

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>REDD+ Project Document</b>                                                                                                                                                                                                                                                                                                                                                  |
| <b>Basic Project Information</b>                                                  |                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Project Title</b>                                                              | Aire de Vida Project " Kai KOMUYA<br>JAG+Y+" REDD+ Puerto Zábalo y Los Monos                                                                                                                                                                                                                                                                                                   |
| <b>Version</b>                                                                    | 6                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Project Location</b>                                                           | <b>Country:</b> Colombia<br><b>Department:</b> Caquetá<br><b>Municipality:</b> Solano                                                                                                                                                                                                                                                                                          |
| <b>Project Proponents and Representative</b>                                      | <b>PUERTO ZÁBALO Y<br/>LOS MONOS INDIGENOUS RESERVATION</b> <ul style="list-style-type: none"> <li>• <b>COEMANI COMMUNITY</b><br/>Fidel Ortiz Joikategedo</li> <li>• <b>LOS ESTRECHOS COMMUNITY</b><br/>Herminso Safirekudo</li> <li>• <b>JERUSALEM COMMUNITY</b><br/>Milenco Emanuel Safirekudo</li> <li>• <b>EL QUINCHE COMMUNITY</b><br/>Elpidio Capera Riecoche</li> </ul> |
| <b>Other Project Proponents and Representatives</b>                               | <b>CARBO SOSTENIBLE SAS</b><br>Juan Andrés López Silva<br><br><b>TERRA COMMODITIES SAS</b><br>Federico Ortiz Mejia<br><br><b>YAUTO SAS</b><br>Pedro Posada Arango                                                                                                                                                                                                              |



|                                                                                   |                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>REDD+ Project Document</b>                                                                                                                                                                                                                               |
| <b>Basic Project Information</b>                                                  |                                                                                                                                                                                                                                                             |
|                                                                                   | <b>VISSO CONSULTANTS SAS</b><br>Jorge Giron                                                                                                                                                                                                                 |
| <b>Prepared by</b>                                                                | <b>CARBO SOSTENIBLE SAS</b><br>Juan Andrés López Silva<br><br><b>TERRA COMMODITIES SAS</b><br>Federico Ortiz<br><br><b>YAUTO SAS</b><br>Pedro Posada                                                                                                        |
| <b>Validation Body and Verification</b>                                           | AENOR                                                                                                                                                                                                                                                       |
| <b>Project duration</b>                                                           | 17-Jan-2018 to 16-Jan-2048; 30 years                                                                                                                                                                                                                        |
| <b>Accreditation Period</b>                                                       | 17-Jan-2018 to 16-Jan-2048; 30 years                                                                                                                                                                                                                        |
| <b>Methodology</b>                                                                | ProClima 2021<br>Methodological Document AFOLU Sector<br>Quantification of GHG Emission Reductions<br>or Removals from REDD+ Projects<br>Version 2.2.<br>05-February-2021                                                                                   |
| <b>Estimated GHG reduction</b>                                                    | <b>Deforestation:</b><br>1,023,028 tCO <sub>2</sub> e/year<br>30,690,863 tCO <sub>2</sub> e for 30-year crediting period<br><br><b>Degradation:</b><br>26,389 tCO <sub>2</sub> e/year<br>818,086 tCO <sub>2</sub> e for an accreditation period of 30 years |



|                                                                                   |                                                                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>REDD+ Project Document</b>                                                                                                       |
| <b>Basic Project Information</b>                                                  |                                                                                                                                     |
|                                                                                   | <b>Project total:</b><br>1,049,418 tCO <sub>2</sub> e/year<br>31,508,950 tCO <sub>2</sub> e for an accreditation period of 30 years |
| <b>Contact Person</b>                                                             | Juan Andrés López Silva<br>jlopezsilva@carbostenible.co<br>m<br>+57 1 249 4098<br>+57 311 4814086                                   |



