote prevention and healthcare for the residents of the community councils, ensuring a good quality of life.	Adaptation and provision of healthcare facilities.	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>Percentage of executed health brigades / percentage of planned health brigades.</li> <li>Percentage of population coverage in the brigades conducted, by age group.</li> <li>Epidemiological incidence and prevalence rates.</li> <li>Number of elements and supplies acquired.</li> <li>Percentage of progress in construction.</li> <li>Percentage of health service coverage for the elderly.</li> </ul>	<b>Anually</b>	<ul style="list-style-type: none"> <li>Municipal governments</li> <li>EPS/SISBEN</li> <li>Community Councils Los Delfines and Cupica</li> </ul>
			Ensuring the provision of permanent medical services with the periodic implementation of specialized programs.			
			Provision of transportation means for use as both aquatic and land ambulances.			
			Promotion and strengthening of mental healthcare.			

Action line	Community Council	Objective	Sub-activities	Indicators / Supports	Measurement Frequency	Related Actors
				<ul style="list-style-type: none"> <li>Percentage of health service coverage for pregnant and lactating women.</li> <li>Number of people receiving mental health services.</li> </ul> <p><b>Supports:</b></p> <ul style="list-style-type: none"> <li>Procurement plan and supports.</li> <li>Signed contracts.</li> <li>Lists of beneficiaries in health brigades.</li> <li>Reports on the allocation of resources.</li> </ul>		
<b>COMMUNITY-DEFINED ACTION LINES</b>						
<b>Agricultural Productive Sector Strengthening</b>	LOS DELFINES & CUPICA	Contribute to income generation through the cultivation and processing of agricultural products.	<p><b>Feasibility study:</b></p> <p>It will be carried out through pilot projects, to determine the viability of productive initiatives from an economic, technical, and environmental perspective, their productivity, and market needs.</p> <p><b>Definition of areas to intervene:</b></p> <p>Use of technological, technical, and territorial criteria to identify priority suitable areas without causing deforestation.</p> <p><b>Training in transformation processes:</b></p>	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>Hectares suitable for agricultural use</li> <li>Percentage of progress in the works</li> <li>Number of vessels acquired</li> <li>Number of equipment acquired</li> <li>Percentage of trained and certified population</li> <li>Percentage of local labor hired at different stages.</li> <li>Expected productivity per hectare</li> <li>Productivity achieved per hectare</li> </ul>	<b>Annually</b>	<ul style="list-style-type: none"> <li>IIAP</li> <li>SENA</li> <li>Community Councils Los Delfines and Cupica</li> <li>Ministry of Agriculture</li> <li>Municipal governments</li> <li>CODECHOCO</li> </ul>

Action line	Community Council	Objective	Sub-activities	Indicators / Supports	Measurement Frequency	Related Actors
			<p>In order to provide support for the processes in the extraction and transformation companies, as well as the management of supplied resources.</p> <p><b>Installation of crops:</b></p> <p>This includes land preparation, fertilization, seed selection, planting, irrigation, maintenance, and harvesting.</p> <p><b>Construction of storage center and processing plant:</b></p> <p>This involves transforming raw materials and extracting their derivatives.</p> <p><b>Provision of processing plant and purchase of vessels:</b></p> <p>This includes obtaining the necessary infrastructure and machinery for processing plants, as well as transportation systems for raw materials.</p> <p><b>Administrative and marketing strengthening program for coconut and derivatives:</b></p> <p>This program aims to consolidate internal management of initiatives</p>	<ul style="list-style-type: none"> <li>• Number of derived products obtained.</li> <li>• Number of technological processes implemented.</li> <li>• Number of consolidated production chains.</li> </ul> <p><b>Supports:</b></p> <ul style="list-style-type: none"> <li>• Feasibility study</li> <li>• Reports of results within the installation process</li> <li>• Signed contracts</li> <li>• Attendance lists for training processes</li> <li>• Structural, electrical, and architectural blueprints</li> <li>• Photographic documentation</li> <li>• Purchase plans</li> <li>• Purchase records</li> <li>• Outreach campaign</li> <li>• Achieved Good Agricultural Practices (BPA) certifications.</li> <li>• Registration certificate in the green and sustainable ventures window</li> </ul>		



Action line	Community Council	Objective	Sub-activities	Indicators / Supports	Measurement Frequency	Related Actors
			<p>and includes a marketing component promoting awareness campaigns for agricultural products.</p> <p><b>Transformation and commercialization of products:</b></p> <p>Implementing the transformation process and integrating marketing chains for commercialization.</p> <p><b>Certification in Good Agricultural Practices (BPA):</b></p> <p>This involves training the participating community and improving practices to ensure that agricultural production meets quality and safety requirements and remains competitive in the markets.</p> <p><b>Registration in green businesses:</b></p> <p>This step includes registering the project in the Green and Sustainable Entrepreneurship Window of CODECHOCO.</p>			
<b>Strengthening Community Initiatives for Association, Cooperation, and Entrepreneurship</b>	LOS DELFINES & CUPICA	Building the capacities and acquiring the necessary inputs for establishing community enterprises that	<p>Training and education in social and solidarity economics, as well as the different forms of organization that can emerge from it.</p> <p>Consolidation of social and/or solidarity organizations within the councils, with guidance on their functioning.</p>	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>• Percentage of progress in the works.</li> <li>• Percentage of trained and certified population.</li> <li>• Percentage of local labor hired at different stages.</li> </ul>	<b>Anually</b>	<ul style="list-style-type: none"> <li>• IIAP</li> <li>• SENA</li> <li>• Community Councils Los Delfines and Cupica</li> </ul>

Action line	Community Council	Objective	Sub-activities	Indicators / Supports	Measurement Frequency	Related Actors
		contribute to social well-being in the community.	<p>Launch of a community cooperative (community credit).</p> <p><b>Development of a Tourism Plan:</b></p> <p>Based on market research, carrying capacity, technical and feasibility studies, determine the participating stakeholders, required alliances, local infrastructure improvement needs, intended tourism approaches, and community involvement in its development.</p> <p><b>Creation of community tourism enterprises:</b></p> <p>Through training of community members participating in entrepreneurial processes and the formation of businesses or community associations, provide support for their creation and establishment.</p> <p><b>Strengthening of tourist lodges:</b></p> <p>Construction, adaptation, maintenance, and provision of spaces intended to receive tourists.</p> <p><b>Communication Plan Design:</b></p> <p>Promotion and dissemination of the tourist destination through mass media campaigns.</p>	<ul style="list-style-type: none"> <li>Percentage of buildings or locations intervened or constructed.</li> <li>Number of effective alliances established.</li> <li>Number of linked lodges.</li> <li>Carrying capacity.</li> <li>Percentage of received tourists.</li> <li>Tourists' satisfaction with the provided services.</li> <li>Functioning community enterprises.</li> </ul> <p><b>Supports:</b></p> <ul style="list-style-type: none"> <li>Tourism plan.</li> <li>Minutes of incorporation of companies or associations.</li> <li>Construction plans.</li> <li>Photographic documentation</li> <li>Signed contracts</li> <li>Communication plan.</li> </ul>		<ul style="list-style-type: none"> <li>Municipal governments</li> <li>CODECHOCO</li> </ul>

Action line	Community Council	Objective	Sub-activities	Indicators / Supports	Measurement Frequency	Related Actors
			Implementation of the Tourism Plan.			
<b>Diversification of productive systems for the establishment and marketing of non-conventional agroforestry products in the region.</b>	LOS DELFINES & CUPICA	Implementation of crops different from those traditionally used by the community, which can provide additional benefits and incentives for their establishment, production, and marketing.	<p><b>Feasibility study:</b></p> <p>It will be carried out through community consultation and the assessment of incentives' viability by the Ministry of Agriculture and Rural Development. This will involve pilot projects to determine the economic, technical, and environmental feasibility of non-conventional agroforestry product initiatives in the region, their productivity, and market needs.</p> <p><b>Definition of areas for intervention:</b></p> <p>Using technological, technical, and territorial criteria to identify suitable priority areas without causing deforestation.</p> <p><b>Crop installation and rotation:</b></p> <p>This involves preparing and adapting the land, fertilization, seed selection, planting, irrigation, maintenance, harvesting, resting periods, and crop rotation.</p>	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>• Hectares suitable for unconventional agroforestry crops in the region.</li> <li>• Percentage of progress in subactivities.</li> <li>• Number of elements, equipment, and supplies acquired.</li> <li>• Percentage of trained and certified population</li> <li>• Percentage of local labor hired in different stages.</li> <li>• Expected productivity per hectare.</li> <li>• Achieved productivity per hectare.</li> <li>• Number of derived products obtained.</li> <li>• Number of implemented technological processes (quantitative) and description (qualitative).</li> <li>• Number of consolidated value chains.</li> </ul>	<b>Anually</b> <sup>5</sup>	<ul style="list-style-type: none"> <li>• SENA</li> <li>• Ministry of Agriculture and Rural Development</li> <li>• Community Councils Los Delfines and Cupica</li> <li>• Municipal governments</li> <li>• CODECHOCO</li> </ul>

<sup>5</sup> An annual verification will be conducted provided that the cultivation of the agroforestry product is approved by the community and has a feasibility result for its establishment.

Action line	Community Council	Objective	Sub-activities	Indicators / Supports	Measurement Frequency	Related Actors
			<p><b>Transformation and marketing of products:</b></p> <p>Acquisition of inputs and equipment necessary for transformation activities and incorporation into marketing chains for commercialization and implementation.</p> <p><b>Training and certification in good agricultural and environmental practices:</b></p> <p>Training the community in associative, administrative, and productive processes and improving practices to ensure that agricultural production and derivative extraction meet quality and safety requirements and are competitive in the markets.</p> <p><b>Registration of green businesses:</b></p> <p>Registration of the project in the Green and Sustainable Entrepreneurship Window of CO-DECHOCO.</p>	<ul style="list-style-type: none"> <li>Percentage of executed economic resources.</li> <li>Amount invested in implementation and source of funds.</li> </ul> <p><b>Supports:</b></p> <ul style="list-style-type: none"> <li>Feasibility study</li> <li>Reports of results within the installation process.</li> <li>Signed contracts</li> <li>Attendance lists for training processes.</li> <li>Photographic documentation</li> <li>Purchase plans</li> <li>Purchase records</li> <li>Achieved BPA certifications.</li> <li>Certificate of registration in the window.</li> </ul>		
<b>Strengthening the livestock sector - Minor species utilization</b>	LOS DELFINES &	Designing the production, utilization, and commercialization	<p><b>Hiring technical consultancy:</b></p> <p>Accompaniment by experts in determining requirements for productive infrastructure and sanitation, technical and operational concepts</p>	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>Expected productivity indicator</li> <li>Achieved productivity indicator</li> </ul>	<b>Annually</b>	

Action line	Community Council	Objective	Sub-activities	Indicators / Supports	Measurement Frequency	Related Actors
	CUPICA	system for products extracted from minor species such as laying and fattening poultry, fish, pigs, and others.	<p>for breeding, management, and utilization of minor species. As well as, in the formulation of Environmental Management Plans and their management with relevant environmental authorities.</p> <p><b>Training in Good Agricultural Practices (GAP):</b></p> <p>Training the community involved in good livestock practices, safety, and environmental practices associated with the breeding and utilization of minor species.</p> <p><b>Construction, adaptation, and equipping of productive spaces:</b></p> <p>Building productive infrastructure and acquiring the necessary equipment and inputs for breeding, management, utilization, and processing of the species.</p> <p><b>Establishment of breeding stock:</b></p> <p>In accordance with the granted permits and/or estimates outlined in the feasibility studies.</p> <p><b>Management, utilization, and commercialization:</b></p> <p>Acquisition of necessary inputs and equipment for transformation</p>	<ul style="list-style-type: none"> <li>Percentage of progress in sub-activities</li> <li>Number of elements, equipment, and inputs acquired.</li> <li>Number of implemented technological processes (quantitative) and description (qualitative)</li> <li>Number of consolidated production chains</li> <li>Percentage of trained and certified population</li> <li>Percentage of local labor hired in different stages</li> <li>Percentage of economic resources executed</li> <li>Expenditure item in the implementation and source of funds</li> </ul> <p><b>Supports:</b></p> <ul style="list-style-type: none"> <li>Feasibility studies</li> <li>Generated and processed environmental management plans.</li> <li>Granted zoo breeding licenses</li> <li>Signed contracts</li> <li>Infrastructure plans in the production chain</li> <li>Trained and certified community members</li> </ul>		

Action line	Community Council	Objective	Sub-activities	Indicators / Supports	Measurement Frequency	Related Actors
			activities and integration into market chains for marketing and implementation.	<ul style="list-style-type: none"> <li>• Inventories of individuals by species and characterization</li> <li>• Attendance lists for training processes</li> <li>• Photographic documentation</li> <li>• Purchase plans</li> <li>• Purchase records</li> <li>• Progress reports in execution</li> </ul>		
<b>Sustainable fisheries utilization</b>	LOS DELFINES & CUPICA	Design a sustainable utilization and marketing system for the fishing resource	<p>Community training in productive processes for fishing, transformation, and marketing under good practice criteria</p> <p>Installation of a pilot project for artisanal deep-sea fishing beyond the ZEPA (Special Protection Zone)<sup>6</sup>.</p> <p>Replication of the pilot project in different zones previously identified as suitable for implementation, following the ZEPA limit criteria</p>	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>• Expected productivity based on the pilot</li> <li>• Achieved productivity</li> <li>• Percentage of progress in the works</li> <li>• Percentage of progress in the works</li> <li>• Number of equipment acquired.</li> <li>• Percentage of trained and certified population.</li> <li>• Percentage of local labor hired in different stages.</li> <li>• Number of derived products obtained.</li> </ul>	<b>Annually</b>	<ul style="list-style-type: none"> <li>• SENA</li> <li>• AUNAP</li> <li>• Municipal governments</li> <li>• Community Council Los Delfines</li> <li>• CODECHOCO</li> <li>• IIAP</li> </ul>

<sup>6</sup> Exclusive zone for artisanal fishing - Collective strategy for responsible management and recovery of the fishing resource in the Colombian Pacific: Resolution 899 of 2013, National Aquaculture and Fisheries Authority (AUNAP).

