



KALIAWIRI REDD+ PROJECT

This project is proposed by the indigenous reserves Saracure Río Cada, Concordia, Siare Barranco Lindo, Cali Barranquilla, Guaco Alto and Guaco Bajo, Flores Sombrero and Caño Chocón.



Contents

Project Information	5
1 Project description	7
1.1 Project Summary	7
1.2 Objectives.....	7
1.3 Project proponents and stakeholders.....	8
1.3.1 Indigenous reserves	8
1.3.2 BIOFIX CONSULTORIA S.A.S BIC	10
1.3.3 Environmental Authorities with jurisdiction in the project area and related planning instruments	11
1.4 Project location	13
2 Legal Aspects	16
2.1 Analysis of the KALIAWIRI REDD+ Project in relation to Resolution 1447 of 2018 ...	16
3 Non-Permanence Analysis KALIAWIRI REDD+	18
4 Safeguards compliance analysis	23
4.1 Analysis of Follow-up on Social and Environmental Safeguards.....	24
5 Analysis of territorial actors and drivers of deforestation and forest degradation 29	
5.1 Stakeholder analysis	29
5.1.1 Identification of territorial stakeholders.....	29
5.1.2 Identification of actors and drivers of deforestation and degradation.....	29
5.1.3 Conversion of forest land into cattle pasture.	30
5.1.4 Conversion of Forest Land to Agricultural Land for Agriculture	31
5.1.5 Unsustainable collection of fuelwood for fires	31
5.1.6 Unsustainable harvesting of NTFPs.....	32
5.1.7 Uncontrolled grazing.....	33
5.1.8 Extraction of wood for illegal commercial sale.....	34
5.1.9 Natural vegetation cover fires	34

6	Estimation of carbon stock change and greenhouse gas emissions	37
6.1	Calculation of removals	38
6.1.1	Carbon in land use classes (post deforestation)	39
7	MONITORING REPORT.....	59
8	Disturbance events recorded in the monitoring period	89
9	Emission reductions over the monitoring period	91
10	Alignment with sustainable development goals	92
11	Bibliographic references	94

Table list

Table 1.	Project proponents	9
Table 2.	Other project participants.....	11
Table 3.	Planning tools highlighted for the project by the environmental authority	11
Table 4.	Spatial distribution of the indigenous reserves involved in the project.....	14
Table 5.	Constitutional rules and number of inhabitants of the indigenous reserves.....	15
Table 6.	Main legal aspects for the KALIAWIRI REDD+ Project; ¡Error! Marcador no definido.	
Table 7.	Non-permanence risk analysis	19
Table 8.	Safeguard A1.....	¡Error! Marcador no definido.
Table 9.	Compliance with safeguards B2	¡Error! Marcador no definido.
Table 10.	Dissemination media and Compliance evidence..	¡Error! Marcador no definido.
Table 11.	Compliance with safeguard B3	¡Error! Marcador no definido.
Table 12.	Compliance with Safeguard B4.....	¡Error! Marcador no definido.
Table 13.	Compliance with Safeguard B5.....	¡Error! Marcador no definido.
Table 14.	Compliance with Safeguard C6	¡Error! Marcador no definido.
Table 15.	Compliance with Safeguard C7	¡Error! Marcador no definido.
Table 16.	Compliance with Safeguard C8	¡Error! Marcador no definido.
Table 17.	Compliance with Safeguard C9	¡Error! Marcador no definido.
Table 18.	Compliance with Safeguard D10	¡Error! Marcador no definido.
Table 19.	Compliance with Safeguard E11	¡Error! Marcador no definido.
Table 20.	Compliance with Safeguards E12.....	¡Error! Marcador no definido.

Table 21. Safeguard F actions to address the risk of reversals; **¡Error! Marcador no definido.**

Table 22. Compliance with Safeguard F13..... **¡Error! Marcador no definido.**

Table 23. Compliance with Safeguard F14..... **¡Error! Marcador no definido.**

Table 24. Compliance with Safeguards G15 **¡Error! Marcador no definido.**

Table 25. Relationship between action lines and monitoring plan and changes in the behavior of deforestation and degradation agents 35

Table 26. Deforestation projection for the period 2015 - 2044 considering historical deforestation for the period 2000 - 2012. 38

Table 27. Weighted average of carbon..... 39

Table 28. Monitoring report, Impact and Activity Stakeholders of 2015 to 2019 KALIAWIRI REDD+ 59

Table 29. Methodology implemented to prevent, assess, monitor, and mitigate disruptions 89

Table 30. Estimated reduction in deforestation and degradation over the monitoring period 91

Table 31. Relationship between the SDGs and the programs of the proposed action lines 92

List of figures


Figure 1. Organizational chart of the KALIAWIRI REDD+ Project 9

Figure 2. Geographic location of the project area..... 15

Figure 3. Procedures for receiving and evaluating REDD+ activity projects 22

Figure 4. Stakeholder analysis in the region 29

Project Information

	KALIAWIRI REDD+ PROJECT
PROJECT INFORMATION	
Project name	KALIAWIRI REDD+ PROJECT
Version	05
Project Proponents	Cali Barranquilla indigenous reserve Concordia indigenous reserve Flores Sombrero indigenous reserve Caño Chocón indigenous reserve Río Siare Barranco Lindo indigenous reserve Saracure Río Cada indigenous reserve Guaco Alto y Guaco Bajo indigenous reserve
Prepared by	BIOFIX CONSULTORIA S.A.S BIC
Project location	Colombia Vichada and Guainía Cumaribo (Vichada) and Inírida (Guainía)
Validation and Verification Body	AENOR
Project Lifetime	January 1, 2015, to December 31, 2044. Lifetime of 30 years
Methodology	The methodology used to estimate emissions reductions from deforestation is the Colombian Technical Standard NTC 6802 of 2016 " <i>Mitigation actions in the land use, land use change and forestry sector (USCUSS) at the rural level, incorporating social and biodiversity considerations</i> ".

	<p>The methodology used to calculate the leakage belt is the <i>LK-ASU</i> of the <i>REDD VCS VM0007 methodology</i> as it relates to leakage from displacement of unplanned deforestation.</p> <p>The methodology used for the reference area is the guidelines of <i>VM0009 Avoided Deforestation</i>.</p> <p>The methodology for verification of additionality was defined in accordance with the requirements of <i>Article 43 of Resolution 1447 of 2018</i>.</p>
Greenhouse Gas Accounting	January 1, 2015 to December 31, 2044
Monitoring period for this deforestation and forest degradation report	January 1, 2015 to December 31, 2019

1 Project description

1.1 Project Summary

The project is named “KALIAWIRI REDD+” in recognition of the ancestral tree, that, in the Piapoco – Sikuni language, represents the mythical Kaliawiri tree, which is believed to be the origin of cultivated plants. The elders discovered that pineapple, cassava, yam, peach palm, and various other plants that could be cultivated grew on its branches. Considering the cultural significance of this tree for the indigenous communities within the influence area of project, this name was chosen.

The KALIAWIRI REDD+ Project is located within the departments of Vichada and Guainía, in a transitional zone between the Orinoco and Amazon regions. Due to its physical and climatic conditions, this geographic area plays a crucial role in climate regulation, emissions capture, and biodiversity.

Therefore, the indigenous communities involved in the project aim to carry out conservation processes within the framework of sustainability criteria, utilizing their territorial autonomy. These processes include the protection of natural forests areas, the preserves and safeguarding of their cultural identity, and the promotion of productive practices that prioritize the protection of biodiversity and the environmental richness of their territory. These characteristics are directly linked to the objectives of REDD+ projects, desired sustainable local development, and the purpose of reducing emissions caused by deforestation.

1.2 Objectives

The objectives of the KALIAWIRI REDD+ project are:

- Mitigate the effects of climate change by adopting measures to reduce and sequester CO₂ 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.

- Contribute to the conservation of biodiversity by protecting the ecological connectivity and habitat of those species included in a category of threat that represent an environmental interest as bioindicators in the ecosystems or scientific interest as is the case of *Panthera onca* (Jaguar).
- Contribute to the education of gender equity by increasing the capacity for leadership, empowerment, and entrepreneurship of indigenous women in the collective territories.

The project aims to reduce emissions by 29.757.598 tCO₂e over its lifetime, which translates to an annual reduction of 991.920 tCO₂e.

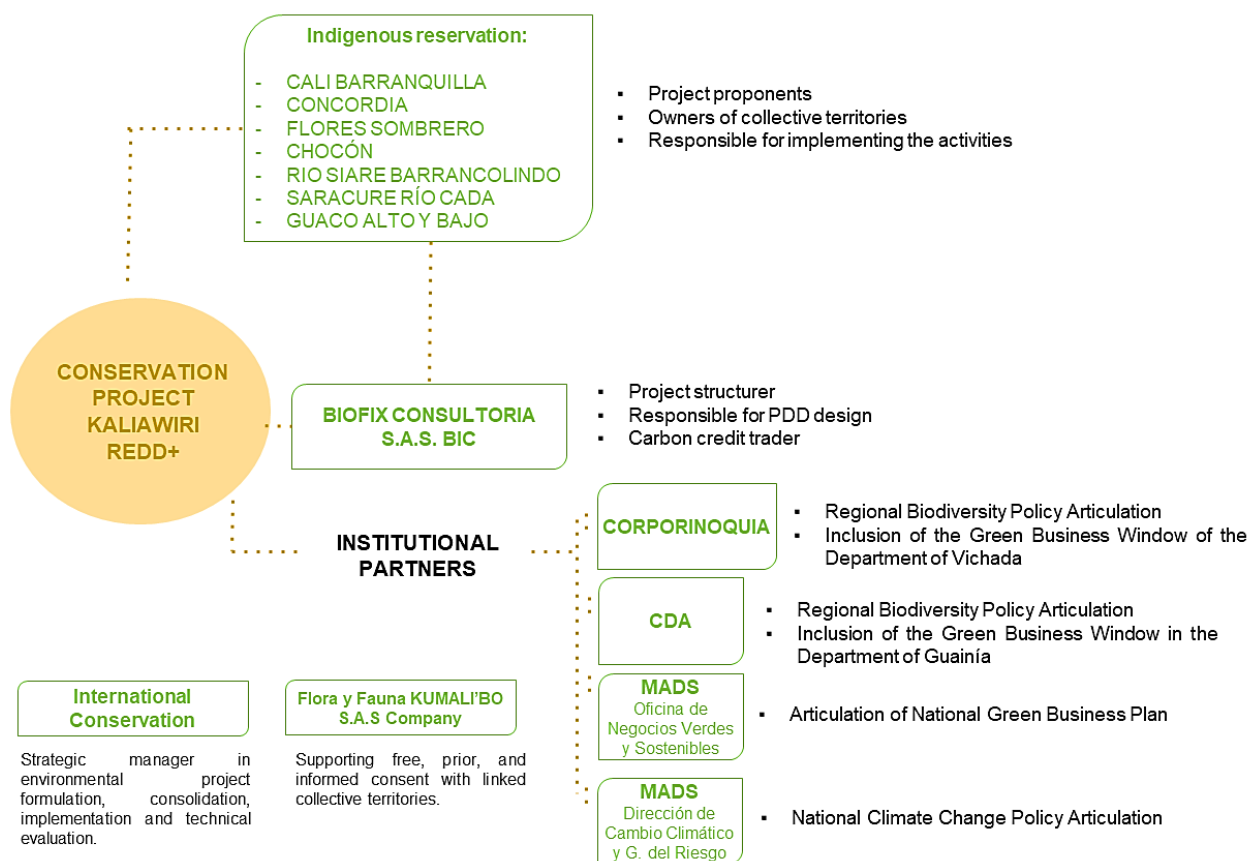
1.3 Project proponents and stakeholders

1.3.1 Indigenous reserves

The project proponents are the indigenous reserves: Cali Barranquilla, Concordia, Flores Sombrero, Caño Chocón, Río Siare Barranco Lindo, Saracure Río Cada and Guaco Alto y Guaco Bajo. These communities have designated BIOFIX CONSULTORIA S.A.S BIC, to manage the project document design and the commercialization of the carbon credits it generates, through a temporary association agreement signed between the parties.

The project has had as institutional allies the Corporación Autónoma Regional de la Orinoquia - CORPORINOQUIA, the Corporación para el Desarrollo Sostenible del Norte y el Oriente Amazónico - CDA (where the REDD+ project is registered in the Ventanilla de Emprendimientos Verdes and the Oficina de Negocios Verdes y Sostenibles of the Ministerio de Ambiente y Desarrollo Sostenible.

In addition, it is worth mentioning the participation of Conservation International, which has been involved as strategic manager in the formulation, consolidation, implementation and technical evaluation of the project in environmental matters related to the protection, recovery and defense of biodiversity in the territory, as well as the Flora y Fauna Company KUMALI'BO S.A.S., which has been involved as strategic manager in the approval and socialization phase of the project with the seven (7) indigenous reserves participating in the project.

Figure 1. Organizational chart of the KALIAWIRI REDD+ Project


Source: KALIAWIRI REDD+ project

The following members of the Indigenous Reservations will act as representatives of the project, taking into account the election carried out in a General Assembly of the Traditional Indigenous Authorities within each reservation, which will be recorded in internal minutes and submitted to the Heads of the Indigenous Affairs Offices of the Municipalities of Cumaribo and Inirida (in the case of RI Concordia), in whose presence the oath will be taken, the Act of Possession will be signed and the Resolution of Recognition will be issued (see Appendices 2.h, 2.i, 2.j, 2.k, 2.l, 2.m, and 2.n).

Table 1. Project proponents

Name of institution	Cali Barranquilla indigenous reserve
Contact	Octavio Gómez
Telephone number	(+57) 3213461394

E-mail address	resguardocalibarranquilla14@gmail.com proyektokaliawirired@gmail.com
-----------------------	--

Name of institution	Concordia indigenous reserve
Contact	Carlos Gaitán Rodríguez
Telephone number	(+57) 3223379343
E-mail address	resguardoconcordia2022@gmail.com proyektokaliawirired@gmail.com

Name of institution	Flores sombrero indigenous reserve
Contact	Jesus Rodríguez
Telephone number	(+57) 3202166564
E-mail address	floresombreros@gmail.com

Name of institution	Caño Chocón indigenous reserve
Contact	Yuberney Gaitán
Telephone number	(+57) 3227296396
E-mail address	resguardochocon1@gmail.com

Name of institution	Río Siare Barranco Lindo indigenous reserve
Contact	Ramón León
Telephone number	(+57) 3125833610
E-mail address	resguardosiare2022@gmail.com proyektokaliawirired@gmail.com

Name of institution	Saracure Río Cada indigenous reserve
Contact	Aldemar Gaitán Mancipe
Telephone number	(+57) 3044751422 (+57) 3227037793
E-mail address	saracureriocada2000@gmail.com

Name of institution	Guaco Alto y Guaco Bajo indigenous reserve
Contact	William Pérez Gaitán
Telephone number	(+57) 3222891645
E-mail address	guacoaltoybajo@gmail.com

Source: KALIAWIRI REDD+ project

1.3.2 BIOFIX CONSULTORIA S.A.S BIC

It is 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

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

Source: KALIAWIRI REDD+ project

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

The environmental authorities with jurisdiction over the area where the municipalities involved in the project are located are the Orinoquia Regional Autonomous Corporation – CORPORINOQUIA and the Corporation for the Sustainable Development of the Northern and Eastern Amazon – CDA. Among their functions, they stand out for directing the planning process in land use to mitigate improper land uses and exploitations, such as deforestation phenomena.