## Table of Contents

|        |                                                                        |    |
|--------|------------------------------------------------------------------------|----|
| 1.     | Project description .....                                              | 9  |
| 1.1.   | Project summary .....                                                  | 9  |
| 1.2.   | Project objectives: .....                                              | 11 |
| 1.3.   | Project location .....                                                 | 15 |
| 1.4.   | Project duration .....                                                 | 16 |
| 1.5.   | Accreditation period .....                                             | 16 |
| 1.6.   | Head of the initiative .....                                           | 16 |
| 2.     | Applicability of the methodology .....                                 | 20 |
| 3.     | Normative references .....                                             | 21 |
| 4.     | Carbon sinks and GHG sources .....                                     | 24 |
| 4.1.   | Carbon deposits .....                                                  | 24 |
| 4.2.   | Sources of GHG .....                                                   | 25 |
| 5.     | Spatial and temporal limits of the project .....                       | 25 |
| 5.1.   | Eligible REDD+ project areas .....                                     | 25 |
| 5.2.   | Land cover and land use .....                                          | 26 |
| 5.3.   | Biodiversity .....                                                     | 29 |
| 5.4.   | Characteristics of the communities of the indigenous reservation ..... | 34 |
| 5.5.   | Conservation Values .....                                              | 35 |
| 5.6.   | Reference region for baseline estimation .....                         | 36 |
| 5.7.   | Leakage area .....                                                     | 54 |
| 5.8.   | Time limits and analysis periods .....                                 | 56 |
| 5.8.1. | Project start date: 17-Jan-2018 .....                                  | 57 |
| 5.8.2. | Emission quantification period .....                                   | 59 |
| 5.8.3. | Monitoring periods .....                                               | 59 |
| 5.8.4. | Historical period of deforestation .....                               | 59 |
| 5.8.5. | REDD+ project emissions estimation .....                               | 60 |
| 6.     | Baseline scenario and additionality analysis .....                     | 61 |
| 6.1.   | Step o. REDD+ project start date .....                                 | 61 |



|        |                                                                                             |     |
|--------|---------------------------------------------------------------------------------------------|-----|
| 6.2.   | Step 1. Identification of the land use alternatives .....                                   | 62  |
| 6.2.1. | Sub-step 1a. Identification of probable land use alternatives in the project areas .....    | 62  |
| 6.2.2. | Sub-step 1b. Consistency of land use alternatives with applicable laws and regulations..... | 65  |
| 6.3.   | Step 2. Barrier analysis .....                                                              | 66  |
| 6.3.1. | Sub-step 2a. Identification of barriers to project implementation.....                      | 67  |
| 6.3.2. | Sub-step 2b. Analysis of barriers to scenario implementation .....                          | 68  |
| 6.4.   | Step 3. Impact of project registration.....                                                 | 69  |
| 7.     | Causes and agents of deforestation and degradation.....                                     | 70  |
| 7.1.   | Spatial and temporal dimensions.....                                                        | 70  |
| 7.2.   | Context .....                                                                               | 73  |
| 7.2.1. | Territorial context .....                                                                   | 73  |
| 7.2.2. | Socio-cultural context .....                                                                | 76  |
| 7.2.3. | Economic context .....                                                                      | 85  |
| 7.2.4. | Historical context .....                                                                    | 86  |
| 7.3.   | Key players, interests and motivations .....                                                | 89  |
| 7.4.   | Economic activities and their importance .....                                              | 92  |
| 7.5.   | Direct and indirect impact .....                                                            | 92  |
| 7.6.   | Relationships and synergies.....                                                            | 93  |
| 7.7.   | Chain of deforestation and degradation events.....                                          | 95  |
| 8.     | REDD+ Activities .....                                                                      | 96  |
| 8.1.   | General intervention strategy.....                                                          | 96  |
| 8.2.   | Prioritization of areas for interventions.....                                              | 97  |
| 8.3.   | Participation of all stakeholders in the territory .....                                    | 98  |
| 8.4.   | Contribution of the REDD+ Project to national climate change targets.....                   | 98  |
| 8.5.   | REDD+ strategy design .....                                                                 | 99  |
| 8.6.   | Description of REDD+ activities.....                                                        | 101 |
| 9.     | REDD+ safeguards .....                                                                      | 127 |
| 10.    | GHG emission reductions from REDD+ activities.....                                          | 137 |
| 10.1.  | Uncertainty management .....                                                                | 137 |