Action line	Communi- city Coun- cil	Objective	Sub-activities	Indicators / Supports	Measure- ment Fre- quency	Related Actors
				<ul style="list-style-type: none"> <li>Number of implemented technological processes.</li> <li>Number of consolidated production chains</li> </ul> <p><b>Supports:</b></p> <ul style="list-style-type: none"> <li>Pilot test results report</li> <li>Training materials</li> <li>Plan and purchase records</li> <li>Attendance lists for training</li> <li>Permit(s) issued by environmental authority(ies)</li> </ul>		
<b>Sustainable Forest Use</b>	LOS DELFINES  &  CUPICA	Generating an opportunity for sustainable economic growth through forest utilization.	<p><b>Formulation of Forest Management and Utilization Plans:</b></p> <p>With the assistance of a forestry expert, in compliance with legal requirements.</p>	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>Number of equipment acquired</li> <li>Percentage of trained and certified population</li> <li>Percentage of local labor hired in different stages.</li> <li>Expected productivity per hectare.</li> <li>Achieved productivity per hectare.</li> <li>Number of derived products obtained.</li> <li>Forest utilization rate.</li> </ul> <p><b>Supports:</b></p> <ul style="list-style-type: none"> <li>Forest Management Plan.</li> <li>Forest Utilization Plan.</li> <li>Annexes of procedures.</li> </ul>	<b>Anually</b>	<ul style="list-style-type: none"> <li>SENA</li> <li>Association of sawmill operators</li> <li>IIAP</li> <li>Community Councils Los Delfines and Cupica</li> <li>Municipalities of Bahía Solano and Juradó</li> <li>CODECHOCO</li> </ul>
			<p><b>Obtaining Permits and Utilization Authorizations:</b></p> <p>Managed with the respective authorities.</p>			
			<p><b>Green Business Registration:</b></p> <p>Enrolling the project in the Green and Sustainable Entrepreneurship window of CODECHOCO.</p>			
			<p><b>Community Training:</b></p> <p>In productive processes and best practices for timber utilization from</p>			

Action line	Community Council	Objective	Sub-activities	Indicators / Supports	Measurement Frequency	Related Actors
			<p>the forest, its transformation, and marketing</p> <p>Design, Construction, and Provision of a Timber Transformation Center.</p> <p>Implementation of Management and Utilization Plans along with periodic monitoring of the activity.</p>	<ul style="list-style-type: none"> <li>Permit(s) granted by environmental authority(ies).</li> <li>Resolution(s) from the authority(ies).</li> <li>Green Business Registration Certificate.</li> <li>Transformation Center design plans.</li> <li>Signed contracts.</li> <li>Periodic monitoring reports.</li> </ul>		
<b>Community Facilities</b>	LOS DELFINES & CUPICA	Improvement of community facilities within the community councils, including housing, those associated with public services, and recreation and sports.	<p>Diagnosis and improvement of housing.</p> <p>Installation of recreation and sports centers.</p> <p>Strengthening of basic sanitation and public services.</p>	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>Percentage of progress in the works.</li> <li>Percentage of local labor hired in different stages.</li> <li>Percentage of coverage of public services.</li> <li>Number of intervened houses.</li> </ul> <p><b>Supports:</b></p> <ul style="list-style-type: none"> <li>Sewer network plans.</li> <li>Delivery and acceptance certificates.</li> <li>Signed contracts</li> </ul>	<b>Anually</b>	<ul style="list-style-type: none"> <li>Municipalities of Bahía Solano and Juradó</li> <li>Government of Chocó</li> <li>Community Councils Los Delfines y Cupica</li> </ul>
<b>Connectivity Program</b>	LOS DELFINES & CUPICA	To build and equip the necessary infrastructure to provide connectivity solutions and im-	<p>Construction and equipping of computer rooms with internet service.</p> <p>Awareness, engagement, and training of council members on the use of ICTs.</p>	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>Percentage of progress in the works.</li> <li>Percentage of local labor hired in different stages.</li> <li>Number of devices with internet access.</li> </ul>	<b>Annual</b>	<ul style="list-style-type: none"> <li>Municipalities of Bahía Solano and Juradó</li> <li>Government of Chocó</li> </ul>



Action line	Community Council	Objective	Sub-activities	Indicators / Supports	Measurement Frequency	Related Actors
		prove communications for the communities that make up the community councils.		<ul style="list-style-type: none"> <li>Percentage and characterization of the population sensitized and trained in ICTs.</li> <li>Number of elements, equipment, and supplies acquired.</li> <li>Budget allocated for implementation and funding source.</li> </ul> <p><b>Supports:</b></p> <ul style="list-style-type: none"> <li>Delivery and acceptance certificates</li> <li>Signed contracts.</li> <li>Purchase records</li> <li>Budget execution report.</li> <li>Photographic documentation</li> <li>Training memos and attendance lists.</li> </ul>		<ul style="list-style-type: none"> <li>Community Councils Los Delfines and Cupica</li> </ul>
<b>Mobility Improvement Program</b>	LOS DELFINES & CUPICA	To provide communities with the road infrastructure and the necessary equipment and supplies to facilitate their river and land mobility.	Acquisition of heavy machinery for infrastructure repair for mobility.	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>Number of boats or vehicles acquired / Number of boats or vehicles projected.</li> <li>Percentage of local labor hired.</li> <li>Percentage of compliance with maintenance performed.</li> <li>Percentage of population benefited.</li> <li>Budget allocated for implementation and funding source.</li> </ul>	<b>Anually</b>	<ul style="list-style-type: none"> <li>Municipalities of Bahía Solano and Juradó</li> <li>Government of Chocó</li> <li>Community Councils Los Delfines and Cupica</li> </ul>
			Infrastructure diagnostics associated with mobility, for subsequent repair.			

Action line	Community Council	Objective	Sub-activities	Indicators / Supports	Measurement Frequency	Related Actors
				<p><b>Supports:</b></p> <ul style="list-style-type: none"> <li>• Signed contracts.</li> <li>• Records of identified issues.</li> <li>• Plans and purchase records.</li> <li>• Budget execution report.</li> <li>• Inventory of acquired boats and/or vehicles.</li> <li>• Copies of licenses and required procedures for operation.</li> <li>• Training process memos.</li> <li>• Delivery acceptance certificates.</li> <li>• Photographic documentation</li> </ul>		

**Source: DELFINES CUPICA REDD+ project**

## **6 Agents and drivers of Deforestation and Forest Degradation**

### **6.1 Analysis of Actors and Drivers of Deforestation and Forest Degradation**

The causes of deforestation and forest degradation resulting from anthropogenic activities are those human actions carried out at the local level on a forest, such as the expansion of agriculture and/or livestock farming, the implementation of infrastructure projects, forced displacement, illegal mining, or selective harvesting of forest species, whether for timber extraction or other uses involving the felling of trees, directly impacting natural vegetation cover. Although there are also natural causes determined by the biophysical conditions of the territories (Dueñas, 2018). However, anthropogenic causes are particularly subject to local and regional contexts due to underlying causes that can be demographic, economic, technological, cultural, and institutional, specific to each of the territories, and not always clear (Geist & Lambin, 2002).

Therefore, to identify the agents and drivers of deforestation and forest degradation in the project area, it is necessary to describe the context in which these agents and drivers converge. For this purpose, sources of information that have a direct relationship with the territory were consulted. These sources include land tenure, such as the diagnoses carried out as part of the DELFINES CUPICA REDD+ Project and the Ethno-development Plans; environmental authority perspectives on managing and regulating natural resource use; management and coordination, such as municipal governments and governorships; and contributions from specialized research institutes that are recognized as official sources of information for decision-making by public institutions, such as the Pacific Environmental Research Institute - IIAP.

Within the analysis of deforestation and degradation, a series of criteria were considered for compiling information. One of them relates to considering that forest degradation is analyzed from the perspective of fragmentation and, therefore, in several deforestation drivers, it is a stage of deforestation or complete loss of cover when induced by anthropogenic causes. For this reason, quantification becomes more complex, and both quantification and actor identification can be done together in some specific cases.

Another criterion considered was the inclusion of observations recorded during field visits in the project's development to identify the influence of spatial and non-spatial variables in forest degradation and deforestation processes, as described by (Geist & Lambin, 2002), and as presented below:

**Spatial Variables:**

- The type of forest located in the area with high commercial value.
- Wide distances between local councils and larger ones, forested areas, and population centers in the municipality and department, making it difficult for government and local authorities to control.
- Poor conditions in terms of access roads and connectivity, with maritime transport as the primary means of transportation.

**Non-Spatial Variables:**

- Demand for illegally harvested timber.
- Internal factors associated with the lack of appropriate technologies, consolidated value chains, specific public policies, microcredit opportunities, and knowledge among community councils for the sustainability of forest and agricultural production.
- Increased pressure on resources due to population growth and/or displacement in communities.
- Difficulties in diversification and income growth for community livelihoods, making illegal practices attractive.

With this landscape, we complement Section "4. ANALYSIS OF TERRITORIAL ACTORS AND DEFORESTATION DRIVERS" of the PDD of DELFINES CUPICA REDD+ V.4. In this section, we add an analysis of actors and drivers of deforestation and forest degradation based on the guidelines of Section "10. CAUSES AND AGENTS OF DEFORESTATION AND/DEGRADATION" of the ProClima Methodological Document Version 2.2. We identify the main drivers of deforestation and forest degradation present in different project areas (reference area, project area, leakage area) as shown in the following summary table.

Type of activity generated	Origin	Key Actors / Stakeholders	Type of Cause	Cause	Driver	Interests and motivations	Spatial and temporal dimension
Deforestation	Anthropic	Subsistence farmers (Internal Stakeholder)	Direct	Expansion of the agricultural frontier	Conversion of forest land to subsistence agriculture.	Establish productive agricultural plots for self-consumption and local commercialization.	In the reference and implementation period of the project, in the areas of: Reference Area Project Area Leakage Area
Deforestation	Anthropic	Owners of private land within the area of the community councils (External Stakeholder)	Underlying	Unclear land allocation rights	Conversion of council forest land to commercial forestry plantations	Land grabbing and commercialization of timber from introduced species	During the reference and implementation period of the project, in the areas of: Reference Area Project Area
Deforestation	Anthropic	Livestock farmers who are members of community councils (Internal Stakeholder)	Direct	Expansion of the livestock frontier	Conversion of forest land to pasture for livestock grazing	When the actor is from the community, it is carried out for self-consumption and commercialization purposes.	During the reference and implementation period of the project, in the areas of: Reference Area Project Area

		Livestock farmers who are not members of community councils (External Stakeholder)				when they are settlers or external actors, the motivation is land grabbing and local and regional marketing.	Leakage Area
Degadation and Deforestation	Anthropic	Local and regional sawmills  (Internal Stakeholders)	Direct	Extraction of forest products	Illegal logging for commercial purposes	In the case of an Internal Stakeholder, these are collective uses for local consumption and marketing.	During the reference and implementation period of the project, in the areas of: Reference Area Project Area Leakage Area
		International timber industry  (External Stakeholder)	Underlying		National institutional policies and programs (during the reference period)	In the case of external acts, these are national programs or regional actors that take advantage of the timber for national or international commercialization.	In the period under review, in the areas of: Reference Area Project Area
Degradation	Anthropic	Families using firewood for subsistence purposes	Direct	Extraction of forest products	Unsustainable extraction of firewood for fire	Selective harvesting of wood energy species or part of them for cooking activities is carried out.	During the reference and implementation period of the project, in the areas of:

		(Internal Stakeholder)			and/or subsistence purposes		Reference Area Project Area Leakage Area
Deforestation	Anthropic	Population displaced from their territory  (Internal Stakeholder y externo)	Underlying	Demographic factors and socio-economic and cultural contexts attributable to violence	Dynamics of forced population migration in search of new settlement sites and subsistence.	Due to conflict events by external actors, internal actors have to find a place to relocate.	In the reference period in the areas of: Reference Area Project Area
Degadation y Deforestación	Natural	Biophysical and climatic conditions: Natural Forest fires, flooding, mass movements, continental erosion, etc.	Direct	Dynamics of Degadation and natural Deforestation due to climatic factors	Natural vegetation cover fires	Climatic conditions not so common in the area	In the reference period in the areas of: Reference Area Project Area
					Coastal marine erosion	Very common climatic conditions in the area	During the reference and implementation period of the project, in the areas of: Project Area
Degradation y Deforestación	Anthropic	Actors involved in illegal activities  (Internal Stakeholder y externo)	Underlying	Other political and socio-economic factors	Loss of coverage associated with illegal activities	When they are internal actors, the motivation is livelihoods other than the few economic opportunities in the area.	During the reference and implementation period of the project, in the areas of: Reference Area

					(Internal Stakeholder and external)	When they are external actors, it is due to motivations and interests of power.	Project Area Leakage Area
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Source: DELFINES CUPICA REDD+ project



Below is a specific analysis of the deforestation and forest degradation engines identified in the project areas:

#### 6.1.1 Conversion of Forested Lands into Subsistence Farming

Based on the information presented in item 2.1.3 of the PDD regarding the type of agriculture carried out by the communities, small-scale commercial crops such as rice, plantains, bananas, coconuts, cocoa, and indigenous products like borojón, chontaduro, Chinese potato, and palm hearts are combined. These crops are the economic livelihood of small inhabitants (Universidad Cooperativa de Colombia, 2016).