Among the planning instruments that govern the actions of CORPORINOQUIA and CDA, the following stand out:

Table 3. Planning tools highlighted for the project by the environmental authority

Environmental Authority	Planning tools
CORPORINOQUIA	<ul style="list-style-type: none"> • Action Plan 2016 - 2019 "Por una Región Viva". • Regional Environmental Management Plan (PGAR) 2013 - 2025.
CDA	<ul style="list-style-type: none"> • Action Plan 2016 - 2019 "Un buen Ambiente para el Posconflicto". • Regional Environmental Management Plan (PGAR) 2012 – 2023.

Source: KALIAWIRI REDD+ Project

As for the Action Plan " *Por una Región Viva*" of CORPORINOQUIA, within its approach includes in programs and projects, among others: i). The implementation of climate change

adaptation and mitigation measures, ii). Consolidation of protected areas and strategic ecosystems within the jurisdiction of CORPORINOQUIA, iii). Implementation of the Regional Green Business Plan as a generator of strategies (REDD, REDD+, CDM and BANCO₂) of positive impacts and good environmental practices for the conservation of strategic ecosystems; iv). Consolidation of conservation strategies to reduce impacts on biodiversity, implementation of actions of conservation plans for endangered fauna and flora; v). Consolidation of environmental strategies of indigenous communities; vi). Consolidation of environmental education and communication with environmental governance and governability.

For its part, the Action Plan 2016 - 2019 " *Un Buen Ambiente para el Posconflicto*", corresponding to the CDA, within the approaches of the programs and projects of the Action Plan, highlights those that are in line with the objectives of the Kaliawiri REDD+ Conservation Project, which are, among others, the following: i). Promoting the transformation of sectors towards more efficient and inclusive pathways, ii). Conservation and sustainable use of natural capital within the jurisdiction of the CDA, iii). Consolidate a climate change policy framework that seeks to integrate climate change into environmental, territorial and sectoral planning; iv). Strengthening the Development planning with climate change adaptation criteria; v). Protection and conservation of territories and ecosystems; vi). Environmental management in indigenous areas.

With regard to the PGAR 2012 - 2023, the CDA includes within the environmental vision for the regional development of the department the articulation of efforts to generate opportunities for the development of alternatives that allow a sustainable use of forest resources that contribute to improving the income of the population, from food security and access to basic services, through the organization and establishment of businesses associated with green markets, highlighting the opportunity to establish adaptation and mitigation strategies and take advantage of opportunities for trade and financing associated with carbon.

In its regional vision of sustainability, CORPORINOQUIA's PGAR 2013 - 2025 highlights the importance of articulating efforts to take advantage of the potential in the market for green products and biocommerce, promoting the use of environmental services, participating in carbon market mechanisms and mitigation funds, formulating and managing projects to access resources from climate change mitigation funds, giving scope to the guidelines of the national institutional framework.

In addition, in conjunction with this approach, the Regional Green Business Program: Orinoquia Region (Annex 22.) was formulated in collaboration with MADS, CARs, research institutions and related productive sectors, which stands out as an important tool for environmental authorities and productive sectors of the region under sustainable guidelines, for planning and decision-making, in accordance with regional potential and competitive advantages, generating economic and social growth and promoting the conservation of natural resources.

It should be noted that the programs include the category of carbon markets, which is divided into two sectors: the regulated market and the voluntary market, of which for 2009, according to data from the Ministry of Commerce, Industry and Tourism, there were no projects implemented in either the department of Vichada or the department of Guainía related to the category in question. For this reason, there is a need to deepen its planning and development.

In addition, the Secretary of Social Development of the Municipality of Cumaribo and the Secretary of Planning and Economic Development of the Municipality of Inírida represent the environmental issues of the municipalities.

1.4 Project location

The KALIAWIRI REDD+ Project is in the departments of Vichada and Guainía in a transition zone between the Orinoquia and the Amazonia, which, due to its physical and climatological conditions makes this geographic area key for climate regulation, emission sequestration and biodiversity conservation. In the case of the department of Vichada, the municipality where the activities are carried out is Cumaribo, and in the department of Guainía, the municipality is Inírida.

The municipality of Cumaribo is in eastern Colombia and has an area of 65.674 Km². Its municipal capital is located at coordinates 04°26'28" north latitude and 69°48'32" west longitude, at an altitude of 161 meters above sea level. It is bordered to the north by the municipalities of Santa Rosalía and Puerto Carreño along the Tomo River, to the south by the municipalities of Guaviare, to the east by the Republic of Venezuela along the Orinoco River and to the west by the department of Meta (IGAC, 2022).

The municipality of Cumaribo is made up of 16 inspections, which in turn are made up of 60 villages, 27 indigenous reserves and the "El Tuparro" National Park.

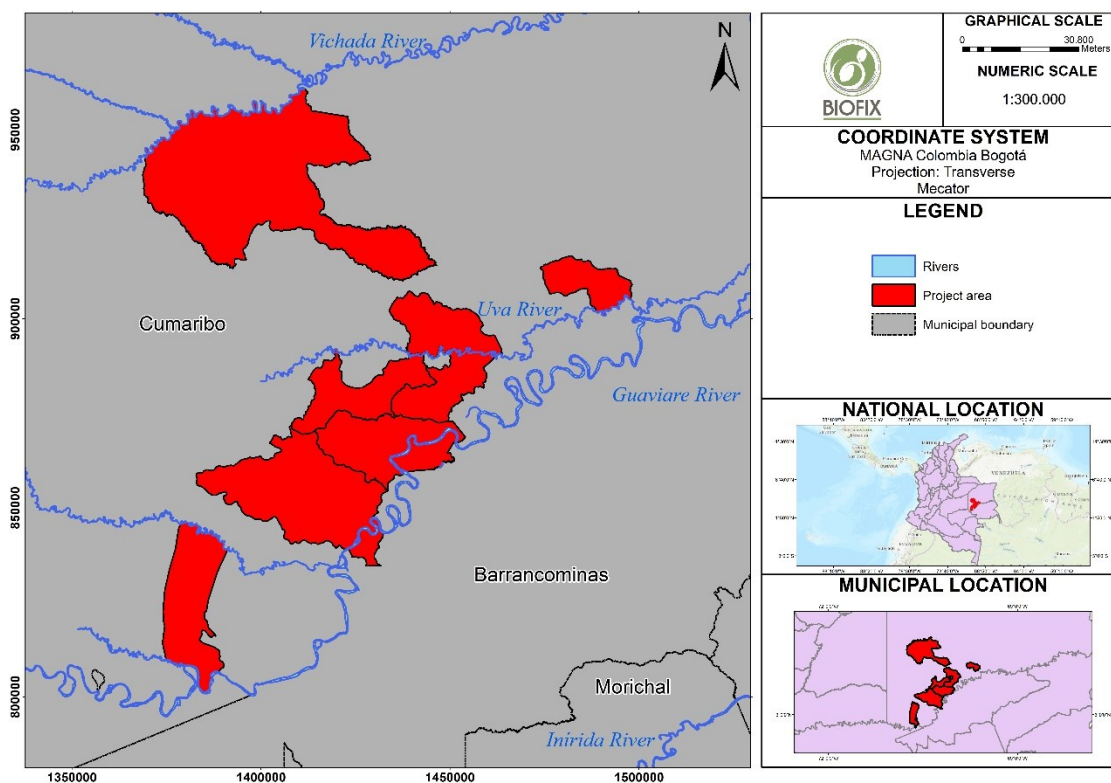
The municipality of Inírida is in eastern Colombia and covers an area of 17,000 Km². It is bordered to the north by the inspections of Arrecifal and Sapuara, to the south by the municipalities of Puerto Colombia and Sejal, to the east by the municipality of Cacahual and the Bolivarian Republic of Venezuela, and to the west by the municipalities of Morichal and Barrancominas. In terms of the political division of Inírida, there is the municipal capital, which has the Corregimiento Barranco Tigre and the hamlet of Cuayare. Inírida is located at an altitude of 100 meters above sea level.

The indigenous reserves that are part of the project cover 486.050 hectares spatially distributed in the territories of the indigenous reserves listed below:

Table 4. Spatial distribution of the indigenous reserves involved in the project

Indigenous Reserves	Extension (ha)	Coordinates	
		Latitude	Length
Concordia	90.730	3°15'44,452800"N	70°22'38,262000"W
Flores Sombrero	20.462	3°45'01,573200"N	69°39'05,896800"W
Cali-Barranquilla	56.675	3°00'00,000000"N	69°58'23,898000"W
Chocón	35.289	3°28'58,155600"N	70°14'04,380000"W
Río Siare	46.983	3°00'33,375600"N	70°38'45,481200"W
Saracure Río Cada	186.148	4°00'16,988400"N	70°27'50,767200"W
Guaco Bajo y Guaco Alto	49.763	3°22'59,642400"N	70°10'47,737200"W
Total	486.050		-

Source: KALIAWIRI REDD+ project

Figure 2. Geographic location of the project area


Source: KALIAWIRI REDD+ project

The following table presents a summary of certain characteristics of the indigenous reserves:

Table 5. Constitutional rules and number of inhabitants of the indigenous reserves

Indigenous Reserves	Constitutional Rule	Ethnic group	Number of inhabitants ¹	Number of families
Concordia	Resolution No. 073 of April 14, 1993	Piapoco	237	47
Flores Sombrero	Resolution No. 0146 of December 14, 1993	Piapoco	45	8
Cali-Barranquilla	Resolution No. 0147 of December 14, 1993	Piapoco	282	58
Chocón	Resolution No. 0148 of December 14, 1993	Piapoco	320	70
Río Siare Barranco Lindo	Resolution No. 044 of July 21, 1983.	Sikuani	413	106

¹ Data collected for the 2023 census.

Saracure Río Cada	Resolution No. 005 of January 28, 1991	Sikuani y Piapoco	3.529	773
Guaco Bajo y Guaco Alto	Resolution No. 003 of January 21, 1987	Piapoco	1.125	217
TOTAL			5.951	1.279

Source: KALIAWIRI REDD+ project

2 Legal Aspects

2.1 Analysis of the KALIAWIRI REDD+ Project in relation to Resolution 1447 of 2018

This project complies with the current regulation of the National Emission Reduction Registry, Resolution 1447 of 2018 in terms of Article 39 "*Use of methodologies for the formulation and implementation of REDD+ projects*", namely: The REDD+ project holder shall use methodologies that meet the following characteristics:

1. Follow the guidelines prescribed by the UNFCCC in relation to REDD+: both the 2016 Technical Standard NTC 6208 "*Mitigation actions in the USCUS sector at the rural level, incorporating social and biodiversity considerations*" as indicated in section "*0. Introduction*" and as described in the ProClima Methodology "*Methodological Document AFOLU Sector. Quantification of GHG emission reductions from REDD+ projects version 2.2.*", under "*5. Normative references*".
2. Have a mechanism to manage the risk of leakage of GHG emission reductions: The risk of leakage of GHG emission reductions is managed. This is done through the cross-cutting action lines for all REDD+ projects developed by Biofix Consultancy, in particular the action line "*Program to monitor and control deforestation and forest degradation*" and the Action Line "*Participatory Reforestation of Degraded Ecosystems*", described in the PDD KALIAWIRI REDD+.
3. Have a mechanism to manage the risk of non-permanence of GHG emission reductions and removals: In the Monitoring Report, an additional analysis of permanence risks is conducted, in addition to the guidelines in "*Uncertainty Management, in the ProClima program, uncertainty management is determined by the precision of the*

maps used to estimate activity values and the application of discounts", such discounts are 15% reserve.

4. Have a mechanism to manage uncertainty in the quantification of baseline and mitigation results: In accordance with section "14.4 *Monitoring the permanence of the REDD project*" of the ProClima methodology version 2.2, the monitoring plan with mitigation measures, monitoring indicators and reporting procedure is presented in section 5.4 of the monitoring report.

In turn, the project meets the additionality criteria of Article 43 of Resolution 1447 of 2018 with respect to:

1. The project is not a product of environmental compensation activities, concessions or timber harvesting requests, or requests for deduction from national forest reserves.
2. The project is not a product of conservation and restoration activities in strategic areas and ecosystems for which payments for environmental services for the reduction and sequestration of greenhouse gases are accessed in accordance with the provisions of Chapter 8 of Title 9 of Part 2 of Book 2 of Decree 1076 of 2015.

With regard to the baseline, Resolution 1447 of 2018 establishes that art. 41. Paragraph 2°. In order to carry out the verification of emission reductions and GHG removals generated "*From January 2020, the REDD+ project holder that has validated its baseline prior to the issuance of this Resolution shall adjust and validate its baseline from the most updated NREF*". The adjustment of the baseline consists of the methodological reconstruction of the most recent NREF applicable to the project over the geographical 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 baseline, "*there is no baseline for the project area in 2018*"; in this sense, for this Monitoring Report, the adjustment has been made with the updated values by the "*proposed baseline of forest emissions from deforestation in Colombia for payment for REDD+ results under the UNFCCC. NREF 2019*" as shown in the removal calculations.

Finally, it is noted that the KALIAWIRI REDD+ project is registered in the Monitoring System for Reporting and Verification of Mitigation Actions at the National Level - RENARE.

The KALIAWIRI REDD+ Project will be developed within the framework of compliance with local and national laws, statutes and regulations related to environmental projects, REDD+ and climate change. BIOFIX CONSULTORÍA SAS, as the structuring company, will evaluate annually the compliance with the legal requirements in terms of:

- (a) Identify legal and environmental requirements.
- (b) Adjust the reference level according to the latest IDEAM report on the reference level for the Department of Vichada in accordance with the provisions of Resolution 1447 of 2018 or the standard that modifies, adds or replaces it.
- (c) Verification of compliance with the new land management plans for the municipality of Cumaribo.
- (d) Identify the socio-environmental safeguards and determine their compliance.

To ensure the compliance of the REDD+ project and the participating parties with the regulations to guarantee compliance during the project's lifetime.

3 Non-Permanence Analysis KALIAWIRI REDD+

As established in Resolution 1447 of 2018, an analysis of non-permanent risks of the project is established, which may be natural or anthropogenic, for which monitoring and reporting procedures for permanent risks are applied. The above is in response to the possible risks that may occur in the project, of which stand out in the territory of the indigenous reserves proponents of the KALIAWIRI REDD+ project:

- Extreme weather events such as earthquakes, floods or landslides.
- Forest fires
- Forced resettlement in rural areas of the departments.
- Illegal markets for fauna and flora, for trade, pets, hunting, etc.
- Governance deficits due to changes in local government structures.
- Conversion of eligible REDD+ project areas into ineligible areas due to uncontrolled forest degradation and deforestation processes.