|         |                                                                              |     |
|---------|------------------------------------------------------------------------------|-----|
| 10.2.   | Activity data .....                                                          | 139 |
| •       | Deforestation.....                                                           | 139 |
| •       | Degradation.....                                                             | 141 |
| •       | Emission factors .....                                                       | 148 |
| •       | Deforestation.....                                                           | 148 |
| •       | Degradation.....                                                             | 150 |
| •       | GHG emissions in the period of analysis .....                                | 150 |
| •       | Deforestation.....                                                           | 150 |
| •       | Degradation.....                                                             | 151 |
| •       | GHG emission reductions expected with the implementation of REDD+ activities | 153 |
| 10.2.2. | Deforestation .....                                                          | 153 |
| 10.2.3. | Degradation .....                                                            | 154 |
| 11.     | Monitoring plan .....                                                        | 155 |
| 11.1.   | Project limits .....                                                         | 155 |
| 11.2.   | Implementation of REDD+ activities .....                                     | 156 |
| 11.3.   | Monitoring of REDD+ safeguards .....                                         | 196 |
| 11.4.   | Project permanence .....                                                     | 204 |
| 11.5.   | Project emissions .....                                                      | 209 |
| •       | Activity data .....                                                          | 209 |
| •       | GHG emissions in the monitoring period.....                                  | 212 |
| •       | Quantification of the project's emission reductions .....                    | 214 |
| 11.6.   | Quality control and quality assurance procedures.....                        | 216 |
| 12.     | Risk Management.....                                                         | 216 |
|         | References .....                                                             | 221 |



## List of Tables

|                                                                                                               |     |
|---------------------------------------------------------------------------------------------------------------|-----|
| Table 1. Sustainable Development Goals with which the project activities are aligned.....                     |     |
| 12                                                                                                            |     |
| Table 2. Conditions of applicability of the methodology and its compliance                                    | 20  |
| Table 3. Carbon Deposits.                                                                                     | 24  |
| Table 4. Sources of GHG                                                                                       | 25  |
| Biodiversity identified in the red books for the project area.                                                | 31  |
| Table 6. Species identified in the IUCN Red List in the project area (IUCN, 2021). ....                       |     |
| 32                                                                                                            |     |
| Table 7. Ecosystems present in the project area and in the region of reference (Gobernación de Caquetá, 2013) |     |
| .....                                                                                                         |     |
| 53                                                                                                            |     |
| Table 8. Criteria for defining the area of leakage and their fulfillment                                      | 55  |
| Table 9. GHG emission reductions resulting from project implementation.                                       | 60  |
| Table 10. Analysis of barriers with respect to identified land use scenarios                                  | 68  |
| Table 11. Key actors, motivations and interests                                                               | 91  |
| Table 12. Economic activities and their importance                                                            | 92  |
| Table 13. Causes of deforestation and its impact                                                              | 92  |
| Table 14. Matrix of land use change                                                                           | 94  |
| Table 15. Deforestation and Degradation Chain of Events                                                       | 95  |
| Table 16. REDD+ safeguards and compliance                                                                     | 127 |
| Table 17. Fragmentation classes                                                                               | 143 |
| Transition of fragmentation classes (ha) for the period from 2007 to 2014 in the reference region.            |     |
|                                                                                                               | 14  |
| 4                                                                                                             |     |
| Table 19. Transition of fragmentation classes (ha) for the period from 2014 to 2017 in the reference region.  |     |
|                                                                                                               | 14  |
| 4                                                                                                             |     |
| Table 20. Aerial biomass by fragmentation class                                                               | 150 |
| Table 21. Difference in aerial biomass by type of fragmentation                                               | 150 |
| Table 22. Permanence risk analysis.                                                                           | 205 |