This driver is also due to limited technical capacity to establish environmentally friendly alternative production methods. This leads to the use of unsustainable ancestral practices like forest burning, which, in turn, demands the expansion of areas to maintain basic self-sufficiency production. This deforestation driver is identified in both the reference area and the project area because it is a typical practice in the Pacific biome.

#### 6.1.2 Conversion of Forested Lands into Commercial Forest Plantations

While this activity is common in some areas of the Pacific biome, including the project's reference region, these areas usually see the establishment of commercial forest plantations due to better access roads, collection centers, and processing and sales sites. However, in the project area, privately-owned forest plantations were observed that do not cover a large area and do not have a viable marketing route due to the high costs of river and maritime transport. Therefore, this change in land use, while still related to forestry, is not from natural forests and is not eligible within the REDD+ project. It is driven by socioeconomic factors that do not align with the proposals of the community councils.

Furthermore, this deforestation driver compromises the water resources' security for the Cupiqueña population as it does not respect the 30-meter protection margin for water sources, a situation that the community is addressing through reforestation and coverage rehabilitation activities to resolve this socio-environmental conflict.

#### 6.1.3 Conversion of Forested Lands into Pastures for Livestock

This degradation and deforestation driver has two main causative agents. The first is linked to population migration dynamics, and the other agent is the local communities residing

within and around forested areas. The latter is of lesser concern compared to the former, as it is of small scale and associated with forested areas. It is present in both the reference area and the non-eligible area of the DELFINES CUPICA REDD+ project but is very close to the eligible areas.

The conversion of forested lands into pastures for livestock by the first deforestation agent results from declining soil productivity due to degradation. The lack of capital and appropriate technologies for production is also a significant factor causing small, mostly private farmers in the non-eligible project area to adopt extensive livestock farming (Dueñas, 2018). This poses a risk to the project's eligible REDD+ areas.

The underlying cause of this adoption of extensive livestock farming is more complex than it appears. In the Pacific region, this production system is not driven by productivity, market advantages, or financial benefits in the livestock sector, as it is in Brazil. Instead, in Colombia and specifically in the Pacific region, this productive system is associated with land grabbing, resulting in Chocó department having one of the highest Gini<sup>7</sup> indices globally, with a value of 0.61 (Dueñas, 2018).

#### 6.1.4 Illegal Timber Extraction for Commercial Purposes

In the region, illegal markets related to timber extraction and utilization have drawn attention from legal and environmental authorities at the department and national levels. Given the forest richness and the presence of highly valuable, threatened timber species with significant commercial demand in regions like Antioquia, Risaralda, and Valle del Cauca, as well as international markets like Japan and China, there has been significant pressure. These species include caimito, abarco, chibugá (*Cariniana pyriformis*), huina, oak, black cedar, Colombian palm, linde, algarrobo, chaquiro pine, among others (Córdoba, 2001).

This legal utilization occurred during the reference period (2000 - 2006) within the eligible area of the DELFINES CUPICA REDD+ project, where selective harvesting was conducted with management and utilization plans developed by USAID and the Community Council

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<sup>7</sup> The Gini Index for rural land is a measure of the degree of concentration of rural land within the reference spatial unit, considering the number of people who exercise legal property rights over it (SINCHI & MADS, 2018).

"Los Delfines." Although this project resulted in minimal coverage degradation due to helicopter-assisted timber extraction, it did not yield the expected results and was abandoned, leaving only remnants of some road improvements in the area. The Community Council has since established a permanent nursery for reforestation in degraded areas as part of the DELFINES CUPICA REDD+ project's action plan.

However, illegal selective harvesting still occurs, both in the project area and in the reference area and the leakage area. This leads to a reduction in above-ground biomass and coverage because the logging is often carried out without adhering to permitted thicknesses, removing vegetation layers beyond the tree-felling area, or selectively extracting the most economically valuable species.

These forests have historically been a significant source of income for local families who extract timber periodically when economic needs arise. However, the economic benefits are primarily reflected in the departments where the timber is marketed. In the case of Bahía Solano and Juradó, illegal armed groups control illegal revenue despite the presence of the Navy and the Army (Revista Semana, 2016).

The most significant impact of this activity occurs in the southern municipalities of the department (Litoral de San Juan), the central area (Medio Baudó, Quibdó, Medio Atrato, Rio Iró, Rio Quito, Bojayá), and the north (Carmen de Darién, Riosucio, and Unguía) (CO-DECHOCO, 2012), i.e., in the reference area and potentially even in the DELFINES CUPICA REDD+ project area. As part of the additionality strategies, the project includes control measures to prevent the migration of agents and deforestation and degradation drivers that could affect their forest territories.

#### 6.1.5 Unsustainable Firewood Extraction for Cooking and/or Subsistence

The migration of settlers to denser forested areas is directly motivated by the opportunities presented by local illegal markets. It can also be due to the presence of armed groups operating outside the law that force local populations to leave their ancestral territories. Both scenarios have been observed in the DELFINES CUPICA REDD+ project areas, although more prominently in the reference area. Forced displacements occurred in the Cupica Community Council area during the reference period (2000 - 2010).

This deforestation driver is primarily motivated by illegal economies, especially those related to coca leaves and cocaine paste. These dynamic gains strength due to the marginal and limited rural employment conditions. Since extensive livestock farming is the primary economic activity and requires very little labor, settlers proceed to deforest forested areas to establish subsistence and coca crops initially, which are typical in the early years and later replaced by pastures (reference area). This also indirectly affects the project area as it serves as a marketing corridor for these products and involves some young people in the region, especially as transporters (Dueñas, 2018).

Although the land tenure of the community councils within the project is clear due to the adjudication regulations issued by INCORA and INCODER, they are not immune to land invasions by settlers. Therefore, under the umbrella of strengthening governance and community council institutions, efforts are being made to prevent this deforestation and degradation driver caused by external agents through land regularization and area marking.

#### 6.1.6 Vegetative Coverage Fires due to Natural Causes

The Chocó Biogeographic region, particularly the reference area, is notably affected by fires in vegetation coverage, especially during the dry periods from December to March and July to August, intensified by the El Niño phenomenon and fast-moving winds from the Pacific Ocean. In the project area, natural forest fires are not common due to high humidity and annual precipitation. However, it remains a latent risk, as anthropogenic forest fires, such as those used in rice cultivation, can occur.

This deforestation and degradation driver is considered, depending on the scale of the fire, as it can be a disturbance event that may occur in the project area. Mitigation measures need to be established accordingly.

#### 6.1.7 Coastal Marine Erosion

This deforestation and degradation driver is among the natural phenomena that can occur in the project area as mass movements or floods. Such events have occurred in the leakage area during the project's implementation in the Juradó municipality, as well as in the project area in the 1990s, leading to the relocation of the Cupica town center. Coastal marine erosion, however, is a constant and latent degradation phenomenon in the project and leakage areas, both during the reference period and the project's implementation. This is due to the

oceanographic dynamics surrounding the project's western area. The proposing project communities have prioritized these areas with strong-rooted forest species to begin mitigating the loss of territory due to this type of erosion, which is intensified when mangroves and riparian areas are deforested.

#### 6.1.8 Loss of Coverage Associated with Illegal Activities

Within the numerous variables indicating that the Chocó department is one of the richest in the country, the geological component has historically represented a development opportunity or sustenance for the settled communities. This is due to the presence of minerals such as gold, silver, and platinum, especially in the reference region of the DELFINES CUPICA REDD+ project.

However, associated with the social context previously described, this has become one of the activities with the greatest environmental impact. In subsistence economies, it often begins with forest degradation and sometimes even leads to deforestation. In semi-mechanized open-pit or alluvial mining, which is present in the region, it directly leads to deforestation of ecologically and biologically significant forested areas. It also results in the destruction of the few cultivable soils, erosion of hillside slopes, and sediment loading of watersheds due to significant sediment contribution contaminated with heavy metals, fats, oils, increased water turbidity, and changes in river dynamics due to modified riverbeds (CODECHOCO, 2012).

The main watersheds affected include the Andágueda River, Quito River, Baudó River, and Atrato River, as well as their micro-watersheds. The material extracted from Lloró is transported to Quibdó for commercialization, while material from Cantón de San Pablo and Cértegui is transported to Istmina and Quibdó.

Illegal mining is the main source of funding for criminal activities in the department. Illegal groups use this activity to enrich themselves, finance criminal activities, and reconfigure as armed actors. This happens in areas with institutional control and judicial gaps (Gobernación Chocó, 2016).

Furthermore, in some neighboring municipalities like Medio Atrato, Rio Quito, or Bagadó, mining concessions and titles granted to multinational companies have multiplied, leading to conflicts with settled communities.

In addition, it's important to mention that in some neighboring municipalities like Medio At-rato, Rio Quito, or Bagadó, mining concessions and titles granted to multinational companies have multiplied, leading to conflicts with the established communities. As a result, Afro-Co-lombian and Indigenous communities have repeatedly expressed their disagreement with any type of project within their territories because they perceive that the entry of external actors undermines Mother Earth, harms the territory, and impacts the community itself.

*"Mechanized mining and the cultivation of coca for illicit purposes alter the harmonious relationship of the Black community with nature, the local economy, community life, and the importance of tradition." (García, et al., 2018)*

## **6.2 Analysis of Behavior Change among Deforestation and Forest Degradation Agents**

Now, based on the identified drivers and agents of deforestation and forest degradation in the reference areas, leakage areas, and project area, and with a clear understanding of their motivations and interests, relevant mitigation measures are established within the frame-work of the Monitoring Plan. This focus is solely on internal actors, namely, the community belonging to the proposing community councils of the project.

These measures aim to provide alternatives for changing these behaviors and dynamics, always within the framework of respecting the autonomy, self-recognition, and worldview of the community itself. The goal is to mitigate unplanned deforestation and degradation within the project area and prevent the displacement of these activities to the leakage belt.

Line of action	Cause	Agent	Driver	Justification	Monitoring method
Institutional and governance strengthening	Expansion of the agricultural frontier	Agricultores de subsistencia (Internal Stakeholder)	Conversion of forest land to subsistence agriculture.	Through the activities planned for the strengthening of family production systems, it is proposed to incorporate the strategic line of inter-generational knowledge exchange.	Annual management reports on the line of action in comparison with the indicators set and those achieved. Similarly, compliance with local planning instruments will be verified within the framework of compliance with socio-environmental safeguards.
	Unclear land allocation rights	Owners of private land within the community council area (External Stakeholder)	Conversion of forest land to commercial forestry plantations	Through the construction of ethno-development plans and the land titling of some private properties within the collective territory, it is expected to have clear and marked boundaries of the REDD+ project areas and to improve the relationship spaces with the stakeholders.	
	Other political and socio-economic factors	Actores involucrados en actividades ilegales (Internal and external Stakeholder)	Population migration dynamics	Local planning instruments such as ethno-development plans, management plans and internal bylaws establish mechanisms and protocols for dealing with emergencies due to population migration that mitigate the impacts that may occur.	
Restoration, recovery and/or participatory rehabilitation of deforested ecosystems and forest degradation.	Unclear land allocation rights	Owners of private properties within the area of the community councils. (External Stakeholder)	Conversion of forest land to commercial forestry plantations	Restoration, recovery or participatory rehabilitation activities are established in priority areas to be determined in the monitoring program, which is carried out weekly and reports are submitted every six months.  Thus, general reforestation activities can be in abandoned agricultural or livestock areas. Enrichment activities in areas of natural forest that	Annual management reports on the line of action in comparison with the indicators set and achieved.  Field verification of the effectiveness of implemented actions.