- Community dissatisfaction with the REDD+ project implementation process in general due to lack of ownership of project activities.

Following the guidelines of section 14.4 Permanence Monitoring of the ProClima methodology document version 2.2, the following monitoring and mitigation plan table for non-permanent risks is established for the KALIAWIRI REDD+ project:

Table 6. Non-permanence risk analysis

Identified risk of permanence	Mitigation Measure	Monitoring indicators	Monitoring and reporting procedure	Evidence of indicator monitoring
The occurrence of extreme weather events such as earthquakes, floods, or landslides	Extreme natural events are not controllable, but areas that can recover after a natural event are prioritized for reforestation of areas degraded by such a degradation driver.	Number of hectares reforested in areas degraded by natural phenomena.	Project implementation reports under the action lines (participatory reforestation) of the KALIAWIRI REDD+ Monitoring Plan.	KALIAWIRI REDD+ Monitoring Plan
Forest fires	<p>If it is of anthropogenic origin, the cause of the burning will be identified, and if it is different from subsistence activities, the quantification of emissions will be carried out for the relevant discount.</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 restored or reforested.</p> <p>Tons of carbon dioxide equivalent from emissions from industrial or semi-industrial activities.</p>	<p>Weekly monitoring by the project developer under the deforestation and degradation monitoring action line.</p> <p>Implementation reports from industrial or semi-industrial projects that generate emissions under the productive activities of the monitoring plan of the KALIAWIRI REDD+ project.</p>	KALIAWIRI REDD+ Monitoring Plan
Forced displacement in rural areas of the departments	Armed conflicts are not mitigated by the REDD+ project, the right to life takes precedence over all other project objectives, if it is safe, a security alert will be issued to the relevant government agencies as long as it does not endanger the community in general.	<p>Number of security alerts generated by illegal armed groups.</p> <p>Number of armed groups identified in the area.</p>	Joint report of the project proponents, accompanied by the project developer, to the relevant state authorities.	KALIAWIRI REDD+ Monitoring Plan

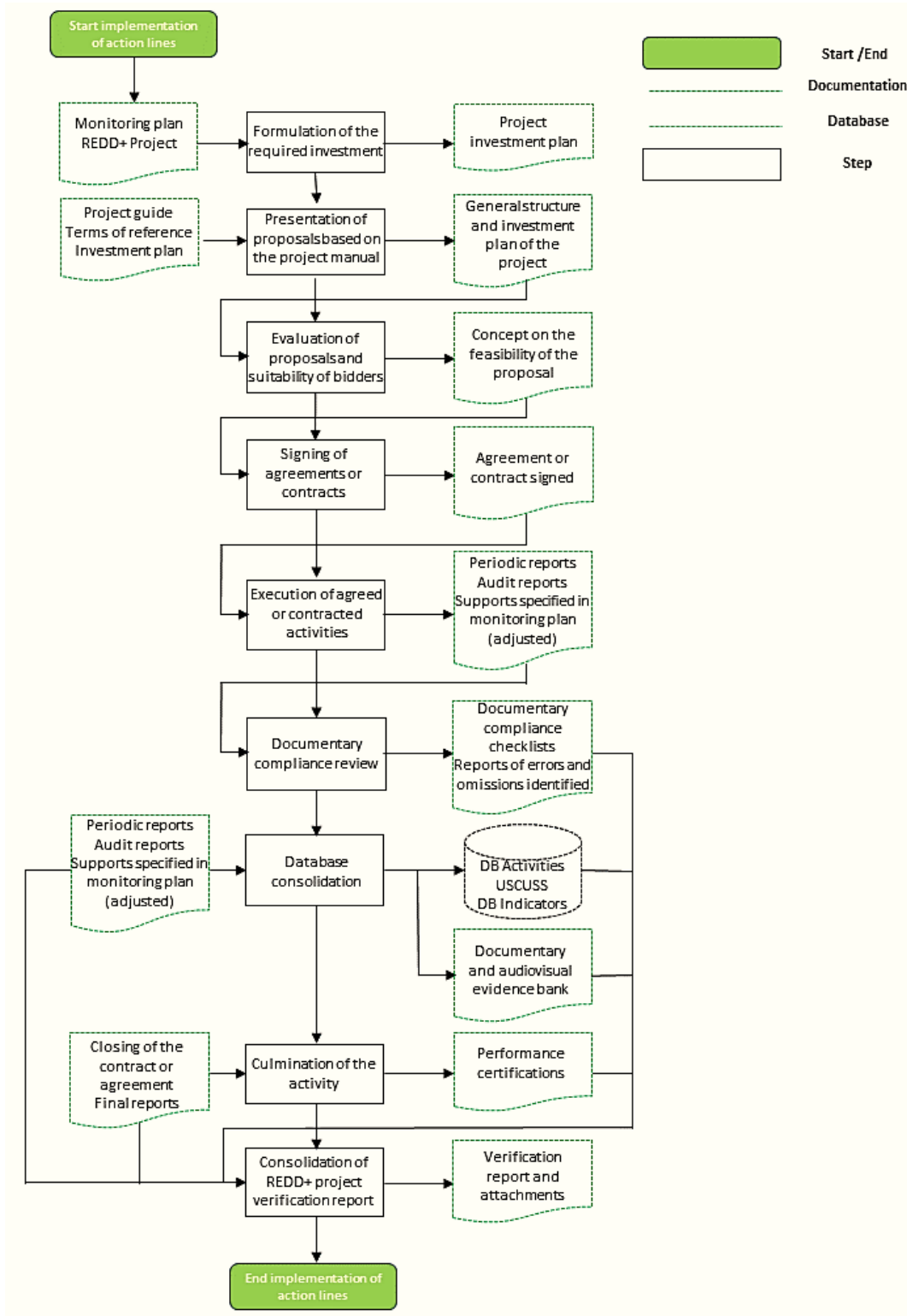
<p>Illegal market of fauna and flora for trade, pets, hunting, among others</p>	<p>Include the population that wishes to harvest timber for commercialization in sustainable forest harvesting schemes within the framework of Colombian regulations.</p> <p>Include the population that wishes to benefit from genetic resources or fauna in sustainable management plans within the framework of Colombian regulations.</p>	<p>Number of hectares in sustainable forest management for inclusion in planned deforestation activities.</p> <p>Number of management plans prepared for fauna, flora or genetic resources under Colombian regulations.</p>	<p>Reports on the implementation of productive projects and/or green businesses within the action lines of the monitoring plan of the KALIAWIRI REDD+ project.</p>	<p>KALIAWIRI REDD+ Monitoring Plan</p>
<p>Governance deficit due to changes in local government structures</p>	<p>Participation in the annual information and training meetings planned by the indigenous reserves.</p>	<p>Number of meetings and/or trainings held by project proponents and project developer.</p>	<p>Reports on the implementation of training projects within the framework of the action line for strengthening governance and institutions.</p> <p>Minutes of the participation of the indigenous reserves proposing the project, accompanied by the developer, in information, training, accountability and management meetings.</p>	<p>KALIAWIRI REDD+ Monitoring Plan</p>
<p>Conversion of eligible REDD+ project areas into ineligible areas due to uncontrolled forest degradation and deforestation</p>	<p>Identification, demarcation and marking of eligible areas of the KALIAWIRI REDD+ project in areas at risk of deforestation and degradation due to production processes or other reasons.</p> <p>Sensitization of the actors that put the eligible areas of the KALIAWIRI REDD+ project at potential risk.</p>	<p>Number of hectares identified and demarcated.</p> <p>Number of signs installed.</p> <p>Number of training sessions for stakeholders.</p>	<p>Reports on the implementation of signaling and training projects under the Governance and Institutional Strengthening Action Line.</p>	<p>KALIAWIRI REDD+ Monitoring Plan</p>
<p>General community dissatisfaction with the</p>	<p>Participation in the annual information and training meetings</p>	<p>Number of trainings conducted for stakeholders.</p>	<p>Reports on the implementation of training projects</p>	<p>KALIAWIRI REDD+ Monitoring Plan</p>

REDD+ project implementation process due to lack of ownership of project activities	planned by the indigenous reserves.	Number of meetings and/or trainings conducted by project proponents and project developer.	within the framework of the action line for strengthening governance and institutions. Minutes of the participation of the indigenous reserves proposing the project, accompanied by the developer, in information, training, accountability and management meetings.	
---	-------------------------------------	--	--	--

Source: KALIAWIRI REDD+ Project

In conclusion, there are risks of natural origin that cannot be controlled or foreseen, while those of anthropogenic origin must be mitigated and controlled through local planning and the internal resolution of socio-environmental conflicts, always with the technical support of Biofix Consulting as project developer.

The following internal procedure has been adopted to ensure the monitoring of the project activities and their follow-up:

Figure 3. Procedures for receiving and evaluating REDD+ activity projects


Source: KALIAWIRI REDD+ Project

4 Safeguards compliance analysis

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

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 affect collective territo-	Documentary review of the administrative acts of existence and legal rep-	BIOFIX BIC Legal Department.	Annually

ries (additions or subtractions of territory) and/or changes in legal representation within the territory.	resentation 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.

4.1 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 KALIAWIRI 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.

Cancun Safeguards	National Interpretation of Cancun Safeguards	Monitoring Action	Person in charge
-------------------	--	-------------------	------------------

<p>The complementarity or compatibility of the measures with the objectives of national forest programs and international conventions and agreements on the subject.</p>	<p>Correspondence with the international agreements signed by Colombia regarding forests, biodiversity, and climate change.</p>	<p>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.</p>	<p>BIOFIX BIC Technical and Legal Departments.</p>
<p>The transparency and effectiveness of national forest governance structures, considering national legislation and sovereignty.</p>	<p>Transparency and access to information.</p>	<p>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.</p>	<p>Legal Directorate, Financial Directorate, Social Project Coordination, Communications Department, and Technical Department BIOFIX BIC.</p>
	<p>Accountability.</p>	<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>	
	<p>Recognition of Forest Governance Structures.</p>	<p>The project actions must be designed in accordance with existing forest governance structures and with the involvement of relevant</p>	

		<p>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.</p>	
	<p>Strengthening of capacities.</p>	<p>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.</p>	
<p>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 Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples.</p>	<p>Free, Prior, and Informed Consent (FPIC)</p>	<p>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.</p>	<p>BIOFIX BIC Technical and Legal Departments.</p>
	<p>Traditional Knowledge</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>Territorial Rights</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>The analysis of reversal risks is supplemented in section 5.3 of this document.</p>	<p>BIOFIX BIC Technical and Legal Departments.</p>
	<p>Sectoral Planning</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>The leakage analysis is further complemented in sections 6 and 7 of this document.</p>	<p>BIOFIX BIC Technical Department.</p>

5 Analysis of territorial actors and drivers of deforestation and forest degradation

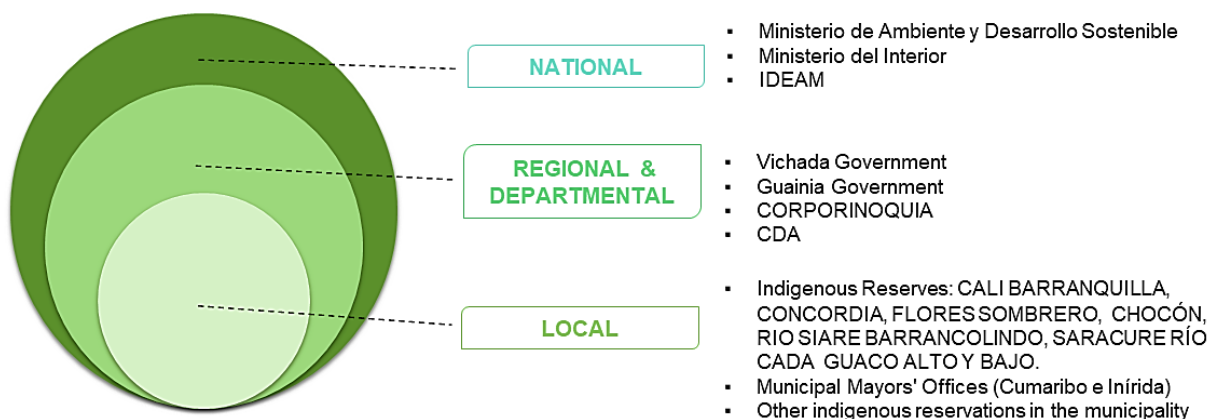
Based on field experience and secondary information collected on land use changes in recent years, the following identifies the actors present in the area, the drivers of deforestation, and the direct and indirect causes of deforestation.

5.1 Stakeholder analysis

5.1.1 Identification of territorial stakeholders

The stakeholders in the project area are grouped as follows: i) public, private, educational or external non-profit institutions present in the territory, ii) associations or organizations formed in the community. Of these, those that are key in terms of their presence, participation, authority or control over the territory have been identified in Figure 4 at the local, departmental, regional and national levels:

Figure 4. Stakeholder analysis in the region



Source: KALIAWIRI REDD+ Project

5.1.2 Identification of actors and drivers of deforestation and degradation

Some members of the indigenous communities, together with people from other regions (settlers), mostly from the Central Andean region of the country and foreigners, are the main

agents of deforestation in the project's reference area, mainly due to the conversion of natural cover for the illegal establishment of timber for self-sufficiency or commercialization, and the conversion of forests into land for subsistence crops.

The analysis of deforestation and degradation took into consideration the influence of spatial and non-spatial variables, such as:

Spatial variables:

- The type of forest in the area, which has a high commercial value.
- Large distances between indigenous reserves, forested areas and municipal and departmental population centers, which makes control by government and indigenous authorities difficult.
- Poor condition of access roads.

Non-spatial variables:

- External demand for illegal wood products.
- Internal factors related to the lack of appropriate technologies, consolidated production chains, specific public policies, microcredit opportunities, and knowledge of indigenous reserves for sustainable agricultural production.
- Increased pressure on resources due to population growth in communities.
- Difficulties in diversifying and increasing economic income for community livelihoods.

All of these factors create incentives for illegal activities that offer higher, faster, and easier returns to the community. This is particularly true for families in the project area who do not have environmentally friendly economic alternatives.

Drivers of deforestation and forest degradation in the study area include:

5.1.3 Conversion of forest land into cattle pasture.

According to the Mayor's Office of Cumaribo in the PDM for 2016-2019, dual-purpose livestock activity is becoming one of the best alternatives for the integral development of the municipality, projects have been implemented aimed at some indigenous communities, but

their sustainable systems are impoverished by the lack of promotion of the joint creation of comprehensive livestock programs and projects, ranging from awareness, socialization, planning, implementation, evaluation and monitoring to the adoption of sustainable systems to avoid the monotonous supply of drifting livestock. For cattle ranchers and non-indigenous landowners, livestock is the basis of all their productive activities.