## List of Maps

|                                                                                                                                       |    |
|---------------------------------------------------------------------------------------------------------------------------------------|----|
| Map 1. Location of the REDD+ project area Puerto Zábalo and Los Monos. Source: Own elaboration.....                                   | 15 |
| Map 2 Zoning of the reserve Indígena Puerto Zábalo y Los Monos in 2016. Source: (reserve Puerto Zábalo y Los Monos, 2016) .....       | 16 |
| Map 3. Delimitation of the indigenous reservation and the forest area corresponding to the project area. Source: Own elaboration..... | 26 |
| Map 4. Land use coverages in the territory of the RI Puerto Zábalo and Los Monos. Source: Own elaboration. ....                       | 29 |
| Map 5. Biological corridors between national protected areas (taken from USAID, 2021) .....                                           | 38 |
| Map 6. Spatial location of the project area and reference region. Source: Own elaboration.....                                        | 39 |
| Map 7. Climate in the project area and reference region. Source: Own elaboration.....                                                 | 42 |
| Map 8. Precipitation in the project area and in the reference region.                                                                 | 44 |
| Map 9. Hydrography of the project area and reference region.                                                                          | 46 |
| Map 10. Soils in the project area and in the reference region. Source: IGAC, 2021 .....                                               | 48 |
| Map 11. Relief in the project area and the reference region                                                                           | 52 |
| Map 12. Ecosystems present in the project area and in the reference region. ....                                                      | 54 |
| Map 13. Leakage area of the project. Source: Own elaboration                                                                          | 56 |
| Map 14. Forest loss in the project reference area for the period from 2007 to 2017. Source: Own elaboration.....                      | 58 |
| Map 15. Forest loss in the project area for the period from 2018 to 2021. Source: Own                                                 |    |





elaboration.....

59

Map 16. Forest loss in the indigenous reservation for the period between 2007 and 2017. Source: Own elaboration. 71

Map 17. Degradation in the project area, reference region and leakage area between 2007-2014. Source: Own elaboration. 72

Map 18. Degradation in the project area, reference region and leakage area between 2014 and 2017. Source: Own elaboration. 73

Map 19. Degradation in the project area, reference region and leakage area in the period 2007-2017. Source: Own elaboration. 143

# 1. Project description

## 1.1. Project summary

The objective of the Puerto Zabalo and Los Monos indigenous reserve REDD+ Project is to contribute to the sustainable development of the communities and preserve the existing forests in the reservation's territory. This community initiative seeks to conserve the forest through a comprehensive strategy that strengthens the community's territorial governance (implementation of the Life Plan and Safeguards Plan, updating of the Environmental Management Plan, implementation of the Monitoring Plan, and strengthening of the community's capacities and culture), develops sustainable productive activities compatible with nature that contribute to food security and income generation, implements biodiversity monitoring actions, and improves social investment in the territory. The project is mainly oriented to the national carbon market through the commercialization of carbon credits for carbon tax exemption, as well as the eventual commercialization in international instances.

The territory of the Indigenous Reserve covers 624,590 hectares, of which 609,025 hectares correspond to the forest that makes up the project area that is eligible under the REDD+ mechanism. The reserve is located in the municipality of Solano (department of Caquetá), on the northern bank of the Caquetá River and is made up of the communities of Los Estrechos, Quinché, Jerusalén and Coemaní. These communities are home to approximately 244 families, which represents at least 1092 people belonging to the Uitoto ethnic group. Most of them speak the Minika dialect variation, except for Puerto Zábalo and Coemaní, which speak Uitoto. The Indigenous reserve was constituted by Resolution 032 of 1988 of INCORA and was modified by Agreement 026 of 2017 of the National Land Agency of the Ministry of Agriculture and Rural Development to expand the area of the reserve and manage to connect the Chiribiquete National Park with the Predio Indigenous reserve in Putumayo and thus create one of the largest conservation corridors in the Amazon (PID Amazonía , 2017).