Expansion of the livestock frontier	Livestock farmers, members and non-members of community councils  (Internal and external Stakeholder)	Conversion of forest land to pasture for livestock grazing	have been selectively harvested. Or in areas degraded or deforested by natural activities such as areas where there have been fires or extreme natural phenomena.  As for the areas of coastal marine erosion, activities are being carried out to recover the marine and fluvial coast, with species from the region and with root system potentialities.
	Local sawmills  (Internal Stakeholders)	Illegal logging for commercial purposes	In this case there is no human agent to intervene, but the recovery of degraded areas is supported by the inclusion of local sawmills in these processes.
	Families using firewood as a means of livelihood  (Internal Stakeholder)	Unsustainable extraction of firewood for fire and/or subsistence purposes	
Dynamics of Degadation and Natural Deforestation by climatic factors	Biophysical and climatic conditions: natural forest fires, floods, landslides, continental erosion, etc.	Natural fires of the vegetation cover  Coastal marine erosion	



Forest Deforestation and Degradation Monitoring and Control Program	Expansion of the livestock frontier	Livestock farmers, members and non-members of community councils  (Internal and external Stakeholder)	Conversion of forest land to pasture for livestock grazing	<p>The Deforestation and Degradation monitoring and control program includes a technical component, which is carried out by analyzing sentinel, radar, landsat, or other satellite images that help fill information gaps due to cloud cover.</p> <p>When there are medium- or large-scale disturbance events, the community council will be informed through an early warning mechanism to verify whether it is possible to intervene or to direct communications to the relevant environmental authorities.</p> <p>In this way, technical monitoring is complemented by the social monitoring of the forest custodians.</p>	Monthly monitoring reports on Deforestation and Degradation and verify the number of early warnings generated and mitigation actions.
	Extraction of forest products	Local sawmills  (Internal Stakeholders)	Illegal logging for commercial purposes		
	Dynamics of Degradation and Natural Deforestation by climatic factors	Biophysical and climatic conditions: natural forest fires, floods, landslides, continental erosion, etc.	Natural fires of the vegetation cover  Coastal marine erosion		
Biodiversity conservation program	Extraction of forest products	Local sawmills  (Internal Stakeholders)	Illegal logging for commercial purposes.	Through participatory studies with local sawmillers to determine the species of socioeconomic interest and threat level to prioritize in internal policies to prohibit harvesting.	Reports with the relation of the number of protected species of fauna and flora with the associated projects executed by the community councils or with the relation with third parties from research institutes and universities.
		Families using firewood as a means of livelihood	Unsustainable extraction of firewood for fire and/or subsistence.		

		(Internal Stakeholder)			
Production, supply and marketing of family farming units	Expansion of the agricultural frontier	Subsistence farmers (Internal Stakeholder)	Conversion of forest land to subsistence agriculture.	The territorial planning instruments will be used to delimit the areas with potential for agricultural production for commercial purposes, although this is not the territorial dynamics. In addition to having the center of the family agricultural units to prioritize and define the needs in inputs to be strengthened in each of the areas.	Implementation reports of the agricultural enterprises supported by the REDD+ project.
Strengthening of partnership, co-operation and community entrepreneurship initiative	Expansion of the agricultural frontier	Subsistence farmers (Internal Stakeholder)	Conversion of forest land to subsistence agriculture.	From the point of view of co-market crops, the possibilities of association would minimize Deforestation or Degradation in mosaics, which potentialize ecosystem fragmentation, while in associative areas the edge effect is lower and fragmentation is less likely.	Verify the number of associative enterprises created or strengthened within the framework of the REDD+ project.
	Extraction of forest products	Local sawmills (Internal Stakeholders)	Illegal logging for commercial purposes.	Priority is given to sawmillers' associations so that cooperative activities can be more effective in the planning of sustainable forest management.	
Strengthening of the livestock-productive sector: Use of minor species	Expansion of the livestock frontier	Livestock farmers, members and non-members of community councils  (Internal and external Stakeholder)	Conversion of forest land to pasture for livestock.	Change production mechanisms from extensive to intensive livestock farming, with silvopastoral or agrosilvopastoral systems to optimize the number of head of cattle per hectare.	Verify the number of hectares freed from ex-tensive cattle ranching and enabled for rehabilitation processes.  Verify the number of head of cattle per hectare in the project area.

Sustainable forest harvesting	Extraction of forest products	Local sawmills  (Internal Stakeholders)	Illegal logging for commercial purposes	With the organization of sawmillers in harvesting cooperatives, they can support the establishment of sustainable forest management plans and all the requirements of the Colombian regulatory framework to enter into legal forest harvesting, at this point the REDD+ project would incorporate planned deforestation as an activity.	Verify the number of sawmills included in conservation or sustainable forest harvesting cooperatives, number of hectares included in sustainable forest harvesting processes within the framework of Colombia's legal timber pact.
		Families using firewood as a means of livelihood  (Internal Stakeholder)	Unsustainable extraction of firewood for fire and/or subsistence.	Maximizing the utilization of forest residues implies that no more individuals have to be harvested to satisfy the need for firewood. Similarly, the establishment of wood energy orchards would take pressure off the natural forest.	

**Source: DELFINES CUPICA REDD+ project**

## 7 Quantification of Greenhouse Gas Emission Reductions

### 7.1 Quantification Methodology for Deforestation and Forest Degradation

The activities designed and being implemented in the DELFINES CUPICA REDD+ Conservation Project aim to reduce CO<sub>2</sub> emissions resulting from deforestation and forest degradation compared to reference levels.

The project area is covered by forests and meets the forest concept defined by the Colombian government. These areas have been forests for a minimum of 10 years before the project's start date, as demonstrated by the historical analysis from 2000 to 2010. However, in the absence of REDD+ project activities, deforestation and degradation would be exacerbated.

#### 7.1.1 Deforestation

The methodology applied to estimate emission reductions from deforestation follows the Colombian Technical Standard NTC 6208, "Mitigation Actions in the Land Use, Land-Use Change, and Forestry (LULUCF) Sector at the Rural Level, Incorporating Social and Biodiversity Considerations."

The deforestation rate ( $r$ ) was calculated in accordance with the formula proposed by Puyravaud (2003), which expresses the percentage of forest area decreased per year (%/year).

$$r = \left( \frac{1}{(t_2 - t_1)} * \ln \frac{A_2}{A_1} \right) * 100$$

Where:

$A_1$  = The forested area at the initial moment, in hectares

$A_2$  = The forested area at the end of the analyzed period, in hectares

$t_1$  = Initial year of the period

$t_2$  = Final year of the period

### 7.1.2 Deforestation Leakage Management

The deforestation rate, when calculated using the NTC 2016 methodology "Mitigation Actions in the USCUS Sector at the Rural Level, Incorporating Social and Biodiversity Considerations," must be consistent with its corresponding deforestation leakage management. However, this methodology does not specify the calculation and discounting methodology for leaks in this activity. Nonetheless, the DELFINES CUPICA REDD+ project follows the regulatory guidelines outlined in Resolution 1447 of 2018, Article 39, which indicates that leakage for this activity requires management measures.

As such, the leakage prevention measures planned in the project fall within the framework of cross-cutting action lines (sections 6.1.2. and 6.1.3. of this document). These broadly include tree planting, agricultural intensification, fertilization, and other measures to improve cultivated land areas. The proponents of the REDD+ forest conservation project control leaks through demand management activities for forest products and services. These mitigation activities include agroforestry to provide sustainable sources of wood and employment opportunities.

Similarly, one of the proposed activities for the coming years is to increase agricultural mechanization and productivity, which minimizes market leakage. Another advantage is that the implementation of multiple productive components increases profitability, employment, and overall community support.

Mitigation strategies for leaks in the project include the implementation of productive activities that improve socio-economic conditions, strengthen governance, and establish forest custodians, with a priority on encouraging sawmill operators to change their productive activities. These productive activities enable communities to market and add value to certain basic products, providing these families with an alternative source of income that does not stem from illegal logging.

### 7.1.3 Forest Degradation

For mapping and estimating areas with forest degradation, the methodology proposed by PROCLIMA, as outlined in the AFOLU Sector Methodological Document: Quantification of Greenhouse Gas Emission Reductions or Removals from REDD+ Projects, Version 2.2,

February 2021, is used. This methodology includes estimating historical degradation following the procedures applied by the country for emission reduction estimation, aiming to facilitate nesting at subnational or national levels, as established in the emission reduction estimation strategy for avoiding deforestation and degradation.

Additionally, the methodology for estimating forest degradation in Colombia, proposed by the Forest and Carbon Monitoring System - SMByC, was used. This methodology is based on determining changes in aboveground biomass in different forest cover classes assigned through a fragmentation analysis.

The methodology is described below:

- a) Natural forest cover layers used:
  - i. Start year of the reference period
  - ii. End year of the reference period
- b) Fragmentation of forests for each layer used: processing is suggested using a fragmentation algorithm such as Landscape Fragmentation Tool or similar.
- c) Fragmentation classes: the result of areas by fragmentation class in each evaluated year.
- d) Precision analysis to reduce the uncertainty of degradation estimates. This must include verification of fragmentation classes with additional remote sensing information and field control points.
- e) Transitions between fragmentation classes:
  - i. Primary degradation: core to patch
  - ii. Secondary degradation: perforated to patch.

#### **Activity Data:**

The annual degradation estimate in the project area is calculated using the equation:

$$CSBD1_{im,m} = \left( \frac{1}{t_2 - t_1} \right) * (A_{núcleo,i} - A_{núcleo-par,m})$$

Where:

$CSBD1_{im,m}$  = Annual primary degradation in the project area; ha

$t_1$  = Start year of the monitoring period

$t_2$  = End year of the monitoring period

$A_{núcleo,i}$  = Project area in core class in the year of the start of the monitoring period; ha

$A_{núcleo,i}$  = Project area transitioning from core to patch in the year at the end of the monitoring period; ha

$$CSBD2_{im,m} = \left( \frac{1}{t_2 - t_1} \right) * (A_{perforado,i} - A_{per-par,m})$$

Where:

$CSBD2_{im,m}$  = Annual secondary degradation in the project area; ha

$t_1$  = Start year of the monitoring period

$t_2$  = End year of the monitoring period

$A_{perforado,i}$  = Area in the reference region in the perforated class in the year of the start of the monitoring period; ha

$A_{per-par,m}$  = Area in the reference region transitioning from perforated to patch in the year at the end of the monitoring period; ha

#### 7.1.4 Forest Degradation Leaks

The estimation of annual degradation in leakage area is calculated using the following equations, for primary degradation.

$$CSBD1_{f,m} = \left( \frac{1}{t_2 - t_1} \right) * (A_{núcleo,f,i} - A_{núcleo-par,f,m})$$

Where:

$CSBD1_{f,m}$  = Annual primary degradation in the leakage area; ha

$t_1$  = Year at the beginning of the monitoring period

$t_2$  = Year at the end of the monitoring period

$A_{núcleo,f,i}$  = Leakage area in core class in the year at the beginning of the monitoring period; ha

$A_{núcleo-par,f,m}$  = Leakage area transitioning from core to patch in the year at the end of the monitoring period, ha

The same procedure is followed for secondary degradation.