5.1.4 Conversion of Forest Land to Agricultural Land for Agriculture

Based on the information provided in section 2.1. 3 on the type of agriculture practiced by the indigenous communities, it should be pointed out that the method of cultivation by conuco or chagra consists in the clearing of approximately one and a half hectares for each product, preceded by burning, sowing and harvesting in the gallery forests or bushes, which have a short and precarious lifespan and cause serious damage to the ecosystems of the area (Alcaldía Municipal de Cumaribo, 2008), since sometimes the burns get out of control and end up destroying a large number of additional hectares.

This driving force is also due to the limited technical capacity to implement environmentally friendly production alternatives and the precarious soil fertility conditions, which force producers to expand the cultivated areas in order to maintain basic production for self-sufficiency.

Even considering that only 8.3% of the land in Orinoquia is suitable for commercial agriculture, and that this figure rises to 26% after adaptation processes in terms of drainage, fertilization and reduction of acidity.

5.1.5 Unsustainable collection of fuelwood for fires

Firewood is considered an ecosystem service for the indigenous people living in the project's reserves, appreciated for the flavor it gives to food during cooking, as well as for heating, and because it is a key element in social relations, since the kitchen is the most welcoming place to receive visitors.

Its consumption is determined by technical, economic, ecological, social and cultural variables, but it is recognized that it generates health problems, mainly due to the use of Formica waste with MDF, together with species of the region, which raises the need to further study the effects of its combustion.

For the country, the most complete reports on the use of fuelwood are the National Energy Study "ENE" and the Analysis of Energy in the Rural Sector, carried out in 1982. The ENE shows that the average kilograms of firewood for daily cooking varies from 19.35 kg/day for open stoves, 25.87 kg/day for stoves without chimneys, and 29.48 kg/day for stoves with chimneys. The calculated per capita consumption was 100 kg/month and in the most inefficient case 150 kg/month (FAO, 2008).

According to data from the National Statistics Department - DANE, in the 2013 Quality of Life Survey (ECV), there are 1.6 million families in Colombia that use firewood for cooking daily, of which 1.4 million are rural families and the rest urban families.

Taking into account the above information, the daily consumption of firewood in the study area, with 3,704 inhabitants, is 370,400 kg, which corresponds to 135,196,000 kg per year.

5.1.6 Unsustainable harvesting of NTFPs

It is recognized that non-timber forest products (NTFPs) are important to the well-being of many rural communities and contribute to the conservation of tropical forests.

Although forest products have been harvested for thousands of years, it is only in the last forty years that NTFPs have become an object of global interest, partly because of concerns that arose in the late 1980s about environmental problems, deforestation and community welfare (FAO, 1991).

However, the current perspectives of NTFP harvesting lead to their overuse or overexploitation, affecting the indigenous population with strong ecological and economic consequences, due to the lack of criteria for sustainable harvesting and control of the actors involved in their commercialization.

Non-timber forest products (NTFPs) found in the study area include: seje palm and moriche palm, from which oils and seeds are extracted.

As for the Seje palm (*Oenocarpus bataua* var. *bataua*), the indigenous people have traditionally collected the fruit and ripened it in warm water to prepare refreshing drinks and, in some cases, to extract the oil, which is used in traditional medicine to relieve respiratory ailments such as coughs, bronchitis, asthma, tuberculosis, and as a laxative; or in the production of cosmetics.

On the other hand, the pulp of the Moriche palm (*Mauritia flexuosa*) is used for the extraction of vitamins, lipids, proteins, minerals, among others. It is composed of 12-24% oil, 2.3-3.7% protein, a high phosphorus content (27 mg/100 g pulp) and the highest rate of provitamin A (4.6 mg/100 g pulp) found in nature.

In fruits collected in the Colombian highlands, protein and fat percentages of 5.4 and 4.28, respectively, were found. Thus, this project is framed in the context of strengthening the production and value chains of the products in order to guarantee their sustainable use.

5.1.7 Uncontrolled grazing

In recent years, cattle ranching in the Orinoco region has focused on the search for production alternatives, but the lack of efficient technologies and the introduction of foreign models have led to an increase in extensive exploitation and forest degradation.

In addition, deforestation and degradation due to land use change have been shown to be a significant source of greenhouse gases (CIAT & CORMACARENA, 2018) and cause drastic changes in the physical and hydrogeological properties of the soil due to the phenomena of compaction caused by cattle grazing, burning due to the introduction of foreign pastures, and the influence of water infiltration.

To this end, PRICCO60 proposes two main interventions to mitigate and adapt to climate change in the department:

- (a) Implementation of rehabilitation activities for introduced and degraded pastures.

For sites with introduced pastures that have been poorly managed in the past and have suffered a degradation process, it is proposed to rehabilitate the pastures using tolerant and drought and waterlogging resistant grasses, since there is currently germplasm available for the region with materials adapted to extreme conditions. However, the option of implementing these technologies is not yet within reach of the indigenous reserves, due to the isolation and size of the regions where they have cattle. Therefore, this measure could be effective because it could be financed through the sale of carbon credits, making the silvopastoral project more technical and sustainable.

- (b) Promoting rational grazing through the division of pastures and forage banks.

The aim is to reduce methane emissions generated as a by-product of livestock activity through the implementation of herd management practices in terms of animal nutrition, the division of pastures to rationalize daily fodder consumption and the use of fodder banks of high nutritional quality.

This measure can increase production parameters, avoid soil degradation due to trampling, prevent the reduction of vegetation cover generated during the dry season, improve pasture response by allowing better capitalization of periods of abundance and scarcity, which is a way to reduce sensitivity to water seasonality, thus reducing the vulnerability of the sector.

5.1.8 Extraction of wood for illegal commercial sale

According to Corporinoquia, pieces of wood from species such as purple flower and cedar mure have been confiscated to be sold illegally in the rural area of the municipality, without the commercial logging permits required by the regional environmental authority.

There are also some small areas in the area with indirect forest degradation processes due to selective logging that causes forest degradation and a decrease in the aerial biomass content. These areas are generally found along the edges of waterways used as communication routes by local communities.

5.1.9 Natural vegetation cover fires

The high biodiversity, the sustainability of water and soil resources, as well as some human activities in the Colombian Orinoquia are notoriously affected by vegetation cover fires. This phenomenon occurs recurrently during the annual dry periods of December to March and July to August, and both the area and frequency of damage tend to increase significantly due to El Niño phenomena.

As humid tropical ecosystems lose part of their surface and internal moisture content, their vulnerability and risk to the burning of the plant biomass that makes them up increases.

The statistics on fires in Colombia allow the analysis of their behavior in different scenarios, that is, by regions, departments or municipalities, with Niño or under normal climatic conditions, by vegetation cover affected, by Regional Autonomous Corporation, by year or by month, and in this way they can be used to prioritize areas, guide actions or support the need for more detailed studies.

Table 7. Relationship between action lines and monitoring plan and changes in the behavior of deforestation and degradation agents

Action line	Associated motors	Justification	Monitoring method
Institutional and governance strengthening	<ul style="list-style-type: none"> • Unsustainable harvesting of non-timber forest products. • Logging for illegal commercial sale. • Natural vegetation cover fires. 	<p>Through the activities planned to strengthen family production systems, it is proposed to incorporate the strategic line of intergenerational knowledge sharing.</p> <p>Based on the construction of life plans and land titling, it is expected to have clear boundaries and guidelines for the REDD+ project areas and to improve the relationship with private stakeholders.</p> <p>Local planning instruments such as life plans, management plans and internal statutes will establish mechanisms and protocols for dealing with emergencies due to population migration that will mitigate the impacts that may occur.</p>	<p>Annual management reports on the line of action in comparison with the indicators proposed and achieved.</p> <p>Similarly, compliance with local planning instruments is reviewed in the context of compliance with socio-environmental safeguards.</p>
Participatory reforestation of degraded ecosystems	<ul style="list-style-type: none"> • Forest conversion (slash-and-burn) for subsistence crops in Conucos. • Unsustainable collection of fuelwood for cooking and heating. • Unsustainable harvesting of non-timber forest products. • Logging for illegal commercial sale. • Natural vegetation cover fires. 	<p>Reforestation includes restoration, recovery or participatory rehabilitation activities are established in priority areas determined in the monitoring program, which is carried out weekly and semi-annual reports are submitted.</p> <p>In such a way that the general reforestation activities can be carried out in areas abandoned by agriculture or cattle ranching. Enrichment activities in areas of natural forest that have been selectively harvested, or in areas that have been degraded or deforested by natural activities such as fires or extreme natural phenomena.</p>	<p>Annual management reports on the line of action in relation to the indicators set and those achieved.</p> <p>Field verification of the effectiveness of the actions implemented.</p>
Program for monitoring and control of deforestation and forest degradation	<ul style="list-style-type: none"> • Forest conversion (slash-and-burn) for subsistence crops in Conucos. • Unsustainable collection of fuelwood for cooking and heating. 	<p>The deforestation and degradation monitoring and control program includes a technical component, which is carried out through the analysis of sentinel, radar, Landsat, or other satellite imagery that helps fill information gaps due to cloud cover.</p>	<p>Monthly monitoring reports on deforestation and degradation and review of the number of early warnings generated and mitigation actions taken.</p>

	<ul style="list-style-type: none"> • Unsustainable harvesting of non-timber forest products. • Logging for illegal commercial sale. • Natural vegetation cover fires. 	<p>In the event of medium or large scale disturbances, the indigenous reserve is informed through an early warning mechanism to assess the possibility of intervention or direct communication with the relevant environmental authorities.</p> <p>In this way, the technical monitoring is complemented by the social monitoring of the foresters by the indigenous guard.</p>	
<p>Strengthening of conucos</p> <p>Strengthening of the agricultural-productive sector: cassava, hybrid cocoa, chili, plantain, pineapple, sugar cane, cereals, medicinal plants</p>	<ul style="list-style-type: none"> • Unsustainable collection of fuelwood for cooking and heating • Unsustainable harvesting of non-timber forest products. • Logging for illegal commercial sale. • Natural vegetation cover fires 	<p>The instruments of territorial planning are used to define the areas with potential for agricultural production for commercial purposes, although this is not the territorial dynamic.</p> <p>In addition to having a census of family agricultural units (conucos and chagras) in order to prioritize and define the input needs to be strengthened in each case.</p> <p>From the point of view of cash crops, the possibilities of association would minimize deforestation or degradation in mosaics that potentialize ecosystem fragmentation, while in associative areas the edge effect is lower and fragmentation is less likely.</p> <p>Associative associations of saw millers and NTFP harvesters are prioritized to make cooperative activities more effective in planning sustainable forest management.</p>	<p>Implementation reports of the agricultural enterprises supported by the REDD+ project.</p> <p>Verify the number of associative enterprises created or strengthened as part of the REDD+ project.</p>
<p>Silvopastoral and poultry use</p>	<ul style="list-style-type: none"> • Forest conversion (slash and burn) for cattle grazing and introduction of livestock. • Uncontrolled grazing. • Logging for illegal commercial sale. • Natural vegetation cover fires. 	<p>Changing production mechanisms from extensive to intensive cattle ranching, with silvopastoral or agrosilvopastoral systems to optimize the number of cattle per hectare.</p> <p>By organizing forest product harvesters into harvesting cooperatives, they can support the establishment of sustainable forest management plans and all the requirements of the Colombian legal</p>	<p>Verify the number of acres released from extensive cattle ranching and made available for rehabilitation.</p> <p>Verify the number of cattle per hectare in the project area.</p> <p>Verify the number of sawmills included in</p>

		<p>framework to enter into legal forest harvesting, at which point the REDD+ project would include deforestation and planned degradation as an activity.</p> <p>Maximizing the use of forest residues means that no more individuals need to be harvested to meet fuelwood needs. Similarly, the establishment of wood energy orchards would take pressure off the natural forest.</p>	<p>conservation or sustainable harvesting cooperatives, and the number of hectares included in sustainable harvesting processes under the Colombian Legal Timber Pact.</p>
<p>Sustainable forest use: rubber, moriche and seje</p>	<ul style="list-style-type: none"> • Forest conversion (slash-and-burn) for subsistence crops in Conucos. • Unsustainable collection of fuelwood for cooking and heating • Unsustainable harvesting of non-timber forest products. • Logging for illegal commercial sale. 	<p>From the point of view of cash crops, the possibilities of association would minimize deforestation or degradation in mosaics that potentialize ecosystem fragmentation, while in associative areas the edge effect is lower and fragmentation is less likely.</p> <p>Associative associations of saw millers and NTFP harvesters are prioritized to make cooperative activities more effective in planning sustainable forest management.</p>	<p>Verify the number of associative enterprises created or strengthened as part of the REDD+ project.</p>

Source: KALIAWIRI REDD+ Project

6 Estimation of carbon stock change and greenhouse gas emissions

The carbon pools included in these studies are

- a) **Aboveground biomass:** The values used in this analysis correspond to the average aboveground biomass of the tropical rainforest, whose value is 231.7 t ha⁻¹, which corresponds to the most representative forest of the region, composed of different species and trees of great height and in good condition.
- b) **Underground biomass:** The value of carbon in the belowground biomass of the current project area was defined according to Table 8 of NTC 6208, which defines that the ratio for very humid tropical forests is 0.24, therefore the carbon present in the belowground biomass in the project area is 26.1 t ha⁻¹.

- c) **Soil organic carbon content:** Soil organic carbon stocks within the current project area were defined according to NTC 6208, which states in Table 9 that the soil type (ABA) contains 47 t C ha⁻¹, for tropical, very humid regions (as indicated in Section 2.2.4 Life Zone of this document).

Low activity clay mineral soils (ABA) are highly weathered soils dominated by 1:1 clay minerals and amorphous iron and aluminum oxides (the BMR classification includes Acrisols, Lixisols, Nitisols, Ferralsols, and Durisols; the USDA classification also includes Ultisols, Oxisols, and Acid Alfisols).

6.1 Calculation of removals

The combined deforestation and degradation projection was calculated using a linear estimate of forest loss from multiplying the combined deforestation and degradation rate by the current project area in 2015 (Table 26).

Table 8. Deforestation projection for the period 2015 - 2044 considering historical deforestation for the period 2000 - 2012.

t	Year	Area deforested and degraded annually	Remaining area
1	2015	2441,5	358.065,0
2	2016	2424,8	355.623,5
3	2017	2408,3	353.198,7
4	2018	2391,9	350.790,4
5	2019	2375,6	348.398,5
6	2020	2359,4	346.023,0
7	2021	2343,3	343.663,6
8	2022	2327,3	341.320,3
9	2023	2311,4	338.993,0
10	2024	2295,7	336.681,6
11	2025	2280,0	334.385,9
12	2026	2264,5	332.105,9
13	2027	2249,0	329.841,4
14	2028	2233,7	327.592,4
15	2029	2218,5	325.358,7
16	2030	2203,3	323.140,2
17	2031	2188,3	320.936,9
18	2032	2173,4	318.748,6
19	2033	2158,6	316.575,2
20	2034	2143,9	314.416,6
21	2035	2129,2	312.272,7
22	2036	2114,7	310.143,5
23	2037	2100,3	308.028,8
24	2038	2086,0	305.928,5
25	2039	2071,8	303.842,5
26	2040	2057,6	301.770,7

27	2041	2043,6	299.713,1
28	2042	2029,7	297.669,5
29	2043	2015,8	295.639,8
30	2044	2002,1	293.624,0

Source: KALIAWIRI REDD+ Project

6.1.1 Carbon in land use classes (post deforestation)

The estimation of carbon in land use classes of deforested areas was estimated using the results of the land use change matrix, the carbon values in aboveground biomass of non-forest classes given in Table 6 of NTC 6208, and the ratio "aboveground biomass / below-ground biomass" according to IPCC (2006) and IPCC (2003).