The territory of the Puerto Zábalo y Los Monos reserve has experienced a reduction in forest cover mainly due to land use changes associated with the expansion of the agricultural frontier, timber extraction for subsistence and commercialization, establishment of illicit crops, colonization processes, and alluvial mining activities. The forest cover has also been affected by landslides and soil erosion. Project activities are aimed at reducing deforestation and unplanned forest degradation in the reserve's territory, which is expected to mitigate climate change by reducing greenhouse gas (GHG) emissions.

The project falls under the Agriculture, Forestry and Other Land Use (AFOLU) sector, in the Reducing Emissions from Deforestation and Degradation (REDD+) category. The ProClima methodology (Quantification of GHG Emission Reductions or Removals from REDD+ Projects, v.2.2 of 2021) is used and is expected to avoid the emission of about 31,508,950 tCO<sub>2</sub> during the 30-year crediting period, with an annual average of 1.049418 tCO<sub>2</sub>. Emission reductions result from the implementation of an integrated strategy that includes improving governance, developing sustainable production systems, increasing social investment, and monitoring biodiversity. Through the trading of carbon certificates (Verified Carbon Credits -VC), economic resources will be obtained to ensure compliance with the activities necessary to achieve sustainable development objectives in the long term.

The formulation and implementation of the project has been the responsibility of the communities of the reserve and the project developers, involving the active participation of all community members, their leaders and legal representatives. Work has been done continuously to strengthen the interest, commitment to participation and orientation of all participants so that the objectives conceived from the project design to the implementation of the activities are achieved. The participation of community members in all stages of project development has facilitated the understanding and appropriation of the initiative at the reserve level, noting that the results and expectations continue to grow over time.

By accessing the REDD+ mechanism, communities can consolidate their efforts to protect forests and strengthen territorial control and cultural adhesion activities, as well as satisfy the economic needs that arise from voluntarily renouncing activities that compromise the stability of the forests in the reserve.

## 1.2. Project objectives:

The project has the following general objective:

- Contribute to the sustainable development of the communities and reduction of deforestation and forest degradation in the territory of the Puerto Zábalo and Los Monos Indigenous Reservation, in the department of Caquetá.

The specific objectives of the project are:

- **Climate objective:** Mitigate climate change by reducing forest degradation and deforestation and restoring degraded areas.
- **Biodiversity objective:** Contribute to the conservation and monitoring of the biodiversity present in the indigenous territory.
- **Objective for the community:** To promote the sustainable development of local communities and improve living conditions, considering the following elements:
  - a. Strengthen self-government, ancestral knowledge and spirituality of the communities.
  - b. Develop productive systems compatible with nature conservation and community welfare.
  - c. Strengthen land-use planning.
  - d. Strengthen mechanisms to guarantee food security for the communities living in the reserve.
  - e. Contribute to improve the living conditions of the communities living in the reserve.

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

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

| Category                             | Unit of measure                                                                                                                                                             | Sustainable Development Goal                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reduction of emissions of GEI</b> | Reductions reductions emissions reductions in the area of the project.                                                                                                      | <b>SDG 13</b> - Climate Action                                                                                                                                                                                                                                                                                                                         |
| <b>Coverage wooded</b>               | Area of preserved forest in indigenous territories.                                                                                                                         | <b>SDG 13</b> - Climate Action<br><b>SDG 15</b> - Life of Terrestrial Ecosystems                                                                                                                                                                                                                                                                       |
| <b>Land use</b>                      | Area of forest with improved management practices.                                                                                                                          | <b>SDG 11</b> - Sustainable cities and communities<br><b>SDG 13</b> - Climate Action<br><b>SDG 15</b> - Life of Terrestrial Ecosystems                                                                                                                                                                                                                 |
|                                      | Area of agricultural systems with improved management practices.                                                                                                            | <b>SDG 2</b> - Zero Hunger<br><b>SDG 11</b> - Sustainable cities and communities<br><b>SDG 13</b> - Climate Action<br><b>SDG 15</b> - Life of Terrestrial Ecosystems                                                                                                                                                                                   |
| <b>Capacity building</b>             | People who benefit from training and training in production systems management, biodiversity strategies for biodiversity monitoring and territorial governance mechanisms.  | <b>SDG 1</b> - End poverty<br><b>SDG 2</b> - Zero Hunger<br><b>SDG 8</b> - Decent work and economic growth<br><b>SDG 10</b> - Reduced inequalities<br><b>SDG 11</b> - Sustainable cities and communities<br><b>SDG 12</b> - Responsible production and consumption<br><b>SDG 13</b> - Climate Action<br><b>SDG 15</b> - Life of Terrestrial Ecosystems |
|                                      | Women benefiting from training and training in management of productive systems, biodiversity strategies for biodiversity monitoring and territorial governance mechanisms. | <b>SDG 1</b> - End poverty<br><b>SDG 2</b> - Zero Hunger<br><b>SDG 5</b> - Gender equality<br><b>SDG 8</b> - Decent work and economic growth<br><b>SDG 10</b> - Reducing Inequalities<br><b>SDG 11</b> - Sustainable cities and communities                                                                                                            |