The annual emission due to degradation in the project area is calculated according to the following equation.

$$EAD_{im,m} = (CSBD1_{im,m} * DCBF1_{im,m_{eq}}) + (CSBD2_{im,m} * DCBF2_{im,m_{eq}})$$

Where:

$EAD_{im,m}$  = Emission in the project area for the monitored period; tCO<sub>2</sub>e

$CSBD1_{im,m}$  = Annual historical primary degradation in the project area; ha

$CSBD2_{im,m}$  = Annual historical secondary degradation in the project area; ha

$DCBF1_{im,m_{eq}}$  = Carbon dioxide equivalent contained in the total biomass difference per hectare in the primary degradation class; tCO<sub>2</sub>e ha<sup>-1</sup>

$DCBF2_{im,m_{eq}}$  = Carbon dioxide equivalent contained in the total biomass difference per hectare in the secondary degradation class; tCO<sub>2</sub>e ha<sup>-1</sup>

Leakage area

$$EAD_{f,m} = [(CSBD1_f * DCBF1_{f,m_{eq}}) + (CSBD2_f * DCBF2_{f,m_{eq}})] - EAD_f$$

Where:

$EAD_{f,m}$  = Annual emission in the leakage area for the monitored period; tCO<sub>2</sub>e

$CSBD1_f$  = Annual historical primary degradation in the leakage area; ha

$CSBD2_f$  = Annual historical secondary degradation in the leakage area; ha



$DCBF1_{f,m_{eq}}$  = Carbon dioxide equivalent contained in the total biomass difference per hectare in the primary degradation class in the leakage area; tCO<sub>2</sub>e ha<sup>-1</sup>

$DCBF2_{f,m_{eq}}$  = Carbon dioxide equivalent contained in the total biomass difference per hectare in the secondary degradation class in the leakage area; tCO<sub>2</sub>e ha<sup>-1</sup>

$EAD_f$  = Annual emission from degradation in the leakage area in the baseline scenario; tCO<sub>2</sub>e

### 7.1.5 Quantification of Project Emission Reductions due to Forest Degradation

The reduction of emissions from avoided degradation in the validation phase is estimated according to the equation:

$$RED = (t_2 - t_1) * (EAD_{lb} - EAD_{im} - EAD_f)$$

Where:

$RED$  = Reduction of emissions from avoided degradation; tCO<sub>2</sub>e

$t_2$  = End year of the reference period

$t_1$  = Start year of the reference period

$EAD_{lb}$  = Annual emission from degradation in the baseline scenario; tCO<sub>2</sub>e

$EAD_{im}$  = Annual emission from degradation in the project scenario; tCO<sub>2</sub>e

$EAD_f$  = Annual emission from degradation in the leakage area in the baseline scenario; tCO<sub>2</sub>e

## 7.2 Carbon Reservoirs

The carbon reservoirs were updated in compliance with Resolution 1447 of 2018 by applying the values of aboveground and belowground biomass and soil organic carbon reservoirs from the 2014 NREF to the 2019 NREF for the Pacific biome, where the DELFINES CUPICA REDD+ project is located, as shown in the following summary table:

TABLE

## 7.3 Calculation of Deforestation Emission Reductions

The projection of deforestation was calculated considering an estimate of forest loss by multiplying the deforestation rate and the current project area in the year 2010 at the beginning of the project, as shown in the following table.

**Table 8. Projection of deforestation over the lifespan of the DELFINES CUPICA REDD+ project**

t	Year	Annual Deforested Area	Remaining Area	Potential Carbon Reduction (t CO <sub>2</sub> )	Reserve Discount 15% (t CO <sub>2</sub> )	Net Carbon Reduction (t CO <sub>2</sub> )
1	2010	857,3	103.022,0	422.988	63.448	359.540
2	2011	850,2	102.164,7	419.468	62.920	356.548
3	2012	843,1	101.314,4	415.977	62.397	353.580
4	2013	836,1	100.471,3	412.516	61.877	350.639
5	2014	829,2	99.635,2	409.083	61.362	347.721
6	2015	822,3	98.806,0	405.678	60.852	344.826
7	2016	815,4	97.983,8	402.302	60.345	341.957
8	2017	808,6	97.168,3	398.954	35.963	339.111
9	2018	801,9	96.359,7	395.634	35.663	336.289
10	2019	795,2	95.557,8	235.778	35.367	200.411
11	2020	788,6	94.762,6	233.816	35.072	198.743
12	2021	782,0	93.974,0	231.870	34.781	197.090
13	2022	775,5	93.191,9	229.940	34.491	195.449
14	2023	769,1	92.416,4	228.027	34.204	193.823
15	2024	762,7	91.647,3	226.129	33.919	192.210
16	2025	756,3	90.884,6	224.247	33.637	190.610
17	2026	750,0	90.128,3	222.381	33.357	189.024
18	2027	743,8	89.378,2	220.531	33.080	187.451
19	2028	737,6	88.634,4	218.695	32.804	185.891
20	2029	731,5	87.896,8	216.875	32.531	184.344
21	2030	725,4	87.165,3	215.070	32.261	182.810
22	2031	719,4	86.439,9	213.281	31.992	181.289
23	2032	713,4	85.720,6	211.506	31.726	179.780
24	2033	707,4	85.007,2	209.746	31.462	178.284
25	2034	701,5	84.299,8	208.000	31.200	176.800
26	2035	695,7	83.598,2	206.269	30.940	175.329
27	2036	689,9	82.902,5	204.553	30.683	173.870
28	2037	684,2	82.212,6	202.850	30.428	172.423
29	2038	678,5	81.528,5	201.162	30.174	170.988
30	2039	672,8	80.850,0	199.488	29.923	169.565
<b>TOTAL</b>				<b>8.242.815</b>	<b>1.236.422</b>	<b>7.006.393</b>

Source: DELFINES CUPICA REDD+ project

## 7.4 Calculation of Reductions in Forest Degradation Emissions

The projection of degradation was calculated considering an estimate of forest loss based on the combination of primary and secondary degradation in the project area from 2010 at the start of the project, as shown in the following table, considering that reductions are adjusted with biomass content adjusted by 30% for primary degradation areas and 70% for secondary degradation.

**Table 9. Projection of emissions reduction due to degradation over the lifespan of the DELFINES CUPICA REDD+ project**

t	Year	Potential Carbon Reduction (t CO <sub>2</sub> )	15% Reserve Discount (t CO <sub>2</sub> )	Net Carbon Reduction (t CO <sub>2</sub> )
1	2010	15.062	2.259	12.803
2	2011	15.062	2.259	12.803
3	2012	15.062	2.259	12.803
4	2013	15.062	2.259	12.803
5	2014	15.062	2.259	12.803
6	2015	15.062	2.259	12.803
7	2016	15.062	2.259	12.803
8	2017	15.062	2.259	12.803
9	2018	15.062	2.259	12.803
10	2019	15.062	2.259	12.803
11	2020	15.062	2.259	12.803
12	2021	15.062	2.259	12.803
13	2022	15.062	2.259	12.803
14	2023	15.062	2.259	12.803
15	2024	15.062	2.259	12.803
16	2025	15.062	2.259	12.803
17	2026	15.062	2.259	12.803
18	2027	15.062	2.259	12.803
19	2028	15.062	2.259	12.803
20	2029	15.062	2.259	12.803
21	2030	15.062	2.259	12.803
22	2031	15.062	2.259	12.803
23	2032	15.062	2.259	12.803
24	2033	15.062	2.259	12.803
25	2034	15.062	2.259	12.803
26	2035	15.062	2.259	12.803
27	2036	15.062	2.259	12.803
28	2037	15.062	2.259	12.803
29	2038	15.062	2.259	12.803
30	2039	15.062	2.259	12.803
<b>TOTAL</b>		<b>451.857</b>	<b>67.778</b>	<b>384.078</b>

Source: DELFINES CUPICA REDD+ project

## 7.5 Total Reduction in Deforestation and Forest Degradation Emissions

Below is the sum of emissions reductions for both activities (deforestation and forest degradation).

**Table 10. Total carbon reductions for deforestation and forest degradation in the DELFINES CUPICA REDD+ project area**

t	Year	Total Carbon Reduction DEF+DEG (t CO <sub>2</sub> )	15% Reserve Discount (t CO <sub>2</sub> )	Net Carbon Reduction DEF+DEG (t CO <sub>2</sub> )	Cumulative Net Carbon Reduction DEF+DEG (t CO <sub>2</sub> )
1	2010	438.050	65.707	372.342	372.342
2	2011	434.530	65.179	369.350	741.693
3	2012	431.039	64.656	366.383	1.108.076
4	2013	427.578	64.137	363.441	1.471.517
5	2014	424.145	63.622	360.523	1.832.040
6	2015	420.740	63.111	357.629	2.189.669
7	2016	417.364	62.605	354.759	2.544.428
8	2017	414.016	62.102	351.914	2.896.342
9	2018	410.696	61.604	349.092	3.245.433
10	2019	250.840	37.626	213.214	3.458.647
11	2020	248.878	37.332	211.546	3.670.193
12	2021	246.932	37.040	209.892	3.880.086
13	2022	245.002	36.750	208.252	4.088.337
14	2023	243.089	36.463	206.625	4.294.963
15	2024	241.191	36.179	205.012	4.499.975
16	2025	239.309	35.896	203.413	4.703.388
17	2026	237.443	35.616	201.827	4.905.215
18	2027	235.592	35.339	200.254	5.105.468
19	2028	233.757	35.064	198.694	5.304.162
20	2029	231.937	34.791	197.147	5.501.309
21	2030	230.132	34.520	195.613	5.696.921
22	2031	228.343	34.251	194.091	5.891.012
23	2032	226.568	33.985	192.582	6.083.595
24	2033	224.807	33.721	191.086	6.274.681
25	2034	223.062	33.459	189.603	6.464.284
26	2035	221.331	33.200	188.131	6.652.415
27	2036	219.614	32.942	186.672	6.839.088
28	2037	217.912	32.687	185.225	7.024.313
29	2038	216.224	32.434	183.790	7.208.103
30	2039	214.550	32.182	182.367	<b>7.390.471</b>
<b>TOTAL</b>		<b>8.694.672</b>	<b>1.304.201</b>	<b>7.390.471</b>	
<b>AVERAGE</b>		<b>289.822</b>	<b>43.473</b>	<b>246.349</b>	

Source: DELFINES CUPICA REDD+ project

## 8 Report on activities during the monitoring period 2019 – 2020

Below is a list of the projects carried out during the period 2019 – 2020 by the project proponents within the framework of the DELFINES CUPICA REDD+ Project.

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
Strengthening of the livestock-productive sector: Use of minor species and sustainable use of fisher-	Frontiers of the Sea and Forest for Peace Project - FRONTEPAZ	Promote the social progress of the population living in the northern zone of the Pacific Coast through the implementation of local economic processes based on fishing, tourism and silvopastoralism.	<p><b>Local Economic Development Component</b></p> <p>Training of fishermen in the areas of sustainability and good management of fishery resources.</p> <p>Capacity building for artisanal fishermen through a program to strengthen the capture, collection, processing, and marketing of fish products.</p>	<p><b>Population benefited by the implementation of the project:</b></p> <p>3000 afro and mestizo fishermen</p> <p>1900 agricultural production families*.</p> <p>1950 Afro, indigenous and mestizo families' users of basic education, health and recreation services*.</p> <p>3 municipal mayors' offices: Bahía Solano, Juradó, Nuquí</p>	<p><b>Certification Community Council</b></p> <p><b>Los Delfines:</b></p> <p>April 7, 2007 to October 10, 2019</p> <p>Anexo 1. FRONTEPAZ</p> <p><b>Certification Community Council</b></p> <p><b>Cupica:</b></p> <p>April 7, 2007 to October 10, 2019</p> <p>Anexo 1</p>	<p>Related parties</p> <p>Pacific Environmental Research Institute</p> <p>European Union</p> <p>Colombia Peace Trust Fund</p> <p>Bahía Solano Mayor's Office</p> <p>Juradó City Hall</p> <p>Nuquí City Hall</p> <p>Los Delfines Community Council</p>

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
			<p>Improving the quality of service and tourism management capabilities.</p> <p>Improving agricultural production and food sovereignty in a sustainable manner.</p> <p>Promoting the addition of value to products derived from biodiversity and enterprises within the framework of green markets.</p>	<p>48 ethnic-territorial organizations of Afro and indigenous communities</p> <p>12 producer organizations</p> <p>4 regional inter-institutional organizations.</p> <p>* The total number of families corresponds to an estimated 21,314 inhabitants, divided as follows: 3,035 indigenous, 12,643 Afro, 5,636 mestizos:</p> <p>3,035 indigenous, 12,643 Afro, 5,636 mestizos</p> <p><b>Number of artisanal fishermen in the municipality of Bahia Solano trained in</b></p>	<p><b><u>Project summary :</u></b> June 27, 2019 Anexo 1</p> <p><b><u>Newsletter No. 2:</u></b> January 25, 2018 Anexo 1</p> <p><b><u>Newsletter No. 3:</u></b> March to April 2018 Anexo 1</p> <p><b><u>Newsletter No. 4:</u></b> August to September 2018 Anexo 1</p>	Cupica Community Council
		Develop solutions to critical aspects of environmental sustainability, land use conflicts, solid waste management and disposal, and zoning of the	<p><b>Environment and Spatial Planning Component</b></p> <p>Identification, in participatory processes, of the potential in services and resources of the territory, the</p>			

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
		territory with an environmental and productive management model with a high level of community participation.	<p>conflicts in the use of the soil and ocean and formulation of strategies.</p> <p>Planning of the territory in its continental and oceanic areas.</p> <p>Promotion of care and respect for the environment, adopting environmental education and surveillance measures.</p>	<p><b>fishery monitoring:</b> 250.</p> <p>Among the topics addressed by FEDEPESCA8 the following stand out:</p> <p>Organizational development for leadership</p> <p>Empowerment of traditional knowledge</p> <p><b>Number of fishery monitoring reports made by fishermen</b></p>		
		Improve access to social services in conditions of equity and intercultural recognition.	<p><b>Social and Cultural Development Component</b></p> <p>Promotion of relevant education for a culture of peace and co-existence.</p> <p>Improvement of rural housing with empha-</p>	<p><b>in Bahía Solano:</b></p> <p>1581 records between January and June 2018 concerning catch, volumes, and sizes of individuals.</p> <p><b>Number of participants in the imple-</b></p>		