As with aboveground forest carbon, a weighted average of aboveground and belowground carbon (taking into account soils) was calculated in relation to the percentage of deforested area in each non-forest category (Table 27).

Table 9. Weighted average of carbon

Final coverage	Area of final forest cover at post deforestation categories (%)	t C aerial/ha	t C by percentage	T C subway	T C soils
Secondary vegetation	19,1%	18,424	3,5168	1,4067	8,9715
Pastures	37,8%	5,969	2,2557	3,6091	17,7612
Heterogeneous agricultural areas	32,4%	5,405	1,7510	0,3502	15,2261
Settlements	0,1%	0	0,00	0	0,0275
Other lands	6,3%	0	0,00	0	2,9559
Wetlands	4,4%	0	0,00	0	2,0578

Source: KALIAWIRI REDD+ Project

7 MONITORING REPORT

The following is presented in greater detail the activities carried out, participating entities, indicators and relevant support of the projects advanced from January 01, 2015 to December 31, 2019, aimed at minimizing the impact generated by agents and drivers in terms of deforestation in the territories proponents:

Table 10. Monitoring report, Impact and Activity Stakeholders of 2015 to 2019 KALIAWIRI REDD+

Activity	Target	Subactivities	Indicators	Execution period and supports	Related parties
<p>Partnership Agreement No. 979 of November 8, 2013</p>	<p>Combining technical, human and economic efforts to guarantee the diagnosis and formulation of life plans for the indigenous peoples of the municipalities of Puerto Carreño, Primavera and Cumaribo, in the department of Vichada.</p>	<p>Approach, sensitization and consultation phase</p> <ul style="list-style-type: none"> - Identification of the indigenous population, its distribution and settlements. - Establish a channel of communication with the traditional authorities. - Agreement on a work agenda. 	<p>Number of community leaders trained ⁷⁵ : 93 leaders</p> <ul style="list-style-type: none"> - IR Saracure: 65 - IR Flores Sombrero: 5 - IR Cali Barranquilla: 5 - IR Chocón: 5 - IR Río Siare: 6 - IR Concordia: 7 <p>(Appendix 5.b, pp. 16)</p>	<p>Starting year:</p> <p>Opening call: October 2013⁷⁶</p> <p>Signing of the agreement: November 2013</p>	<ul style="list-style-type: none"> ● Government of Vichada ● Corporation for the improvement and assurance of education - COREDUKAR ● Departmental Secretariat of Planning and Land Development of Vichada (supervisor of the agreement)
		<p>Socialization Phase ⁷⁴</p>			

⁷⁴ The socialization phase and community self-diagnosis were carried out in the same space, from February 18 to 23, 2014 in the Saracure Río Cada IR and from May 18 to 21 of the same year for the Cali Barranquilla, Chocón, Flores Sombrero, Río Siare, Guaco and Concordia IRs, which already had a Development Plan that was important for the construction of the Life Plan.

⁷⁵ Consistent with indicator (same name) included in the cross-cutting action line "Institutional and governance strengthening" in Section 1.10 Monitoring Plan for community training processes.

⁷⁶ The activities carried out in the region have been developed since 2013; however, due to the conditioning given by the regulations regarding the validity of the period to be verified for retroactivity, the project was proposed since 2015.

		<ul style="list-style-type: none"> - Dissemination of the purpose of the project and clarification of doubts. - Historical and political contextualization of indigenous peoples. - Approach and presentation of the historical, legal and conceptual framework of the life plans. - Legal advice on issues of common interest. - Establishment of commitments and tasks among the participating actors. 	<p>Number of members per indigenous people who have approved life plans⁷⁷ :</p> <ul style="list-style-type: none"> - Sikuanis: 40 - Piapocos: 20 - Piaroas: 15 - Kurripacos: 15 - Kubeos: 15 - Puinabes: 15 - Pirata Puyas: 10 <p><i>(Appendix 5.b, pp. 17)</i></p>	<p>Implementation: November 26, 2013 to December 31, 2015.</p> <p><u>Supports:</u></p> <p>Annex 5.a.</p> <p>Certificate issued by ASOCAUNIGUVI⁷⁹ which indicates the participation of 6 of the IRs that are part of the KALIAWIRI Project in the process of planning, programming, design and implementation of life plans for the indigenous communities that make up these IRs, in order to facilitate and make viable their ethnic, cultural, agroforestry and socioeconomic development.</p>	<ul style="list-style-type: none"> ● Departmental Secretariat of Indigenous Affairs (executor of previous studies) ● ASOCAUNIGUVI
		<p style="text-align: center;">Community self-diagnosis phase</p> <ul style="list-style-type: none"> - Working groups by life plan dimensions: Territory; Environment and Nature; Self-government, rights and administration; Social and cultural identity; Food production, food sovereignty and own economy. - Construction of the SWOT matrix for the identification of needs. 	<p>Amount invested in implementation and source of funds⁷⁸ :</p> <ul style="list-style-type: none"> - 1,176,463,000 of which 90% (\$1,049,958,000) came from the Governor's Office budget and 10% (\$126,505,000) from the COREDUKAR Corporation. 		

⁷⁷ This indicator will no longer be implemented for subsequent verification periods because it is specific to the activity carried out in Agreement 979, which is now closed.

⁷⁸ Consistent with indicator (same designation) included in all action lines in Section 1.10 Monitoring Plan to measure the resources invested and their origin.

⁷⁹ Association of Cabildos and Traditional Authorities Union of Indigenous People of Guainía and Vichada recognized as a public entity of special character by the General Directorate of Indigenous Affairs of the Ministry of the Interior, through Resolution 0121 of August 1, 2017. To which belong the Resguardos: Guaco Alto - Guaco Bajo, Cali Barranquilla, Chocón, Concordia, Rio Siare Barrancolindo and Flores Sombrero.

		<ul style="list-style-type: none"> - Presentation and plenary discussion of conclusions. - Execution of talks and workshops on social mapping. - Execution of population censuses of the communities attached to the Indigenous IRs with personalized interviews. 	<ul style="list-style-type: none"> - Of the total resources, \$562,700,000⁸⁰ were allocated to the IRs linked to KALIAWIRI as follows: (\$464,875,000) from the Governor's Office and (\$97,825,000) from the Corporation. (Appendix 5.b, pp. 33 - 36) 	<p><u>Annex 5.b.</u></p> <p>Compiles the certificate issued by the Secretariat of Planning and Territorial Development indicating the total investment amount of the project and the registration code in the project bank (p. 1). As well as, the proposal submitted by COREDUKAR Corporation (p. 2), Resolution 563 of November 08, 2013 issued by the Governor's Office to initiate the project (p. 19) and copy of the partnership agreement (p. 22).</p> <p><u>Annex 5.c.</u></p> <p>Final technical report on the execution of the partnership agreement presented by COREDUKAR,</p>	
<p style="text-align: center;">Formulation Phase</p> <ul style="list-style-type: none"> - Review, organization and systematization of information gathered by project formulation professionals and community experts. - Structuring of the mission, prospective vision, lines of action, strategies, programs and projects of each Life Plan. 					
<p style="text-align: center;">Approval Phase</p> <ul style="list-style-type: none"> - Socialization of the results obtained through the event "<i>First intercultural meeting of the departmental life plan of</i> 					

⁸⁰ Extracted from the documented budget for Cumaribo and the specific reserves.

		<p><i>the indigenous peoples of the Department of Vichada"</i> ⁸¹</p> <ul style="list-style-type: none"> - Formalization of the departmental round table on policies and actions of the integral and inter-cultural life plan. - Review, proposal of adjustments and final recommendations. 		<p>detailing the methodological route, activities carried out and products obtained, supported with dates (pages 13 - 14, 22 - 23), conclusions, documentation and supports delivered (pages 30 - 32).</p>	
		<p>Adjustment phase and final publication</p> <ul style="list-style-type: none"> - Inclusion of observations and recommendations made during the socialization. - Final publication - Delivery of copies to IRs and public institutions. 		<p>The annexes begin on page 34 and include the documents for the presentation of the agreement with the IRs, the convocations, the thematic guides (page 40) and the working group reports, attendance lists (page 65) and photographs (page 80).</p>	

⁸¹ Held from December 10 to 12, 2014 in the municipality of Cumaribo, with the participation of the Secretary of Indigenous Affairs and Social Development of the Government, the Ombudsman's Office, the Departmental Health Secretariat, the Regional Indigenous Council of Vichada - ASOCRIVI, CORPORAQUIA, ICBF.

<p>Community Life and Development Plan "Kaliawiri"</p> <p>ASOCAUNIGUVI 2012 - 2015</p>	<p>To project the vision of development of the territory in the short term, of the 14 Indigenous Councils of the Piapocos, Sikuanis and Puinabes peoples that make up the Association of Councils and Traditional Authorities of the Indigenous Union of Guainía and Vichada - ASOCAUNIGUVI.</p>	<p>Execution of demographic censuses of the communities attached to the linked Indigenous IRs.</p>	<p>Demographic indicators census of indigenous IRs linked to the Project KALIAWIRI ⁸²:</p> <ul style="list-style-type: none"> - Number of people: 2207 - Number of families: 515 - Number of indigenous communities: 10 - Number of houses: 362 - Housing deficit: 153 - Number of sanitary batteries in the houses: 0 - Number of houses with aqueduct: 0 - Number of schools: 9 - Number of health posts: 0 <p>(Pp. 3 - 5, Appendix 6.a)</p> <p>Number of members of the participating communities</p>	<p>Start date:</p> <p>March 2012⁸³</p> <p>Completion date:</p> <p>December 2015</p> <p>Supports:</p> <p><u>Attachment 6.</u></p> <p>Copy of the "Life and Community Development Plan Kaliawiri" ASOCAUNIGUVI 2012 – 2015</p>	<p>• ASOCAUNIGUVI:</p> <ul style="list-style-type: none"> - IR Guaco Alto y Bajo - IR Cali Barranquilla - IR Chocón - IR Concordia - IR Río Siare Barrancolindo - IR Flores Sombrero - IR Pueblo Nuevo Laguna Colorada - IR Minitas Miro-lindo - IR Chigüiro - IR Murciélago Altamira - IR Laguna Curvina Sapuara - IR Arrecifal - IR Cumaral - IR Guamuco
--	--	--	--	--	--

⁸² Excluding the Saracure IR, which is not part of the Association. This indicator is informative and is used as a reference for estimating the resources to be invested and the population to be benefited. Depending on the needs identified in the future, it may be recalculated to update the demographic data of the communities.

⁸³ The activities carried out in the region have been developed since 2012; however, due to the conditioning given by the regulations regarding the validity of the period to be verified for retroactivity, the project has been proposed since 2015.

		<p>Definition of the indigenous leaders and authorities representing RI in the work commissions of the plan.</p>	<p>by working committees (C.) ⁸⁴ :</p> <ul style="list-style-type: none"> - C. Education: 2 - C. Health: 0 - C. Economy: 0 - C. Political-organizational: 4 - C. Special indigenous jurisdiction, territory and human rights: 1 - C. Family, women, children, youth and the elderly: 4 people - C. Recreation, sports and culture: 1 - C. collective equipment and infrastructure: 1 <p><i>(Pp. 5 - 6, Appendix 6.a)</i></p>	<p>detailing the territorial context and the investment plan by sector.</p>	<ul style="list-style-type: none"> - IR Carpintero Palomas • Caminos de Identidad Foundation – FUCAI • School of Indigenous Democratic Formation
	<p>Establishment of priorities, goals, strategies and projects by sector (Section 1.9.x).</p>				
	<p>Structuring of the investment plan by sector.</p>				

⁸⁴ This indicator will no longer be implemented for subsequent verification periods because it is specific to the activity carried out in the formulation of the Life Plan, which is already closed.

		Consolidation of the final Life Plan document	Quantitative goals set forth in the Life Plan ⁸⁵ : <ul style="list-style-type: none"> - Coverage of 80% of the communities with children's homes. - Provision of 100% of communities with their own health posts. - Coverage of 70% of the communities with means of transportation and communication for the transport of the sick. - Coverage of 70% of the communities with pipelines or tanks for rainwater storage. - Coverage of 50% of the communities with sanitary batteries and septic tanks. - 80% reduction in morbidity due to contagious diseases. - Affiliation of 100% of the members of the indigenous communities to the Subsidized System. - To have 80 leaders trained in leadership, management and administration. 		
		Filing with the Municipal Mayor's Office and Ministry of the Interior			
		Implementation of projects for each line of action proposed			

⁸⁵ This indicator is no longer implemented for subsequent verification periods because it is specific to the activity carried out in the formulation of the Life Plan, which is already closed. However, it is a comparative tool at the close of the Life Plan projection period, to corroborate the effectiveness of the actions implemented.

			<p>- Employability of the members of the communities of 60%. (Pp. 7 - 26, Appendix 6.a)</p> <p>Item invested in the implementation and source of funds ⁸⁶ :</p> <p>- 28,113,000,000,000 of which 7.8% (\$2,220,000,000) comes from the cabildos, 4.6% (\$1,308,000,000) from the Mayor's Office of Cumaribo, 25.3% (\$7,130,000,000) from the Governor's Office and 62.3% from national and international NGOs (\$17,455,000,000). (Pp. 26, Appendix 6.a)</p>		
<p>Plan of Life IR Saracure Río Cadá</p>	<p>To project the medium-term development vision of the territory, of the indigenous communities of the Piapocos</p>	<p>Execution of self-diagnosis and demographic censuses of the communities assigned to the RI Indígena.</p>	<p>Demographic indicators census of indigenous IRs linked to the Project KALIAWIRI⁸⁷ :</p>	<p>Start date:</p> <p>May 2014</p> <p>Filing Ministry of Interior: May 2015</p>	<ul style="list-style-type: none"> ● IR Saracure Río Cadá ● Government of Vichada

⁸⁶ Consistent with indicator (same designation) included in all action lines in Section 1.10 Monitoring Plan to measure the resources invested and the origin of these resources.

⁸⁷ Excluding the Saracure IR, which is not part of the Association. This indicator is informative and is used as a reference for estimating the resources to be invested and the population to be benefited. Depending on the needs identified in the future, it may be recalculated to update the demographic data of the communities.