| Category           | Unit of measure                                                                                     | Sustainable Development Goal                                                                                                                                                                                                                |
|--------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    |                                                                                                     | <b>SDG 12</b> - Responsible production and consumption<br><b>SDG 13</b> - Climate Action<br><b>SDG 15</b> - Life of Terrestrial Ecosystems                                                                                                  |
| <b>Employment</b>  | Persons who are employed or receive economic incentives within the framework of project activities. | <b>SDG 1</b> - End poverty<br><b>SDG 2</b> - Zero Hunger<br><b>SDG 8</b> - Decent work and economic growth<br><b>SDG 10</b> - Reducing inequalities<br><b>SDG 11</b> - Sustainable cities and communities                                   |
|                    | Women who are employed or receive economic incentives as part of project activities.                | <b>SDG 1</b> - End poverty<br><b>SDG 2</b> - Zero Hunger<br><b>SDG 5</b> - Gender equality<br><b>SDG 8</b> - Decent work and economic growth<br><b>SDG 10</b> - Reducing Inequalities<br><b>SDG 11</b> - Sustainable cities and communities |
| <b>Livelihoods</b> | People who improve their livelihoods or income as a result of project activities.                   | <b>SDG 1</b> - End poverty<br><b>SDG 2</b> - Zero Hunger<br><b>SDG 8</b> - Decent work and economic growth<br><b>SDG 10</b> - Reducing Inequalities<br><b>SDG 11</b> - Sustainable cities and communities                                   |
|                    | Women who improve their livelihoods or income as a result of project activities.                    | <b>SDG 1</b> - End poverty<br><b>SDG 2</b> - Zero Hunger<br><b>SDG 5</b> - Gender equality<br><b>SDG 8</b> - Decent work and economic growth<br><b>SDG 10</b> - Reducing inequalities<br><b>SDG 11</b> - Sustainable cities and communities |
| <b>Health</b>      | Individuals who obtain or improve access to health services as a result of the project activities.  | <b>SDG 3</b> - Health and well-being<br><b>SDG 11</b> - Sustainable cities and communities                                                                                                                                                  |
|                    | Women that obtain or improve access to health care services                                         | <b>SDG 3</b> - Health and well-being<br><b>SDG 5</b> - Gender equality                                                                                                                                                                      |