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
			<p>sis on families with female heads of household who are victims of the conflict.</p> <p>Recreation and culture for coexistence and peace.</p>	<p><b>mentation of productive and livestock plots in Bahía Solano:</b></p> <p>469 members of Afro and indigenous communities participated in 14 validation events.</p> <p>Developed by Agroambientales del Pacífico.</p> <p><b>Number of suitable laying hen houses in Bahía Solano:</b></p> <p>40 sheds</p> <p><b>Investment for implementation and source of funds:</b></p> <p>4,000,000 euros, with a contribution of 80% from the European</p>		
		<p>Implement actions aimed at strengthening local governance, technical management skills and influence for social development and peaceful coexistence.</p>	<p><b>Local Governance Component</b></p> <p>Improvement of the quality of health care.</p> <p>Local institutional strengthening for the culture of peace and reconciliation.</p> <p>Reconstruction of the social fabric by strengthening citizen participation and reintegration of children and youth in demo-</p>			



A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
			cratic processes of rural development and peace in the territory.	Union through the Colombian Peace Trust Fund ('3,200,000) and the remaining 20% from the municipalities of Bahía Solano, Juradó and Nuquí.		
Sustainable forest management Timber and NTFPs	<b>Project Application of CTel for the improvement of the timber sector in the Department of Chocó.</b>	Achieve efficient management and improvement of the timber production chain in the Department of Chocó, as an input to generate added value in the products, recover forest species and improve the living conditions of the local community.	<p><b>Ecological component:</b></p> <p>Characterization and monitoring of forest species and associated fauna in the participating municipalities.</p> <p>Formulation of management plans for each forest species.</p> <p>Monitoring of the phenology and biology of the flora.</p> <p><b>Agroforestry Sustainability Compon:</b></p>	<p><b>Volume of vegetable material production:</b></p> <p>April 2016: 9549 seedlings (spices: choiba, cedar, oak, ne-gro guaiac).</p> <p>January 2017: 27928 seedlings on 279 hectares.</p> <p>October 2017: 104,758 seedlings on 1048 hectares.</p> <p><b>Number of hectares characterized for pilot test installation:</b> 4 hectares</p>	<p><b><u>Special cooperation agreement</u></b></p> <p><b><u>Los Delfines:</u></b> August 9, 2016 Anexo 2. CTel</p> <p><b><u>Technical progress report</u></b> April 2016 Anexo 2</p> <p><b><u>Technical progress report</u></b> October 12, 2017 Anexo 2</p> <p><b><u>Technical progress report</u></b> January 2017</p>	<p>Chocó Chamber of Commerce CODECHOCO CATROPICO FEDEOREWA SENA Government of Chocó Other participating Community Councils, Peasant Communities, and Indigenous Reserves</p>

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
			<p>Reproduction of 110,000 seedlings with native seeds of woody species such as: guayacán, nato, carob, abarco, mahogany, cedar, and caracolí.</p> <p>Repopulation of 10,000 hectares with seedlings planted in nurseries in the towns of Nimiquia, El Brazo, Boroboro, Boca de Boroboro and Boca de Caimanera, in the municipality of Bahía Solano.</p> <p><b>Biotechnology Component:</b> Conduct research on in vitro propagation of socio-economically</p>	<p><b>Wildlife species with dispersal potential:</b> 130 species of birds 15 species of bats 18 species of flightless mammals</p> <p><b>Types of agroforestry systems implemented in the municipality:</b> 2 tree-covered crops (cedar, carob, banana and borojó). 2 FFS of alley crops (leguminous plants, cassava, rice and corn).</p> <p><b>Number of workshops dedicated to the transformation of wood in Bahía Solano:</b> 19 cabinetmakers</p>	<p>Anexo 2 <b><u>Presentation of the Project</u></b> June 2016 Anexo 2 <b><u>Technical progress report</u></b> March 2019 Anexo 2</p>	

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
			<p>important forest species.</p> <p><b>Transformation Component and Enterprise Engagement Component:</b></p> <p>Survey of information on the people involved in the processing of raw material or commercialization of products, equipment, techniques used, geo-referencing.</p> <p>Sensitization of the villagers on technological and technical advances in wood processing.</p>	<p>3 sawmills</p> <p><b>Percentage of total project progress:</b></p> <p>87% as of March 2019</p> <p><b>Number of people benefited Directly and indirectly by the project:</b></p> <p>1,500 beneficiaries, 26% of whom are members of Afro-descendant organizations.</p> <p><b>Investment for implementation and source of funds:</b></p> <p>82,800,000 contributed by the Technological University of Chocó.</p>		

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
			Agreement among stakeholders on strategies to consolidate the production chain. Incorporation of sustainable business models			
<b>Institutional and governance strengthening</b>	Strengthening of the organizational and administrative structure of the Cupica Community Council for its proper functioning.	To ensure the administrative functioning of the Cupica Community Council.	Payment of salaries to the various officers and employees of the council. Providing the necessary elements for the functioning of the administrative office.	Number of equipment procured Number of office supplies purchased Number of people hired	<u><b>Accounts receivable:</b></u> february 24, 2020 to december 9, 2020 Ver anexo 3. Fortalecimiento administrativo CUPICA <u><b>Contract for the provision of Legal Advisory Services:</b></u> September 27, 2020 Anexo 3	Community Council Cupica
	Strengthening of the organizational and administrative structure of the Los Delfines Community	Ensure the administrative functioning of the Los	Payment of salaries to the different officials and workers of the council.	Number of equipment procured Number of office supplies purchased	<u><b>Accounts receivable:</b></u> July 2, 2020, to December 9, 2020	Consejo Comunitario Los Delfines

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
	Council for its proper functioning.	Delfines Community Council.	Provide the necessary elements for the operation of the administrative office.	Number of people hired	Ver anexo 4. Fortalecimiento administrativo DELFINES	
	Improvement of the participation and meeting spaces of the Los Delfines Community Council.	Guarantee spaces for the participation and meeting of the community council communities.	Acquisition and adaptation of a land in Bahia Solano Acquisition and development of a plot of land in Juradó	Number of equipment purchased: 2	<b><u>Accounts receivable:</u></b> September 10, 2020 Ver anexo 5. Sedes CC DELFINES <b><u>Purchase and sale:</u></b> June 12, 2020 Anexo 5	Community council Los Delfines
<b>Community equipment</b>	Improvement of public space	Ensuring adequate public space for community circulation	Purchase of a dump truck and a backhoe loader for the improvement of the roads. Transport of the acquired machinery to the community council. Improvement of the community roads	Meters of track in good condition Machinery purchased: 2	<b><u>Approval of the purchase of machinery and track improvements:</u></b> August 31, 2020 Anexo 6. Mejoramiento del espacio público CUPICA <b><u>Proposed road improvement:</u></b> 2020	

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
			<p>Maintenance of the port of the community council, with the paving of an area of 100x4m.</p> <p>Maintenance and improvement of the public lighting system.</p>		<p>Anexo 6  <u>Invoice of purchase of backhoe and dump truck:</u>            November 09, 2020            Anexo 6  <u>Machinery collection account:</u>            November 2020            Anexo 6  <u>achinery transport account receivable:</u>            November 2020            Anexo 6  <u>Public lighting collection account:</u>            December 2020            Anexo 6  <u>Collection account:</u>            December 9, 2020            Anexo 6</p>	

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
					<p><b><u>Quote for backhoe loader and dump truck:</u></b>            October 1, 2020            Anexo 6</p> <p><b><u>Cash receipt:</u></b>            November 29, 2020            Anexo 6</p> <p><b><u>Street lighting report:</u></b>            2020            Anexo 6</p> <p><b><u>Road paving photos:</u></b>            2020            Anexo 6</p> <p><b><u>Proposed street lighting:</u></b>            2020            Anexo 6</p>	

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
<b>Institutional and governance strengthening</b>	Formulation of the Cupica Community Council Ethnodevelopment Plan	Formulate the Ethno-Development Plan of the Cupica Community Council, so that they have a planning instrument for their territory in accordance with their needs and vision for the future.	Family characterization of the Cupica Community Council. Recognition of actors with incidence in the territory. Identification of problems and needs in the territory. Workshops with the community for the formulation of the plan. Socialization of the formulated plan	Ethno-Development Plan document: 1 Characterization document of the Community Council: 1 Meetings with the community: 8	Service provision contract No 002 subscribed between Consejo Comunitario de Cupica and Profesionales del Pacífico S.A.S: June 16, 2020 Annex 7. CUPICA Ethno-Development Plan Formulation Electronic invoice Profesionales del Pacífico: December 9, 2020 Annex 7. Socioeconomic characterization Community Council: 2020 Annex 7	Community Council Cupica Profesionales del Pacífico S.A.S



A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
					Socioeconomic characterization report of the council: 2020 Annex 7 Final report: August 28, 2020 Annex 7 Invoice socioeconomic characterization by Pacific Professionals: April 13, 2020 Annex 7 Addendum No. 1: August 21, 2020 Annex 7 Addendum No. 2: September 7, 2020 Annex 7 Advance payment collection account: August 15, 2020	

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
					Annex 7	
<b>Fortalecimiento institucional y de la gobernanza</b>	Formulation of the Ethno-Development Plan of the Los Delfines Community Council.	Formulate the Ethno-Development Plan of the Los Delfines Community Council, so that they have a planning instrument for their territory in accordance with their needs and vision for the future.	<p>Accompany and support the events that are programmed in the phases of pre-enlistment, characterization, diagnosis and vision of the future, as part of the participatory construction process of the Plan.</p> <p>Proposal of the Corporation's work plan, to initiate the work with the communities of the community council.</p> <p>Social technical advice to the team of</p>	<p>Ethno-Development Plan Document formulated</p> <p>Characterization document of the Community Council</p> <p>Meetings with the community</p>	<p>Activity report: February 2021</p> <p>Annex 8. Formulation of the DELFINES Ethno-Development Plan.</p> <p>Collection account: October 2020</p> <p>Annex 8.</p>	<p>Community Council "Los Delfines"</p> <p>Corporación tortugas del Pacífico</p>

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
			<p>professionals, technicians, experts and the communities participating in the process of participatory construction of the plan, guiding, accompanying and facilitating the processes of social and community intervention in the stages of characterization, diagnosis, vision of the future and strategic plan.</p> <p>Construction of the diagnosis and projection of the components: generational with emphasis on childhood, gender, culture with emphasis</p>			

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
			<p>on folklore and education, with the local community councils.</p> <p>Meeting with the communities to raise awareness of the importance of ethno-development plans and the role that the communities should play in their formulation.</p>			
	<p>Strengthening of the local communities of the Los Delfines Community Council</p>	<p>Strengthen the different communities of the community council through economic support for community work plans.</p>	<p>Definition of the amount to be allocated to each community.</p> <p>Request of the work plan subject to the disbursement of the economic support.</p>	<p>Work plans</p>	<p>Account receivable: July 2, 2020 Annex 9. Strengthening of DELFINES communities Minutes: June 18, 2020 Annex 9 Certification: July 2, 2020 Exhibit 9</p>	<p>Community Council Los Delfines</p>

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
					Board of Directors Minutes: June 18, 2020 Exhibit 9	
	Participation as a member of ASOCAR-BONO for the promotion of emission reduction work.	Participating in ASOCARBONO through membership	Delfines Community Council membership dues payment	Asociación con ASOCARBONO	Account receivable: April 16, 2020 Annex 10. ASOCARBONO DELFINES Affiliation	Community Council Los Delfines ASOCARBONO
	Socialization of the REDD+ project and its progress with the communities.	Report on the benefits that the project has brought to the communities of the Co-Community Council.	Socializations with the community	Number of meetings	Account receivable: October 21, 2020 Annex 11. Socialization of communities	Community Council Los Delfines Community Council Cupica BIOFIX S.A.S
<b>Strengthening and promotion of education</b>	Promoting higher education in the community of Cupica	To support higher education students in the community by paying tuition for their corresponding academic programs.	Socialization with the community about the support to students. Identification of students to be benefited to advance their	Students benefited: 17	Proposal for the payment of studies: 2020 Annex 12. Higher Education CUPICA Collection Account: September 25, 2020	Community Council Cupica