(UNISACAVI) 2015 – 2025	and Sikuani people that make up the IR Saracure Río Cada	Definition of indigenous leaders and authorities representing them in the plan's working committees.	<ul style="list-style-type: none"> - Number of people: 2677, where 24.2% (648) belong to the Sikuani people and 75.8% (2029) to the Piapoco people. - Number of indigenous communities: 93 - Number of recognized sacred sites: 88 - Number of sanitary batteries in dwellings: 0 - Number of houses with aqueducts: 0 - Number of schools: 19 - Number of health posts: 0 <i>(Pp. 9 - 17, 38 – 39, 62 - 64, Appendix 7.a)</i> Quantitative goals set forth in the Life Plan⁸⁸ : <ul style="list-style-type: none"> - Affiliation of 100% of the members of the indigenous communities to the Subsidized Regime. - Manage at least 6 annual health care brigades. 	<p><u>Completion date:</u></p> <p>Estimated December 2025</p> <p><u>Supports:</u></p> <p>Annex 7.a</p> <p>Copy of the "Life Plan of IR Saracure Río Cada 2015 - 2025 detailing the territorial context extracted from the self-diagnosis (pages 9 - 17) and secondary information on geographic and climatological aspects (pages 20 - 27), the mission, vision and objectives of the Plan (pages 103, 114), policies, programs and projects (pages 117 - 157), the investment plan (page 195), photographs</p>
		Reflection meetings with the communities with the advice of the wise men and the consensus of the participants..		
		Comparison of official maps with the traditional territory. Construction of a scale model of the territory covered by the IR to visualize resources, areas of recovery or improvement, implementation of specific projects.		
		Identification of strengths and weaknesses, definition of strategies, prioritization of problems to be addressed, actions to be implemented, expected results, financing needs, etc..		

⁸⁸ This indicator is not implemented for subsequent verification periods because it is specific to the activity carried out in the formulation of the Life Plan, which is already closed. However, it is a comparative tool at the close of the Life Plan projection period, to corroborate the effectiveness of the actions implemented.

		<p>Zonal workshops with other IRs for the joint construction of a vision of development from an ethnic perspective.</p> <p>Structuring of the investment plan by sector.</p> <p>Consolidation of the final Life Plan document</p> <p>Filing with the Municipal Mayor's Office and the Ministry of the Interior</p> <p>Implementation of projects for each proposed line of action</p>	<p>- Reduction of 50% in morbidity and mortality due to respiratory diseases, 25% due to AED in children under 5 years of age, and 50% in the maternal mortality rate.</p> <p>- Training of 100 educational leaders for the collective construction of IEPs⁸⁹ with emphasis on ethno-education.</p> <p>- Construction of 2 indoor soccer fields, 2 soccer fields and 3 playgrounds to benefit 600 people.</p> <p><i>(Pp. 117 - 157, Appendix 7.a)</i></p> <p>Amount invested in implementation and source of funds⁹⁰ :</p> <p>- 43,500,000,000 from RI's own resources, the city council, the governor's office, and national and international NGOs. <i>(Pp. 195, Appendix 7.a)</i></p>	<p>and list of signatures (pages 277 - 281).</p>	
Contribution and Partnership	To join technical, economic and hu-	Education Sector:	Number of equipment purchased for extraction and	Starting year: Open call:	<ul style="list-style-type: none"> Cumaribo Municipal Mayor's Office

⁸⁹ Institutional Educational Projects

⁹⁰ Consistent with indicator (same designation) included in all action lines in Section 1.10 Monitoring Plan to measure the resources invested and the origin of these resources.

Agreement No. 090 of 2015.	<p>man efforts to dynamize and guarantee the delivery of the investment projects of the resources of the allocation of the General System of Participations for Indigenous IRs.</p>	<p>Purchase of bicycles to strengthen school transportation for children and adolescents in the ethno-educational processes of the indigenous communities of Puerto Sesema, Puerto Rico Vichada and Alto Picure.</p>	<p>transportation of agricultural and livestock production ⁹¹ :</p> <p>- 5 chainsaws and tool kit - 2 outboard engines</p> <p><i>(Pp. 11, Appendix 8.b)</i></p>	<p>June 2015</p> <p>Implementation: 06 July 2015 to 03 January 2016</p> <p><u>Supports:</u></p>	<ul style="list-style-type: none"> ● Secretariat of Social Development ● Office of Indigenous Affairs ● Progresar Llanos Orientales Foundation ● IR Saracure Río Cadá ● IR Ríos Muco y Guarrojo ● IR Alto Unuma Vichada
	<p>Housing Sector:</p>	<p>Acquisition of a power generator and zinc sheets to improve housing and, therefore, the quality of life of the indigenous communities of La Sirena and Puerto Guacome.</p>	<p>Percentage of population trained and certified ⁹² :</p> <p>- 9.5% equivalent to 280 indigenous authorities representing the 93 communities of the IR, trained in the use, handling and maintenance of the inputs, equipment and elements delivered.</p> <p><i>(Pp. 16, Appendix 8.b)</i></p>	<p>Annex 8.a</p> <p>Resolution No. 288 of 2015 issued by the Municipal Mayor's Office opening the call for the implementation of programs in the 3 IRs involved (Saracure Río Cadá, Alto Unuma and Muco and Guarrojo Rivers), of which for the first one the education, agricultural and livestock and housing sectors are highlighted. The above within the framework of the Municipal Development</p>	
	<p>Agricultural Development Sector:</p>		<p>Number of items and supplies purchased ⁹³ :</p> <p>- 30 all-terrain bicycles to be given to students as a means</p>		

⁹¹ This indicator is compatible with the indicator "Number of equipment acquired" formulated for the production lines within the Monitoring Plan. Depending on the phase within the production chain being measured, the type of equipment will be specified.

⁹² Consistent with indicator (same name) included in the lines of action of Section 1.10 Monitoring Plan, which includes training and education of the local population in the different topics addressed.

⁹³ Consistent with indicator (same title) included in the line of action "*Strengthening and promotion of education*" in Section 1.10 Monitoring Plan.

		<p>- Acquisition of elements and machinery for the transformation of agricultural and livestock products of the Betania and Guamalito indigenous communities.</p> <p>- Logistical support for the exchange of knowledge for the manufacture of handicrafts in cumare fiber and the preservation of traditional indigenous activities of the IR.</p>	<p>of transportation to their educational institutions. (Pp. 9 y 10, Appendix 8.b)</p> <p>Number of homes remodeled⁹⁴ :</p> <p>- 15 housing (Pp. 10, Appendix 8.b)</p> <p>Number of equipment purchased⁹⁵ :</p> <p>- 1 electric power generator with 2300 W power installed for common use. (Pp. 10, Appendix 8.b)</p> <p>Amount invested in implementation and source of funds⁹⁶ :</p>	<p>Plan "<i>Kumalibo Yabara Dajitatsi - Todos por Cumaribo</i>" (<i>Kumalibo Yabara Dajitatsi - All for Cumaribo</i>)".</p> <p><u>Annex 8.b</u></p> <p>Copy of the contract between the Mayor's Office and Fundación Progresar Llanos Orientales specifying the specific items, goods and services required for the implementation of the programs.</p>	
--	--	---	---	---	--

⁹⁴ Consistent with indicator (same name) included in the joint line of action "Construction and remodeling of housing for the communities of the resguardos" in Section 1.10 Monitoring Plan.

⁹⁵ Ibidem.

⁹⁶ Consistent with indicator (same designation) included in all action lines in Section 1.10 Monitoring Plan to measure the resources invested and the origin of these resources.

			<p>-984,643,000, of which 90% (\$895,130,000) came from the Sistema General de Participaciones and 10% (\$89,513,000) from the Fundación Progresar Llanos Orientales. Of which \$254,377,900 was allocated to the Saracure Río Cadá IR.</p> <p><i>(Pp. 11, 15, 16, Appendix 8.b)</i></p>		
<p>Contract 133 of 2015</p>	<p>To guarantee a decent roof over the heads of RI households and improve the quality of life of families in RI.</p>	<p>Housing Sector:</p> <ul style="list-style-type: none"> - Promote the improvement of indigenous housing and the quality of life of the communities in the IRs. - Ensuring the highest quality materials to ensure the durability of the homes built. 	<p>Proportion of population benefited⁹⁷:</p> <ul style="list-style-type: none"> - 11.2% of the RI's population, equivalent to 8 families out of 45 inhabitants benefited from improvements to their homes. <p><i>(Pp. 2, Appendix 9.a.)</i></p> <p>Number of items and supplies purchased⁹⁸:</p> <ul style="list-style-type: none"> - 180 zinc sheets - 80 units of gray cement. <p>For the improvement of the houses.</p>	<p>Starting year:</p> <p>Opening call: September 21, 2015</p> <p>Contract signature: September 23, 2015</p> <p>Implementation: September 23, 2015 to December 22, 2015.</p> <p><u>Supports:</u></p>	<ul style="list-style-type: none"> ● Cumaribo Municipal Mayor's Office ● IR Río Siare Barranco Lindo

⁹⁷ Consistent with indicator (same name) included in the joint line of action "Construction and remodeling of housing for the communities of the reservation" in Section 1.10 Monitoring Plan.

⁹⁸ Ibidem.

			<p>Amount invested in the implementation and origin of the funds ⁹⁹ :</p> <ul style="list-style-type: none"> - (\$17,200,000) come from the Special Allocation of the General System of Participation, C.D.P. 069 of the Mayor's Office of Cumaribo. <p><i>(Pp. 2, Appendix 9.a.)</i></p>	<p>Annex 9.a.</p> <p>Information on the opening of the bid for the project named: "<i>Purchase of construction materials for the improvement of the houses of the indigenous RI Rio Siare Barranco Lindo of the Municipality of Cumaribo Vichada</i>" (Page 1) and communication of acceptance of the bid granted to Alexis David Trujillo Castro identified with the C.C. 1.124.991.571 of Cumaribo (Page 4).</p> <p>Annex 9.b.</p> <p>Compilation of the activity report supporting the actions carried out under Contract 133 of 2015 (pages 1 - 15). As well as, the completion minutes</p>	
--	--	--	--	---	--

⁹⁹ Consistent with indicator (same designation) included in all action lines in Section 1.10 Monitoring Plan to measure the resources invested and the origin of these resources.

				(pp. 1 - 18), and the liquidation minutes (pp. 19 - 20). Annex 9.c. Certificate issued by the Governor of the Cabildo Indígena del RI Ríos Siare Barranco Lindo on the full compliance with the object of the contract.	
Contract No. 119 of 2015	To promote the educational attainment of RI's youth	<p>Education Sector:</p> <ul style="list-style-type: none"> - Provide materials for the development of play and educational activities. - Impulsar a niños y jóvenes del RI a hacer buen uso del servicio escolar. - To raise awareness among the children and adolescents of RI Ríos Siare Barranco Lindo about the proper use of technological devices. 	<p>Percentage of students benefited¹⁰⁰ :</p> <ul style="list-style-type: none"> - 100% of the students, corresponding to 224 children and young people between 0 and 19 years of age within the RI. <p>(Pp. 2, Appendix 10.a.)</p> <p>Number of equipment purchased¹⁰¹ :</p> <ul style="list-style-type: none"> - Two (2) sound booths - Two (2) wired microphones 	<p>Starting year:</p> <p>Opening call: August 2015</p> <p>Contract signature: August 31, 2015</p> <p>Implementation: September 1, 2015 to November 30, 2016.</p>	<ul style="list-style-type: none"> ● Cumaribo Municipal Mayor's Office ● IR Rio Siare Barranco Lindo

¹⁰⁰ Consistent with indicator (same title) included in the line of action "*Strengthening and promotion of education*" in Section 1.10 Monitoring Plan.

¹⁰¹ Ibidem.

			<p>- One (1) UPS uninterruptible power supply unit.</p> <p>To carry out cultural and curricular activities.</p> <p><i>(Pp. 2, Appendix 10.a.)</i></p> <p>Amount invested in implementation and source of funds ¹⁰² :</p> <ul style="list-style-type: none"> - (\$9,900,000) comes from the Special Allocation of the General System of Participation, C.D.P. 062 of the Mayor's Office of Cumaribo. <p><i>(Pp. 2 y 3, Appendix 10.a.)</i></p>	<p>Supports:</p> <p>Annex 10.a.</p> <p>Information on the opening of the bid for the project named: "<i>purchase of ludic implements for the improvement of the ethno-educational system of the indigenous RI Río Siare Barranco Lindo of the municipality of Cumaribo Vichada</i>" (Page 1) and Communication of acceptance of the Offer granted to Alexis David Trujillo Castro identified with the C.C. 1.124.991.571 of Cumaribo (Page 5).</p> <p>Annex 10.b.</p> <p>Compilation of the activity report supporting the actions carried out under Contract 119 of 2015 (pp.</p>	
--	--	--	--	--	--

¹⁰² Consistent with indicator (same designation) included in all action lines in Section 1.10 Monitoring Plan to measure the resources invested and the origin of these resources.

				1 - 10). As well as, the termination minutes (pages 11 - 13), and the liquidation minutes (pages 15 and 16).	
Contract No. 185 of 2015	Promote the agricultural production of indigenous families of the Río Siare Barranco Lindo IR	<p>Agricultural Development Sector:</p> <ul style="list-style-type: none"> - Coordinate actions to seek alternatives for strengthening the agricultural field. - Exchange knowledge and experiences in the agricultural field and native seeds. 	<p>Number of community members and indigenous authorities participating in intercultural meetings and knowledge exchange ¹⁰³ :</p> <ul style="list-style-type: none"> - 140 people attended the meeting, belonging to the subgroups of children, young people, young students, adults, adults, traditional authorities, indigenous guards, traditional doctors or tsamanes, indigenous leaders and mothers and heads of households. <p>(Pp. 2, Appendix 11.a.)</p> <p>Number of meals provided for attendees ¹⁰⁴ :</p> <ul style="list-style-type: none"> - 420 breakfasts 	<p>Starting year:</p> <p>Opening call: November 2015</p> <p>Contract signature: December 10, 2015</p> <p>Implementation: December 11, 2015 to January 10, 2016.</p> <p>Supports: Appendix 11.a.</p> <p>Information on the opening of the bid for the project entitled: "Logistical</p>	<ul style="list-style-type: none"> • Cumaribo Municipal Mayor's Office • IR Rio Siare Barranco Lindo

¹⁰³ Consistent with indicator (same name) included in the line of action "*Strengthening and rescue of ancestral tradition and culture (traditional medicine, language, education, crafts)*" of Section 1.10 Monitoring Plan.

¹⁰⁴ Indicator of an informative nature that will not have continuity in the following verification periods since it corresponded to a result of the contract, which has already ended.