| Category                          | Unit of measure                                                                                                                  | Sustainable Development Goal                                                                                                                                                                                                          |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   | health as a result of the project activities.                                                                                    | <b>SDG 11</b> - Cities and communities sustainable                                                                                                                                                                                    |
| <b>Education</b>                  | Individuals gaining access to or improvements in the quality of education services as a result of the activities of the project. | <b>SDG 4</b> - Quality education<br><b>SDG 10</b> - Reduced inequalities<br><b>SDG 11</b> - Sustainable cities and communities                                                                                                        |
|                                   | Women gaining access to or improvements in the quality of education services as a result of the activities of the project.       | <b>SDG 4</b> - Quality education<br><b>SDG 5</b> - Gender equality<br><b>SDG 10</b> - Reducing Inequalities<br><b>SDG 11</b> - Sustainable cities and communities                                                                     |
| <b>Water and basic sanitation</b> | People gaining access to safe drinking water or improving the quality of their drinking water as a result of project activities. | <b>SDG 1</b> - End Poverty<br><b>SDG 2</b> - Zero Hunger<br><b>SDG 3</b> - Health and Well-being<br><b>SDG 6</b> - Clean water and sanitation<br><b>SDG 11</b> - Sustainable cities and communities                                   |
|                                   | Women gaining access to safe drinking water or improving the quality of their drinking water as a result of project activities.  | <b>SDG 1</b> - End Poverty<br><b>SDG 2</b> - Zero Hunger<br><b>SDG 3</b> - Health and Well-Being<br><b>SDG 5</b> - Gender equality<br><b>SDG 6</b> - Clean water and sanitation<br><b>SDG 11</b> - Sustainable cities and communities |
| <b>Welfare</b>                    | People whose well-being is improved as a result of project activities.                                                           | <b>SDG 3</b> - Health and well-being<br><b>SDG 7</b> - Affordable, clean energy<br><b>SDG 11</b> - Cities and communities sustainable                                                                                                 |
|                                   | Women whose well-being improves as a result of project activities.                                                               | <b>SDG 3</b> - Health and well-being<br><b>SDG 5</b> - Gender equality<br><b>SDG 7</b> - Affordable and clean energy<br><b>SDG 11</b> - Cities and communities sustainable                                                            |



|                                  |                                                                                                      |                                                                                                      |
|----------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| <b>Biodiversity conservation</b> | Intervention area in which management measures are implemented for the conservation of biodiversity. | <b>SDG 11</b> - Sustainable cities and communities<br><b>SDG 15</b> - Life of Terrestrial Ecosystems |
|----------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|