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
			<p>higher education studies.</p> <p>List of students and the respective careers to be developed.</p>		<p>Attachment 12</p> <p>Minutes of meeting: August 9, 2020</p> <p>Attachment 12</p> <p>CC board meeting minutes: August 14, 2020</p> <p>Attachment 12</p> <p>Delivery receipt: September 28, 2020</p> <p>Annex 12</p>	
	Improvements to the educational facilities of the Cupica Community Council	To intervene in the educational facilities of the Community Council so that children and young people receive knowledge under optimal conditions.	Adapt the educational facilities of the community council	Improved educational institutions: 1	Financial support partnership agreement: November 6, 2020 Annex 13. Educational Facilities	Community Council Cupica Municipal government Bahía Solano
	Fostering higher education in the Delfines community	To subsidize the higher education of 17 students at the Universidad	Identification of students to be beneficiaries.	Students benefited: 17	Account receivable: October 26, 2020	Community Council "Los Delfines"

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
		Tecnológica del Chocó.			Annex 14. DELFINES Higher Education	Universidad Tecnológica del Chocó
Participatory restoration, recovery and/or rehabilitation of deforested ecosystems and forest degradation.	Reforestation of native productive and protective species	Plant 15,000 seedlings of native productive and protective species in the collective territories of the Cupica Community Council.	<p>Socialization and approval of the project by the General Assembly.</p> <p>Involvement of the community in the project, both with the benefits of the project and the work implemented.</p> <p>Prioritization of the areas to be reforested, based on the care of the water courses.</p> <p>Expansion and adaptation of the community nursery.</p> <p>Consolidation of community minga for the</p>	<p>Seedlings planted: 8,116</p> <p>People benefited: 162</p>	<p>65% progress report: 2020</p> <p>Annex 15. CUPICA Reforestation Receivable: July 30, 2020</p> <p>Annex 15. Account receivable: May 25, 2020</p> <p>Exhibit 15 Commencement Deed: May 10, 2020</p> <p>Annex 15 Final report: January 25, 2021</p> <p>Annex 15</p>	Community Council Cupica

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
			<p>establishment of seedlings.</p> <p>Definition of polygons and planting plan of species in each polygon.</p>			
	<p>Participatory reforestation of degraded ecosystems in the communities of Consejo Comunitario Los Delfines.</p>	<p>Reforest ecosystems that have been damaged to a greater extent due to anthropogenic activities, through the inclusion of the community.</p>	<p>Socialization of the project</p> <p>Georeferencing of the areas to be reforested: definition of three polygons.</p> <p>Two nurseries built</p> <p>Ninety-eight hectares reforested with native plant species.</p> <p>Five hectares of coconut trees established</p>	<p>3 defined and georeferenced areas</p> <p>2 nurseries built</p> <p>98 hectares reforested</p> <p>5 hectares in productive systems</p>	<p>Contract: October 20, 2020</p> <p>Annex 16.</p> <p>DELFINES Reforestation</p> <p>Start-up act: October 22, 2020</p> <p>Annex 16</p> <p>Account receivable: 2020</p> <p>Exhibit 16</p> <p>Partial progress report: 2020</p> <p>Annex 16</p>	<p>Community Council “Los Delfines”</p> <p>Corporación Mi Huerto</p>



A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
<b>Forest Deforestation and Degradation Monitoring and Control Program</b>	Coverage monitoring	Monitor land cover change for the REDD+ project based on updated information according to the characteristics of the territory.	Obtaining satellite images for further processing Geospatial processing of satellite images. Analysis of land cover and its changes over time. Generation of vegetation indices for validation of results. Identification of degraded and deforested areas.	Change of coverage	Invoice monitoring: December 02, 2020 Annex 17. CUPICA Coverage Monitoring. Monitoring report: 01 January 2019 to 31 December 2020 Annex 17	Community Council Cupica BIOFIX
	Coverage monitoring	Monitor land cover change for the REDD+ project.	Obtaining satellite images for further processing Geospatial processing of satellite images.	Change of coverage	Invoice monitoring: April 7, 2020 Appendix 18. DELFINES Coverage Monitoring Invoice monitoring: December 2, 2020 Attachment 18	Community Council Los Delfines BIOFIX

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
			<p>Analysis of land cover and its changes over time.</p> <p>Generation of vegetation indices for validation of results.</p> <p>Identification of degraded and deforested areas.</p>		<p>Monitoring report: January 01, 2019 to December 31, 2020 Attachment 18</p>	
<b>Production, sourcing and marketing of family farming units</b>	<p>Strengthening food security through producer support</p>	<p>Contribute to the recovery of food security in the community of Cupica, municipality of Bahía Solano, Chocó.</p>	<p>Socialization of the project with the community</p> <p>Visits to the farms of the beneficiaries of the project, with which the respective productive characterization was made.</p> <p>Provide technical and financial support to beneficiaries</p>	<p>Producers benefited</p> <p>Families benefited: 203</p> <p>Farms strengthened</p> <p>Prioritized species for production</p>	<p>Final report: 2020</p> <p>Annex 19. Strengthening Food Security CUPICA.</p> <p>Letter requesting resources:</p> <p>September 29, 2020</p> <p>Annex 19</p> <p>Minutes of the CC Board of Directors meeting:</p> <p>September 5, 2020</p> <p>Annex 19</p>	<p>Community Council Cupica</p>

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
					Account receivable: October 5, 2020 Annex 19	
Fortalecimiento del sector agrícola – productivo	Characterization and georeferencing of natural populations and vanilla crops in collective territories of the Valle River basin, Bahía Solano - Chocó.	To characterize the natural populations and vanilla crops present in the collective territories of the Valley River basin.	<p>The study area was identified, corresponding to the mouth of the Valle river, located in the territories of the community councils.</p> <p>The plots of the producers involved in vanilla planting in the community councils were characterized.</p> <p>The plots cultivated with vanilla in agroforestry systems were geo-referenced through field visits.</p>	<p>Maps for plots associated with vanilla cultivation: 2</p> <p>Maps of wild vanilla communities: 2</p> <p>Report with species characterization, field conditions, phytosanitary status: 1</p>	<p>Minutes of delivery: January 19, 2020 Annex 20. Strengthening of DELFINES vanilla crop</p> <p>Final report: 2020 Annex 20</p> <p>Maps: 2020 Annex 20</p>	<p>Community Council “Los Delfines”</p> <p>Community Council Río Valle</p> <p>Community Council Cedro</p> <p>SWISSAID</p> <p>Universidad Nacional, sede Medellín</p>

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
			<p>An inventory was made of vanilla species, survival, area planted and planting density in the plots.</p> <p>The species used as tutors were identified and registered by means of a tour of each plot, obtaining the common names used in the region.</p> <p>The vegetation associated with the vanilla crop was characterized, based on plots, where dendrometric information of the plant species was taken.</p> <p>Identification of soil characteristics, such as texture and pH.</p>			

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
			<p>Determination of the health status of the plots.</p> <p>Identification of some wild vanilla communities in the territories of the Río Valle and Cedro Community Councils.</p>			
<b>Strengthening of the fishery-productive sector: Sustainable use of fishery resources</b>	<p>Recovery and conservation of productive practices related to artisanal fishing.</p>	<p>To recover and maintain artisanal fishing practices under the parameters of environmental sustainability and social welfare.</p>	<p>Preparation of preliminary studies, technical designs and infrastructure for the conservation and commercialization center for artisanal fishermen of Tebada and Bahía Solano.</p> <p>Purchase of land in Bahía Solano for the installation of a refrigeration network for</p>	<p>Number of fishermen benefited</p> <p>Number of facilities acquired or strengthened: 1</p>	<p>Purchase and sale agreement: October 04, 2020 Annex 21. Strengthening of artisanal fishing CUPICA</p> <p>Land purchase collection account: October 2020 Annex 21</p> <p>Preliminary studies collection account: December 2020 Exhibit 21</p>	<p>Community Council Cupica</p> <p>Artisanal fishermen of the community of Tebada</p>

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
			the community of Tebada.			
<b>Community equipment</b>	Maintenance and adaptation of the sewage system in the town of Cupica, Municipality of Bahía Solano.	To join administrative, financial and technical efforts between the municipality of Bahía Solano, the Cupica Community Council and the Bahía Solano Water, Sewage and Sanitation Company to finance the maintenance and adaptation of the sewage system in the township of Cupica, Municipality of Bahía Solano.	Socialization with the community of the Community Council Identification of needs in the territory Diagnosis of the state of the sewage system Implementation of maintenance and adaptation actions	Meetings with the community Works carried out	Partnership agreement: November 6, 2020 Annex 22. CUPICA Sewer Maintenance. Collection account: November 18, 2020 Exhibit 22	Bahía Solano Municipal Mayor's Office Bahía Solano Water, Sewage and Sanitation Company Cupica Community Council

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
	Improving the health of the Cupica Community Council	Maintenance and adaptation of the Bahía Solano health post.	Carrying out of the respective works for the improvement of the health center	Improved health post: 1	Financial support partnership agreement: November 6, 2020 Annex 23. Improvement of the Health Post	Cupica Community Council Mayor's Office of Bahía Solano
<b>Health care and prevention program</b>	Support for families of the Cupica Community Council due to COVID health emergency <sup>8</sup>	Support the families of the community council through economic aid, due to the mandatory isolation decreed by the national government.	Identification of families to be supported	Families benefited: 324	Certification of allocation of resources: March 23, 2020 Annex 24. COVID CUPICA Support Photos of deliveries: 2020 Annex 24 Support delivery receipt: April 7, 2020	Community Council Cupica

<sup>8</sup> It should be noted that initially the basic sanitation line of action did not foresee attending to sanitary or climatic emergencies; however, taking into account the social impact generated by the pandemic, it was necessary to attend to the community to guarantee a good quality of life during the sanitary emergency.

A-L	Activity	Objective	Subactivities	Indicators/Measurement variables	Year of start-up and support	Related parties
					Attachment 24	
	Support for families of the Los Delfines Community Council due to COVID health emergency	Support the families of the community council through economic aid, due to the mandatory isolation decreed by the national government.	Identification of families to be supported	Families benefited: 1,750	Account receivable: April 6, 2020 Annex 25. COVID DELFINES Support Minutes: March 24, 2020 Annex 25. Minutes of special meeting: April 7, 2020 Exhibit 25 Certification of allocation of resources: April 6, 2020 Annex 25	Community Council Los Delfines

Source: DELFINES CUPICA REDD+ project



## 9 Standardized Benefits

The standardized benefits and indicators for the monitoring period 2019 - 2020 were estimated according to the indicators achieved by each of the projects executed by the project proponents, the summary table is shown below.

Category	Indicator	Quantity
Employment	Number of people employed by the project activities	21 <sup>9</sup>
	Number of women employed in project activities	6 <sup>10</sup>
Equipment	Number of upgraded and/or acquired equipment	6 <sup>11</sup>
	Machinery purchased	2
Living conditions	Number of families with improved living conditions as a result of the project	2.074
Education	The total number of people for whom access to or quality of education was improved as a result of project activities.	34
Reforestation	Seedlings planted	8.116
	Beneficiaries	162
	Hectares reforested	98
	Hectares in agroforestry systems Coconut	5
	Nurseries built	2
Agricultura	Families benefited	203

**Source: DELFINES CUPICA REDD+ project**

<sup>9</sup> Data provided in the partial report of the Cupica reforestation project.

<sup>10</sup> Data provided in the partial report of the Cupica reforestation project.

<sup>11</sup> The land acquired by the CC Delfines, the improved Cupica port area, the Cupica educational institution, equipment for the community of Tebada and the health post are taken into account.

## 10 Disturbance events recorded during the monitoring period

During the monitoring period between 2010 and 2020, no disturbance events of natural or anthropogenic origin were recorded that affected the calculated greenhouse gas emission reductions.

It is worth mentioning that with the implementation of the activities included in Item 1.9 and 1.10 of the DELFINES CUPICA REDD+ PDD, as well as the periodic monitoring of the areas by the Los Delfines and Cupica Community Councils and BIOFIX, it is expected to control the possibility of generating disturbance events in the future or mitigating their impact, carrying out, if necessary, the adjustment of emission reduction calculations.

However, complementing the NTC 6208 methodology with the guidelines of the ProClima Program methodology version 2.2, the following correspondence analysis is carried out between the most probable disturbance events in the project area and the updated lines of action as a mitigation or early response mechanism.

Disturbance events correspond to processes of natural or anthropic origin that may prevent the projected GHG emission reductions from being achieved. In this regard, the standard indicates that in the event of any of the events contemplated, the proponent will be responsible for consolidating the information on the situation presented, informing the related stakeholders, and making them aware of the situation.