			<p>- 420 lunches - 420 meals</p> <p>Amount invested in implementation and source of funds ¹⁰⁵ :</p> <p>(\$15,372,000) from the Special Allocation of the General System of Participation of the RI Río Siare Barranco Lindo, C.D.P. 061 of the Municipality of Cumaribo.</p> <p><i>(Pp. 3, Appendix 11.a.)</i></p>	<p>support to the general assembly of the Indigenous RI Rios Siare Barranco Lindo of the municipality of Cumaribo for the promotion of traditional agriculture through the exchange of native seeds" (page 1) and communication of acceptance of the bid awarded to Alexis David Trujillo Castro identified with the C.C. 1.124.991.571 of Cumaribo (pages 5 to 7).</p> <p><u>Appendix 11.b.</u></p> <p>Compilation of the activity report that summarizes the actions carried out under Contract 185 of 2015 (pp. 1 - 5). and the settlement minutes (pp. 6 and 7).</p> <p><u>Appendix 11.c.</u></p> <p>Certificate issued by the Governor of the Cabildo Indígena del RI Ríos Siare</p>	
--	--	--	--	---	--

¹⁰⁵ Consistent with indicator (same designation) included in all action lines in Section 1.10 Monitoring Plan to measure the resources invested and the origin of these resources.

				Barranco Lindo of the fulfillment of the contract's object.	
Contract No. 144 of 2016	Acquire construction material for the improvement of housing for investment projects of the resources of the special allocation of the General System of Participation of the indigenous IRs: Guacamayas Mamiyare, Flores Sombrero, Meroy La Veradita, Cali Barranquilla, Egua Guariacana, Rios Muco and Guajorro, Santa Teresita del Tuparroy and Sara-cure Río Cada, of the municipality of Cumaribo Vichada.	Housing Sector: Deliver construction materials in accordance with the required technical specifications and within the term stipulated in the contract.	Number of items and supplies purchased ¹⁰⁶ : - 2401 zinc sheets - 1 güio hose - 8 water hoses - 22 tanks for potable water 250 liters - 3 drinking water tanks of 2000 liters For the improvement of the housing facilities. (Pp. 5 - 12, <i>Appendix 12.a.</i>) Item invested in the implementation and source of funds ¹⁰⁷ : (\$117,682,809) from the budget of the RI General System Special Allocation, C.D.P. 023 of the Municipality of Cumaribo, Colombia. (Pp. 2, <i>Appendix 12.b.</i>)	Starting year: Opening call: December 26, 2016 Contract signature: December 26, 2016 Implementation: January 16, 2017 to March 16, 2017. Supports: <u><i>Appendix 12.a.</i></u> Purchase and Sale Agreement number 144 of 2016	<ul style="list-style-type: none"> ● Cumaribo Municipal Mayor's Office ● IR Guacamayas Mamiyare ● IR Flores Sombrero ● IR Meroy La Veradita ● IR Cali Barranquilla ● IR Egua Guariacana ● IR Rios Muco y Guajorro ● IR Santa Teresita del Tuparroy

¹⁰⁶ Consistent with indicator (same name) included in the joint line of action "Construction and remodeling of housing for the communities of the reservations" in Section 1.10 Monitoring Plan.

¹⁰⁷ Consistent with indicator (same designation) included in all action lines in Section 1.10 Monitoring Plan to measure the resources invested and the origin of these resources.

				<p>signed between the Mayor of the Municipality of Cumaribo and the legal representative of Consorcio Materiales Sabaneros.</p> <p><u>Appendix 12.b.</u></p> <p>Compilation of the supervision report minutes (pp. 1 - 4), as well as, activity report supporting the actions that were carried out under Contract 133 of 2015 (pp. 5 - 12), termination minutes (pp. 13 - 14), and the mutual agreement liquidation minutes (pp. 15 - 18).</p>	<ul style="list-style-type: none"> IR Saracure Río Cada
<p>Contract No. 149 of 2016</p>	<p>Purchase live animals and agricultural inputs for investment projects in the following indigenous IRs: Guacamayas Mamiyare, Valdivia Flores Sombrero, Meray La Veradita, Rios Tomo and Beweri,</p>	<p>Agricultural Development Sector:</p> <p>To deliver the goods and supplies in accordance with the required technical specifications and within the term stipulated in the contract.</p>	<p>Number of individuals per species acquired ¹⁰⁸ :</p> <ul style="list-style-type: none"> - 317 heifers - 45 Zebu bulls - 27 female pigs - 150 poultry (hens) - 14 poultry (broilers) - 480 poultry (broiler chickens) 	<p>Starting year:</p> <p>Opening call: December 28, 2016</p> <p>Contract signature: December 28, 2016</p>	<ul style="list-style-type: none"> Cumaribo Municipal Mayor's Office IR Guacamayas Mamiyare IR Valdivia

¹⁰⁸ Consistent with indicator (same name) included in the joint line of action "Strengthening of the livestock-productive sector: Farms of small species" of Section 1.10 Monitoring Plan.

	<p>Siare Barranco Lindo, Unuma, San Luis del Tomo, Rios Muco and Guarrojo, Santa Teresita del Tuparro and Saracure río Cada in the municipality of Cumaribo, Vichada.</p>		<p>Number of items and supplies purchased ¹⁰⁹ :</p> <ul style="list-style-type: none"> - 17 packages of mineralized salt - 2 jars of Lepecid - 2 jars of mineral salts - 2 bottles of Globulin - 2 bottles of Nexabest - 2 bottles of Nexabaño - 4 injectable syringes - 70 ordinary manilas - 7 packages of purine for fattening - 11 hand mills - 11 nets - 10 machetes - 10 axes - 10 palines - 8 barretones - 2 wheelbarrows - 3 triangular files - 20 shovel ropes - 10 machetes <p>Number of items and supplies purchased ¹¹⁰ :</p> <ul style="list-style-type: none"> - 154 bojotes of bitter cassava seeds 	<p>Implementation: January 16, 2016 to August 3, 2017.</p> <p>Supports:</p> <p><u>Appendix 13.a.</u></p> <p>Purchase and Sale Contract number 149 of 2016 signed between the Mayor of the Municipality of Cumaribo and the legal representative of Consorcio Agrícola Sabaneros.</p> <p><u>Appendix 13.b.</u></p> <p>Compilation of the supervision report (pp. 1 - 7), termination report (pp. 8 - 12), and the liquidation report (pp. 14 - 19).</p>	<ul style="list-style-type: none"> ● IR Flores Sombrero ● IR Merrey La Veradita ● IR Ríos Tomo y Beweri ● IR Siare Barranco Lindo ● IR Unuma ● IR San Luis del Tomo ● IR Rios Muco y Guarrojo ● IR Santa Teresita del Tuparro ● IR Saracure Río Cada
--	---	--	--	--	---

¹⁰⁹ Ibidem. Specific for the productive improvement of the livestock sector.

¹¹⁰ Ibidem. Specific for the productive improvement of the agricultural sector.

			<p>- 77 bojotes of sweet cassava seeds - 1500 plantain hills - 800 topocho cabbages - 200 banana hills</p> <p><i>(Pp. 5 - 12, Appendix 13.a.)</i></p> <p>Item invested in the implementation and source of funds ¹¹¹ :</p> <p>- (\$786,825,396) from the budget of the RI General System Special Allocation, C.D.P. 022 of the Cumaribo Mayor's Office</p> <p><i>(Pp. 2 y 3, Appendix 13.a.)</i></p>		
Contract No. 150 of 2016	Acquire machinery and equipment for investment projects from the resources of the special allocation of the general system of participation of the indigenous IRs: Gua-	Housing, Agriculture and Livestock Development, Education and Transportation Sector:	<p>Number of vessels or vehicles acquired / Number of vessels or vehicles planned ¹¹² : 95 / 95:</p> <p>- 46 motorcycles - 42 off-road bicycles - 1 metal boat - 6 outboard motors</p>	<p>Starting year:</p> <p>Opening call: December 29, 2016</p> <p>Signing of the contract:</p>	<ul style="list-style-type: none"> ● Cumaribo Municipal Mayor's Office ● IR Guacamayas Mamiyare ● IR Valdivia

¹¹¹ Consistent with indicator (same designation) included in all action lines in Section 1.10 Monitoring Plan to measure the resources invested and the origin of these resources.

¹¹² Consistent with indicator (same name) included in the joint action line "Program to improve river and land mobility" in Section 1.10 Monitoring Plan.

	<p>camayas Ma-miyare, Valdivia, Mery la Veradita, Flores Sombrero, La Esmeralda, Kawanerruba, Caño Chocon, Tomo and Beweri Rivers, Siare Barranco Lindo, Carpintero Palmas, Cali Barranquilla, Muco and Guarrojo, Punta Bandera, Santa Teresita del Tuparro and Sara-cure Rio Cada of the municipality of Cumaribo Vichada.</p>	<p>Deliver in accordance with the required technical specifications and within the deadline stipulated in the contract.</p>	<p>Number of items and supplies purchased ¹¹³ :</p> <ul style="list-style-type: none"> - 14 chain saws - 13 cassava graters - 3 motor pumps - 1 planer <p>Number of items and supplies purchased ¹¹⁴ :</p> <ul style="list-style-type: none"> - 8 electric power generators - 22 solar plants - 1 güio hose - 4 water hoses - 12 double electrical outlets - 1 tank for water of 2000 liters - 24 zinc sheets <p>For housing improvements.</p> <p>Number of equipment purchased ¹¹⁵ :</p> <ul style="list-style-type: none"> - 3 laptop computers 	<p>December 29, 2016</p> <p>Implementation: January 16, 2016 to August 17, 2017.</p> <p>Supports:</p> <p>Appendix 14.a.</p> <p>Purchase and Sale Contract number 150 of 2016 signed between the Mayor of the Municipality of Cumaribo and the legal representative of Consorcio Maquinaria Sabaneros.</p> <p><u>Appendix 14.b.</u></p> <p>Compilation of the supervision report minutes (pp.</p>	<ul style="list-style-type: none"> ● IR Mery la Veradita ● IR Flores Sombrero ● IR La Esmeralda ● IR Kawanerruba ● IR Chocón ● IR Ríos Tomo y Beweri ● IR Siare Barranco Lindo ● IR Carpintero Palmas ● IR Cali Barranquilla ● IR Muco y Guarrojo ● IR Punta Bandera
--	---	---	---	--	---

¹¹³ Consistent with indicator (same name) included in the joint line of action "Strengthening of the livestock-productive sector: Minor species farms" of Section 1.10 Monitoring Plan. Specific for the productive improvement of the agricultural sector.

¹¹⁴ Consistent with indicator (same name) included in the joint line of action "*Construction and remodeling of housing for the communities of the reservation*" in Section 1.10 Monitoring Plan.

¹¹⁵ Consistent with indicator (same name) included in the cross-cutting action line "*Strengthening governance, special indigenous jurisdiction, territory, community government and human rights*" in Section 1.10 Monitoring Plan, for the development of cultural and administrative activities of the IR.

			<ul style="list-style-type: none"> - 2 sound systems - 1 multifunctional printer - 1 sealed battery - 1 freezer - 1 piano keyboard - 5 LED televisions - 12 energy saving light bulbs - 520 meters of cable <p><i>(Pp. 2 to 8, Appendix 14.a.)</i></p> <p>Item invested in the implementation and source of funds ¹¹⁶ :</p> <p>-\$642,574,531) from the budget of the RI General System Special Allocation, C.D.P. 025 of the Municipality of Cumaribo</p> <p><i>(Pp. 2, Appendix 14.b. y Pp. 8, Appendix 14.a.)</i></p>	<p>1 - 11), as well as the activity report with evidence of receipt from the community (pp. 12 - 25) and the liquidation minutes (pp. 26 - 48).</p>	<ul style="list-style-type: none"> ● IR I Santa Teresita del Tuparro ● IR Saracure Río Cada
Contract No. 151 of 2016	Support the logistics of the programming and execution of the investment projects of the resources of the special allocation of the	Education and Culture Sector:	Number of community members and indigenous authorities participating in intercultural and	<p>Starting year:</p> <p>Opening call: December 29, 2016</p>	<ul style="list-style-type: none"> ● Cumaribo Municipal Mayor's Office ● IR Guacamayas Mamiyare

¹¹⁶ Consistent with indicator (same designation) included in all action lines in Section 1.10 Monitoring Plan to measure the resources invested and the origin of these resources.

	<p>General System of Participation of the indigenous IRs: Guacamayas Mamiyare, Valdivia, Mery la Veradita, Kawanerruba, Caño Chocon, Tomo and Beweri Rivers, Siare Barranco Lindo, Carpintero Palmas, Muco Mayorgua, San Luis del Tomo, Muco and Guarrojo Rivers and Saracure Rio Cada of the municipality of Cumaribo Vichada..</p>	<p>- Exchange of knowledge in the production of handicrafts and the preservation of the ancestral activity of the Chocón IR.</p> <p>- Training of leaders and traditional doctors - exchange for the indigenous community of the Sikuaní people in the IR Siare Barranco Lindo.</p> <p>- Training in indigenous legislation formulation and structuring of the Saracure Río Cada IR budget.</p>	<p>knowledge exchange meetings ¹¹⁷ :</p> <p>- Chocón RI: 145 - Siare Barranco Lindo RI: 150 - Saracure River Cada: 160</p> <p>(Pp. 5, 6, 7, 15 Appendix 15.a.)</p> <p>Number of meals provided for attendees ¹¹⁸ :</p> <p>- 1365 breakfasts - 1365 lunches - 1365 meals</p> <p>(Pp. 5, 6, 7, 15 Appendix 15.a.)</p> <p>Item invested in the implementation and source of funds ¹¹⁹ :</p>	<p>Contract signature: December 29, 2016</p> <p>Implementation: January 16, 2016 to August 17, 2017.</p> <p>Supports: Appendix 15.a.</p> <p>Contract for the Provision of Services number 151 of 2016 signed between the Mayor of the Municipality of Cumaribo and the legal representative of Consorcio Apoyos Sabaneros.</p> <p>Appendix 15.b.</p>	<ul style="list-style-type: none"> ● IR Valdivia ● IR Mery la Veradita ● IR Kawanerruba ● IR Ríos Tomo y Beweri, ● IR Carpintero Palmas ● IR Muco Mayorgua ● IR San Luis del Tomo ● IR Ríos Muco y Guarrojo ● IR Chocón ● IR Siare Barranco Lindo
--	--	---	--	--	---

¹¹⁷ Consistent with indicator (same name) included in the line of action "*Strengthening and rescue of ancestral tradition and culture (traditional medicine, language, education, crafts)*" of Section 1.10 Monitoring Plan.

¹¹⁸ Indicator of an informative nature that will not have continuity in the following verification periods since it corresponded to a result of the contract, which has already ended.

¹¹⁹ Consistent with indicator (same designation) included in all action lines in Section 1.10 Monitoring Plan to measure the resources invested and the origin of these resources.