The methodology to be used is based on the articulation between the activities and sub-activities to be carried out during the implementation period and specified in the lines of action of the monitoring plan listed in section 6.3, which directly assist in the prevention of events, risk assessment, follow-up in the event of a possible occurrence and mitigation of identified disturbances:

Line of Action	Subactivity	Justification of the link to the disturbance
Institutional and governance strengthening	Promotion and strengthening of traditional culture, guaranteeing spaces for the exchange of intergenerational knowledge.	Given that one of the drivers of deforestation identified in the area is the dynamics of population migration, especially by external agents, providing the community councils with resources to build their own government instru-

<p>Restoration, recovery and/or participatory rehabilitation of deforested ecosystems and forest degradation</p>	<p>Prioritization and definition of areas to be intervened and species to be reforested.</p>	<p>ments so that they can carry out the tasks associated with forest stewardship will help prevent the invasion of the territory by settlers and external actors that promote deforestation and degradation activities, or in some cases they will be responsible for making the necessary warnings to take appropriate action to resolve conflicts.</p>
<p>Participatory reforestation of degraded ecosystems</p>	<p>Reforestation and afforestation programs, hand in hand with community nurseries</p> <p>Linking sawmillers in reforestation processes</p> <p>Monitoring of reforested areas.</p>	<p>Areas that have been identified as potential for reforestation due to previous deforestation or degradation dynamics (natural or anthropogenic) caused by any of the identified drivers, will be included in the planned restoration activities and in the community and remote monitoring processes to mitigate and correct possible losses of carbon sinks and quantifiable emission reductions.</p>
<p>Program for monitoring and control of deforestation and forest degradation</p>	<p>Monitoring of deforestation areas based on geospatial information and early deforestation alerts generated by Biofix Consultoría and IDEAM.</p> <p>Satellite image acquisition and processing</p> <p>Identification of causes and generating agents of changes in coverage, with the help of community monitoring.</p> <p>Training for forest custodians who used to be sawmillers.</p>	<p>Based on the early warning system for the prevention and evaluation of disturbances, with the help of remote sensors, technological tools and human capital, a joint work will be carried out between technical and social monitoring that will allow to evaluate not only the quantification of the disturbances but also the qualitative context of the associated causes, in order to establish an effective mechanism for the prevention, evaluation and correction of disturbances.</p>

**Source: DELFINES CUPICA REDD+ project**

For the DELFINES CUPICA REDD+ Project, the following events have been recognized as threats within the scope of compensation. These events are closely related to the identified agents and drivers of deforestation in Section 4 and encompass short, medium, and long-term actions for monitoring:

- **Loss of forest cover:** The area may be threatened by natural fires associated with degradation, as well as a risk of illegal logging for commercial purposes. As explained in the same section, the dynamics of population migration and the establishment of pastures for land appropriation and land grabbing for livestock and agricultural activities are latent disturbances in the territory, which, as substantiated in Section 7.2, will be prevented, mitigated, and assessed through technical and social monitoring associated with the established action lines.
- Discrepancies among different members and authorities of communities regarding the project and decisions made during implementation on prioritized action lines can pose a risk of generating anthropogenic disturbance events. However, to prevent and/or manage such disagreements, the project emphasizes institutional strengthening and territorial governance as a cross-cutting axis, crucial in ensuring the social sustainability of the project. This involves providing indigenous communities with conflict management tools, negotiation skills, community projection, territorial autonomy, resource management, financial management of economic resources, dissemination and communication of results, training in normative matters regarding their rights and protective measures as ethnic communities, as well as regulations related to resource utilization.
- In case the proposed green business activities in the Monitoring Plan concerning the inclusion of indigenous communities in the implementation of productive lines are not carried out properly, there is a possibility that the deforestation control achieved in the first verification period may decrease. To address this situation, the project contemplates the consolidation of inter-institutional relationships and synergy among different project stakeholders and interested parties. This is aimed at ensuring oversight and support from local environmental authorities, municipal governments, and the Ministry of Environment and Sustainable Development.

In any case, if any of the disturbances described were to occur, the affected area would be assessed, and the tCO<sub>2</sub>e emissions would be deducted from the total estimated amount.

## 11 Estimating of emissions reduction during the 2019 – 2020 monitoring period

The calculation of project activity emissions has been determined for the monitoring period. The verified parameters correspond to those outlined in the monitoring plan. The ex-post emissions of the project for this verification period were calculated from 2019 to 2020, summing the emissions from the observed deforestation transition during this monitoring period. Additionally, degradation monitoring was included, for which emissions were calculated for the period from 2010 to 2020.

The change in land cover in hectares was divided among the verified years. The total emissions reduction for the project is 615,706 tCO<sub>2</sub>e during this monitoring period, of which 523,350 tCO<sub>2</sub>e are marketable (Annex 26).

t	Year	Net degradation reductions (reductions minus flue gas) (t co2e)	Re-serve discount (t co2e) (15%)	marketable reductions degradation (t co2e) (net of leakage and reserve de-counting)	Deforestation reductions (t co2)	Reserve discount (t co2e) (15%)	Marketable deforestation reductions (t co2)	Total reductions in deforestation and degradation (t co2 )	Degradation and deforestation reserve allowance (t co2e) (15%)	Reduction of co-marketable emissions (t co2)
0	2010	15.062	2.259	12.803	-	-	-	15.062	2.259	12.803
1	2011	15.062	2.259	12.803	-	-	-	15.062	2.259	12.803
2	2012	15.062	2.259	12.803	-	-	-	15.062	2.259	12.803
3	2013	15.062	2.259	12.803	-	-	-	15.062	2.259	12.803
4	2014	15.062	2.259	12.803	-	-	-	15.062	2.259	12.803
5	2015	15.062	2.259	12.803	-	-	-	15.062	2.259	12.803
6	2016	15.062	2.259	12.803	-	-	-	15.062	2.259	12.803
7	2017	15.062	2.259	12.803	-	-	-	15.062	2.259	12.803
8	2018	15.062	2.259	12.803	-	-	-	15.062	2.259	12.803
9	2019	15.062	2.259	12.803	225.994	33.899	192.095	241.056	36.158	204.897
10	2020	15.062	2.259	12.803	224.032	33.605	190.427	239.094	35.864	203.230
<b>TOTAL</b>		<b>165.681</b>	<b>24.852</b>	<b>140.829</b>	<b>450.025</b>	<b>67.504</b>	<b>382.522</b>	<b>615.706</b>	<b>92.356</b>	<b>523.350</b>

Source: DELFINES CUPICA REDD+ project

It is important to clarify that emissions reductions from the period 2010 to 2015 resulting from degradation activity would be traded within the framework of the voluntary market, while those from 2015 to 2020 would be traded within the non-incurrence of carbon tax market, as stated in section 1 of this document. As shown in the following table:

t	Year	CCV in the carbon tax market	CCV in the Voluntary Market	Sum of CCV in all markets	Reservation discount (15%)	Total marketable
0	2010	0	15.062	15.062	2.259	12.803
1	2011	0	15.062	15.062	2.259	12.803
2	2012	0	15.062	15.062	2.259	12.803
3	2013	0	15.062	15.062	2.259	12.803
4	2014	0	15.062	15.062	2.259	12.803
5	2015	0	15.062	15.062	2.259	12.803
6	2016	15.062	0	15.062	2.259	12.803
7	2017	15.062	0	15.062	2.259	12.803
8	2018	15.062	0	15.062	2.259	12.803
9	2019	241.056	0	241.056	36.158	204.897
10	2020	239.094	0	239.094	35.864	203.230
<b>TOTAL</b>		<b>525.335</b>	<b>90.371</b>	<b>615.706</b>	<b>92.356</b>	<b>523.350</b>

Source: DELFINES CUPICA REDD+ project

## 12 Alignment with sustainable development goals (SDGs)

The action lines formulated and approved by the community councils affiliated with the project, along with the investment projects reported in the monitoring report for 2019 and 2020, have a direct relationship with the Sustainable Development Goals (SDGs) and their targets. The SDGs and their 169 targets were included and approved in 2015 by the United Nations Member States in the agenda titled "Transforming our World: The 2030 Agenda for Sustainable Development" with the aim of ensuring the social and economic growth of global populations, seeking harmonization with ecological dynamics and the environmental needs expressed by communities every day, with an increasing sense of urgency. This is addressed in the following manner:

SDG	Target SDG	Action Line	Project line monitoring report	Indicator monitoring report	Results of monitoring indicators
1. END OF POVERTY	1.1	Prevention and health care program	Support to families of the Community Councils due to the health emergency caused by COVID	Number of families benefited	2.074 benefited families <sup>12</sup>
	1.3				
	1.4				
	1.5				
2. ZERO HUNGER	2.3	Strengthening of the live-stock-productive sector: Sustainable development	Recovery and conservation of productive practices related to artisanal fishing.	Number of fishermen benefited	1 equipment purchased <sup>13</sup>
	2.4				
	2.5				
8. DECENT WORK AND ECONOMIC GROWTH	8.2	Production, supply and	Strengthening of food security	Equipment purchased	
	8.3				
	8.4				
	8.6				
	8.8				

<sup>12</sup> anexos 24 y 25

<sup>13</sup> anexo 21



		marketing of family farming units	through support to producers	Number of families benefited	203 benefited families <sup>14</sup>
3. HEALTH AND WELLNESS	3.2	Community facilities	Improvement of the health of the Cupica Community Council.	Equipment intervened and/or improved	1 health post upgraded and improved <sup>15</sup>
	3.5				
3.7	Improvement of public space		Equipment acquired	1 port me-go-rado	
3.8					Improved roads
4. QUALITY EDUCATION	4.1	Strengthening and promotion of education	Promotion of higher education in the community councils.	Students benefited	34 students benefited <sup>17</sup>
	4.2				
	4.3				
	4.4		Improvement of the educational facilities of the Cupica Community Council.	Equipment improved and/or intervened	1 upgraded equipment <sup>18</sup>
	4.5				
	4.7				

<sup>14</sup> anexo 20

<sup>15</sup> anexo 23

<sup>16</sup> anexo 6

<sup>17</sup> anexos 12 y 14

<sup>18</sup> anexo 13

6. CLEAN WATER AND SANITATION	6.1 6.2 6.6 6.b	Community facilities	Maintenance and adaptation of the sewage system in the town of Cupica, Municipality of Bahía Solano.	Facilities intervened and/or improved	Sewer maintenance <sup>19</sup>
11. SUSTAINABLE PRODUCTION AND CONSUMPTION	11.1 11.2 11.8 11.b	Strengthening of the agricultural-productive sector	Characterization and georeferencing of natural populations and vanilla crops in collective territories of the Valle River basin, Bahía Solano - Chocó.	Monitoring maps carried out  Species characterization	2 maps for plots associated with vanilla crops  2 maps of wild communities  1 species characterization, field conditions and phytosanitary status report <sup>20</sup>
13. CLIMATE ACTION  15. LIFE OF TERRESTRIAL ECOSYSTEMS	13.1 13.2 13.3  15.1 15.2 15.4 15.5 15.7 15.8	Program for monitoring and control of deforestation and forest degradation	Monitoring of community councils' coverages	Land cover status report  Degraded or deforested areas  Hectares reclaimed	2 reports prepared  Minimum change in coverage <sup>21</sup>

<sup>19</sup> Anexo 22

<sup>20</sup> anexo 20

<sup>21</sup> anexos 17 y 18

	15.9 15.a 15.b 15.c	Restoration, recovery and/or participatory rehabilitation of deforested ecosystems and forest degradation	Participatory reforestation of degraded ecosystems in the communities of Consejo Comunitario Los Delfines.  Reforestation of native productive and protective species in the community council of Cupica.	Hectares reforested  Hectares in productive systems  Nurseries constructed and in operation  Seedlings planted  People benefited	2 nurseries built  98 hectares reforested  5 hectares in productive systems <sup>22</sup>  8,116 seedlings planted  162 people benefited <sup>23</sup>
16. PEACE, JUSTICE AND SOLID INSTITUTIONS	16.7 16.8 16.10	Institutional and governance strengthening	Strengthening of the local communities of the Los Delfines Community Council  Formulation of the Ethno-Development Plan of the Los Delfines Community Council.	Number of communities strengthened  Planning instruments formulated	Subject to work schedules <sup>24</sup>  1 ethnodevelopment plan in the process of formulation

<sup>22</sup> anexo 16

<sup>23</sup> anexo 15

<sup>24</sup> anexo 9

			<p>Formulation of the Ethnodevelopment Plan of the Cupica Community Council.</p> <p>Improvement of the participation and meeting spaces of the Los Delfines Community Council.</p> <p>Strengthening of the organizational and administrative structure of the community councils for their proper functioning.</p>	<p>Equipment acquired</p> <p>Number of equipment procured</p> <p>Number of office supplies acquired</p> <p>Number of people hired</p>	<p>1 ethnodevelopment plan formulated <sup>25</sup></p> <p>2 equipment purchased</p>
17. ALLIANCES TO ACHIEVE THE OBJECTIVES	17.14 17.17	Institutional and governance strengthening	Participation as a member of ASOCARBONO for the promotion of emission reduction efforts.	ASOCAR-BONO Affiliation	Los Delfines Community Council affiliated with ASOCAR-BONO <sup>26</sup>

**Source: DELFINES CUPICA REDD+ project**

<sup>25</sup> anexos 7 y 8

<sup>26</sup> anexo 10



Source: Adapted from (PNUD & UNHABITAT.UCLG., 2019)

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