			<p>- (\$419,3477,163) from the RI General System Special Allocation, C.D.P. 024 of the Cumaribo Mayor's Office.</p> <p><i>(Pp. 124, Appendix 15.b.)</i></p>	<p>Compilation of the report of activities with the community's report (pp. 12 - 122) and the minutes of liquidation (pp. 123 - 156).</p>	<ul style="list-style-type: none"> • IR Saracure Río Cada
<p>Contract No. 29 of 2016</p>	<p>To rescue our ancestral traditions from our own activities, in order to guarantee the continuity and permanence of the indigenous work of the Piapoco community of the Flores Sombrero reservation.</p>	<p>Culture Sector:</p> <ul style="list-style-type: none"> - Promote authentic in-indigenous handicraft traditions in the community of the resguardo. - Present alternatives for the recovery, conservation and preservation of our ancient customs. - To occupy the free time of our children, adolescents and those interested in the transmission of knowledge of our indigenous Piapoco culture.. 	<p>Number of community members and indigenous authorities participating in intercultural and knowledge exchange meetings ¹²⁰ :</p> <ul style="list-style-type: none"> - 45 inhabitants of the IR, corresponding to 12 families. <p>Number of meals provided for attendees ¹²¹ :</p> <ul style="list-style-type: none"> - 100 breakfasts - 100 lunches - 100 meals - 100 snacks <p><i>(Pp. 2 y 3, Appendix 16.a.)</i></p>	<p>Starting year:</p> <p>Opening call: September 1, 2016</p> <p>Contract signature: September 5, 2016</p> <p>Implementation: October 6, 2016 - October 20, 2016</p> <p>Supports:</p> <p><u>Appendix 16.a.</u></p>	<ul style="list-style-type: none"> • Cumaribo Municipal Mayor's Office • IR Flores Sombrero

¹²⁰ Consistent with indicator (same name) included in the line of action "Strengthening and rescue of ancestral tradition and culture (traditional medicine, language, education, crafts)" of Section 1.10 Monitoring Plan.

¹²¹ Indicator of an informative nature that will not have continuity in the following verification periods since it corresponded to a result of the contract, which has already ended.

			<p>Item invested in the implementation and source of funds ¹²² :</p> <p>-\$5,000,000) come from the budget of the Special Allocation of the General System of Participation of the Resguardo, C.D.P. 05 of the Mayor's Office of Cumaribo.</p> <p><i>(Pp. 3, Appendix 16.a.)</i></p>	<p>Information on the opening of the offer for the project named: "logistical support to the exchange of knowledge for the elaboration of handicrafts in Cumaribo and the preservation of the traditional indigenous activities of the Flores Sombrero Resguardo of the municipality of Cumaribo Vichada" (page 1) and communication of acceptance of the offer granted to the Fundación indígena Juvenil de Cumaribo - FUNJIC with NIT. 900101682-1 (page 5).</p> <p><u>Appendix 16.b.</u></p> <p>Compilation of the activity report that summarizes the actions carried out under Contract 29 of 2016 (pages 1 - 21). As well as, the termination act (p. 22), and the mutually agreed settlement act (pp. 23 - 26).</p>	
--	--	--	--	--	--

¹²² Consistent with indicator (same designation) included in all action lines in Section 1.10 Monitoring Plan to measure the resources invested and the origin of these resources.

				<u>Appendix 16.c.</u> Certificate issued by the Governor of the Cabildo indigeno of reservation Flores Sombrero of the full compliance with the object of the contract.	
Implementation of the Interinstitutional Technical Committee on Environmental Education TCEE	To bring together representatives of public and private entities in the municipality of Cumaribo in order to advise and guide the development of environmental education policies and promote sustainable development, in accordance with the legal and political provisions of the	Training and awareness-raising workshops on environmental issues in the municipality: - Fires or burning of savannas and forests - Forest logging and timber trafficking - Wildlife trafficking - Use and management of water resources	Percentage of population trained and certified ¹²⁴ : - 320 people	Start year: <u>November 2016</u> Year ended: <u>Effective</u> Supports: <u>Appendix 17.a</u> Certification issued by UMATA specifying the	- Cumaribo Municipal Mayor's Office - Secretary of Social Development - Secretary of Municipal Planning - UMATA - Municipal Council - IMDER - CORPORINO-QUIA - Casa de la Cultura - ASOJUNCUVIP - SENA - Municipal Risk Management Council - Environmental Police - ASOCRIVIP - KALIAWIRI
		Within the framework of Climate Change and Global Warming Policy Socialization of the Public Policy on Environmental Education	Number of CIDEA members participating in the dissemination of the Public Policy ¹²⁵ : - 23 people		

¹²⁴ Consistent with indicator (same name) included in the action line "*Ecotourism, cultural and environmental education center*" of Section 1.10 Monitoring Plan.

¹²⁵ Indicator of an informative nature, which will not have continuity in the following verification periods because it corresponds to a specific measurement of this project that cannot be replicated in another line of action.

	MADS, MEN ¹²³ y CORPORINOQUIA	and Participation of the Ministry of the Environment	Institutions participating in the socialization of the Public Policy ¹²⁶ : - Secretary of Agriculture and Economic Development of Vi-chada - El Tuparro National Park - SENA - MADS - CIDEA	topics covered in the environmental awareness and education workshops. <u>Appendix 17.b</u> Agreement No. 15 of 2016 with which the Municipal Council formalizes the creation of the CIDEA, dictates its objective, functions, duration, jurisdiction and members that comprise it.	- Indigenous Affairs Office - NGO's
Deforestation monitoring and control program	Deforestation monitoring and control program	Field data collection according to protocols.	Methodological documents generated according to standards Generation of maps and analysis of geographic information	Starting year: January 2019 Completion year: Preliminarily budgeted and scheduled through project completion in 2044. Supports:	Biofix Consultoría SAS
		Elaboration of the methodology according to NTC 6208 standard.			
		Generation, analysis and validation of obtained results			

¹²³ MADS – Ministerio de Ambiente y Desarrollo Sostenible. MEN – Ministerio de Educación Nacional

¹²⁶ Ibidem.

				Annex 20. Geodatabase	
--	--	--	--	-----------------------	--

Source: KALIAWIRI REDD+ Project

8 Disturbance events recorded in the monitoring period

Disruptive events are processes of natural¹⁵ or anthropogenic¹⁶ origin that may prevent the projected GHG emission reductions from being achieved. In this respect, the standard indicates that, in the event of one of the considered events, the proponent will be responsible for consolidating the information on the situation presented, informing the relevant actors and communicating the actions to be taken.

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 Table 29, which directly contribute to the prevention of events, the risk assessment, the follow-up in case of a possible occurrence and the mitigation of identified disturbances:

Table 11. Methodology implemented to prevent, assess, monitor, and mitigate disruptions

Action Line	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 causes of deforestation identified in the area is the dynamics of population migration, especially by agents from outside the territory, providing the indigenous reserves with resources to build their own governmental instruments so that they can carry out the tasks associated with forest management will help prevent the invasion of the territory by settlers and external actors who promote deforestation and degradation activities, or in some cases they will be responsible for providing the necessary warnings to take the necessary actions to resolve conflicts.
Participatory reforestation of degraded ecosystems	Prioritization and definition of areas to be intervened and species to be reforested.	
Participatory reforestation of degraded ecosystems	Reforestation and afforestation programs, hand in hand with community nurseries	Areas 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 potential losses of carbon sinks and quantifiable removals.
	Linking sawmillers in reforestation processes	
Monitoring of reforested areas		
Program to monitor and control deforestation and forest degradation	Monitoring of deforestation areas based on geospatial information and early deforestation alerts generated by Biofix Consultoría and IDEAM.	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 between

	Satellite image acquisition and processing Identification of causes and generating agents of changes in coverage, with the help of community monitoring.	technical and social monitoring will be carried out to evaluate not only the quantification of 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.
	Training for forest custodians who used to be sawmillers.	

Source: KALIAWIRI REDD+ Project

For the KALIAWIRI REDD+ project, the following events have been identified as threats to the scope of compensation, which are closely related to the agents and drivers of deforestation identified above, and which in turn require short, medium and long term actions for monitoring:

- Loss of forest cover: The area may be threatened by natural fires associated with degradation, and there is also a risk of illegal logging for commercial purposes. As explained there, the dynamics of population migration and the establishment of grasslands for land appropriation and land grabbing for the establishment of livestock and agricultural activities is a latent disturbance in the territory, will be prevented, mitigated and evaluated based on the technical and social monitoring associated with the established lines of action.
- The discrepancies that may arise between the various members and authorities of the communities with regard to the project and the decisions taken during the implementation of the prioritized lines of action may represent a risk of generating disturbance events of an anthropic nature. However, in order to prevent and/or manage this type of disagreement, the project will focus on institutional strengthening and territorial governance as a transversal axis, key to guaranteeing the social sustainability of the project, by providing the indigenous reserve with tools for conflict management, negotiation, community outreach, territorial autonomy, resource management, financial management of economic resources, dissemination and communication of results, training in regulations on rights and measures to protect them as ethnic communities, as well as regulations on the use of resources.
- If the green business activities proposed in the monitoring plan to involve indigenous communities in the implementation of production lines are not adequately developed, it is possible that the deforestation control achieved in the first verification period will

be reduced. For this situation, the consolidation of inter-institutional relations and synergy between the different actors and stakeholders of the project will be considered, in order to ensure supervision and monitoring by local environmental authorities, municipal mayors' offices and the Ministry of Environment and Sustainable Development.

In any case, if any of the described disruptions occur, the affected area will be estimated and the tCO₂e emitted will be subtracted from the total estimated amount.

9 Emission reductions over the monitoring period

The calculation of emissions from project activities has been established for the monitoring report. The verified parameters correspond to those foreseen in the monitoring plan.

The project's ex-post emissions for this verification period were calculated for the period 2015 to 2019 by adding the emissions from the deforestation and degradation transition observed during this monitoring period.

The land cover change in hectares was divided among the verified years. The total emission reduction of the project is 4,425,108 tCO₂e during this monitoring period, with 15% of the buffer removed.

The change in land cover in hectares has been divided among the verified years. The combined deforestation and degradation emission reduction of the project is 885,022 tCO₂e per year on average during this monitoring period. The degradation emission reduction of the project, taking into account the baseline of the reference area (2005-2015), is 5,206,011 tCO₂e during this monitoring period, without removing the 15% corresponding to the buffer.

Table 12. Estimated reduction in deforestation and degradation over the monitoring period

Year	Calendar year	Reduction of annual de-forestation and de-gradation emissions (tons CO ₂ e)	15% discount BUFFER	Reduction of annual deforestation and degradation emissions minus BUFFER (tons of CO ₂ e)	Reduction in cumulative deforestation and degradation emissions without subtracting BUFFER (tons of CO ₂ e)
1	2015	1.056.012	158.402	897.611	1.056.012
2	2016	1.048.557	157.284	891.273	2.104.569
3	2017	1.041.152	156.173	884.979	3.145.721

4	2018	1.033.797	155.070	878.726	4.179.518
5	2019	1.026.493	153.974	872.519	5.206.011
Totals		5.206.011	780.903	4.425.108	-

Source: KALIAWIRI REDD+ Project

10 Alignment with sustainable development goals

The lines of action formulated and approved by the indigenous reserves attached to the project, together with the investment projects reported in this monitoring report, show a direct relationship with the Sustainable Development Goals (SDGs) and their targets. The SDG18 and its 169 targets were included and approved in 2015 by the Member States of the United Nations in the agenda entitled "*Transforming our world: the 2030 Agenda for Sustainable Development*", with the aim of ensuring the social and economic growth of the world's population, seeking harmonization with ecological dynamics and environmental needs that are expressed day by day, with a greater sense of urgency, by the communities, and are addressed as follows:

Table 13. Relationship between the SDGs and the programs of the proposed action lines

Sustainable development objective	SDG Goal
O1: End of poverty	<ul style="list-style-type: none"> • Construction and improvement of housing • Construction and improvement of roads, paths and highways • Improving communications and ICT connectivity and accessibility. • Improving river and land mobility.
O2: Zero hunger	<ul style="list-style-type: none"> • Local food production and self-sufficiency systems such as: • Priority coverage in the nutritional demand of the infant, elderly, pregnant and lactating women population. • Consolidation of community seed banks.
O3: Health and wellness	<ul style="list-style-type: none"> • Vaccination, dental, sexual and reproductive health brigades. • Construction and/or improvement of community health posts. • Sexual health and psychoactive substance use prevention program. • Construction and adaptation of sports and recreational scenarios. • Program for the rescue and promotion of ancestral medicine.
O4: Quality education	<ul style="list-style-type: none"> • Construction and/or improvement of educational institutions. • Provision of recreational, technological, cultural and nutritional scenarios. • Literacy training for youth and adults. • Provision of higher education and maintenance support. • Proprietary education systems
O5: Gender equality	<ul style="list-style-type: none"> • Training school for leaders in governance, territorial autonomy and human rights. • Promotion and accompaniment in the consolidation of productive initiatives headed by women and mothers who are heads of household.

	<ul style="list-style-type: none"> ● Professional accompaniment for pregnant and nursing mothers.
O6: Clean water and sanitation	<ul style="list-style-type: none"> ● Construction and/or improvement of community aqueducts. ● Construction of sanitary batteries for housing and community spaces.
O7: Affordable and non-polluting energy	<ul style="list-style-type: none"> ● Provision of eco-efficient stoves ● Implementation of solar energy systems. ● Provision of electric power plants
O12: Responsible production and consumption	<ul style="list-style-type: none"> ● Enabling ecotourism, cultural and environmental education centers. ● Training of tourist guides and community environmental interpreters. ● Encouragement and accompaniment in the consolidation of associations and enterprises within the productive chains ● Implementation of sustainable agricultural and livestock production processes. ● Sustainable use of non-timber forest products: rubber, moriche, seje
O13: Climate action O15: Life of terrestrial ecosystems	<ul style="list-style-type: none"> ● Certification and Marketing of CARBON BONDS ● Increase and conservation of carbon reservoirs. ● Program for participatory reforestation of degraded ecosystems with native species. ● Monitoring of forested areas by trained forest custodians. ● System for reporting the causes and generating agents of deforestation and forest degradation. ● Processing of periodic satellite information. ● Programs for the protection and study of threatened biodiversity.
O16: Peace, justice and strong institutions	<ul style="list-style-type: none"> ● Participatory elaboration of Life or Ethno-Development Plans in ethnic territories. ● Implementation of community radio stations with a gender, ethnic and human rights approach. ● Strengthening of governance and territoriality.
O17: Partnerships to achieve objectives	<ul style="list-style-type: none"> ● Institutional synergies with environmental authorities, government institutions in ethnic affairs. ● Alliances with territorial liaisons. ● Agreements with national and international entities such as CONSERVATION INTERNATIONAL.

Source: KALIAWIRI REDD+ Project

11 Bibliographic references

Alcaldía Municipal de Cumaribo. (2008). Plan Básico de Ordenamiento Territorial Cumaribo - Vichada (2008-2020).

CIAT & CORMACARENA. (2018). Plan Regional Integral de Cambio Climático para la Orinoquía – Departamento de Vichada. Centro Internacional de Agricultura Tropical Publicación No. 465. Cali, Colombia.

FAO. (1991). Non-Wood Forest Products: the way ahead. Organización de la Naciones Unidas para la agricultura y la alimentación. Roma: Italia.

FAO. (2008). Bosques y energía: cuestiones clave. Organización de la Naciones Unidas para la agricultura y la alimentación. Roma: Italia.

IGAC. (2022). *Caracterización Territorial Municipal con fines de Catastro Multipropósito Inírida (Guainía)*.