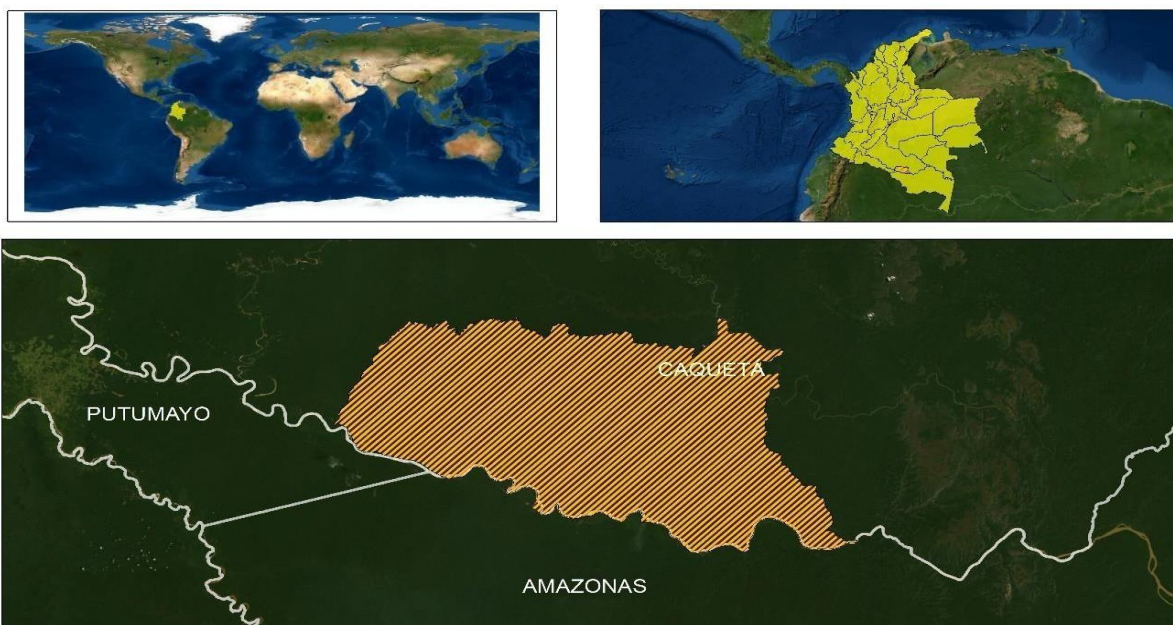


| Category | Unit of measure                                                                                | Sustainable Development Goal                                                                         |
|----------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
|          | Species in any category of risk of extinction that are protected under the project activities. | <b>SDG 11</b> - Sustainable cities and communities<br><b>SDG 15</b> - Life of Terrestrial Ecosystems |

### 1.3. Project location

The project is located in the territory of the Puerto Zábalo and Los Monos Indigenous Reserve in the municipality of Solano, department of Caquetá, where the communities of Jerusalén, Quinche, Los Estrechos and Coemaní are located. The reserve is located in the western part of the municipality, bordered to the south by the Caquetá River and to the north by the Serranía de Chiribiquete National Park.

The spatial location of the project area is presented below:



Map 1. Location of the REDD+ project area Puerto Zábalo and Los Monos. Source: Own elaboration



*Map 2 Zoning of the Puerto Zábalo and Los Monos Indigenous Reservation in 2016. This map includes areas on the southern bank of the Caquetá River that are not part of the reserve. This zoning was done before the expansion in 2017, so the northern boundary does not match the current boundary that borders the Serranía de Chiribiquete National Natural Park. Source: (reserve Puerto Zábalo and Los Monos, 2016).*

#### 1.4. Project duration

The project start date is 17-Jan-2018 and extends for a period of 30 years, which indicates that the project will end on 16-Jano-2048.

#### 1.5. Accreditation period

The accreditation period corresponds to the period from January 17, 2018 to January 16, 1948, for a total of 30 years.

#### 1.6. Initiative holder

The owners of the project correspond to the project proponents, i.e. the four communities that make up the Puerto Zábalo and Los Monos Indigenous Reservation, and CARBO Sostenible S.A.S., Terra Commodities S.A.S., Yauto S.A.S. and VISSO Consultores S.A.S. The holders are responsible for the formulation, implementation, follow-up and registration of the initiative. The following is the information of each holder:

|                      |                                                                                                    |
|----------------------|----------------------------------------------------------------------------------------------------|
| Name of organization | Puerto Zábalo and Los Monos Indigenous Reservation<br>Coemani Community                            |
| Contact Person       | Fidel Ortiz Joikategedo                                                                            |
| Occupation           | Governor                                                                                           |
| Address              | Puerto Zábalo and Los Monos Indigenous<br>Reservation, Solano municipality, Caquetá<br>department. |
| Phone                | +57 316 2046132<br>+57 321 2044735                                                                 |



|       |                                                                         |
|-------|-------------------------------------------------------------------------|
| Email | Not applicable                                                          |
| Role  | Participatory joint project development<br>Implementation of activities |

|                      |                                                                                              |
|----------------------|----------------------------------------------------------------------------------------------|
| Name of organization | Puerto Zábalo and Los Monos Indigenous Reservation<br>Los Estrechos Community                |
| Contact Person       | Herminso Safirekudo                                                                          |
| Occupation           | Captain                                                                                      |
| Address              | Puerto Zábalo and Los Monos Indigenous Reservation, Solano municipality, Caquetá department. |
| Phone                | +57 316 2046132<br>+57 321 2044735                                                           |
| Email                | Not applicable                                                                               |
| Role                 | Participatory joint project development<br>Implementation of activities                      |

|                      |                                                                                              |
|----------------------|----------------------------------------------------------------------------------------------|
| Name of organization | Puerto Zábalo and Los Monos Indigenous Reservation<br>Jerusalem Community                    |
| Contact Person       | Milenco Emanuel Safirekudo                                                                   |
| Occupation           | Governor                                                                                     |
| Address              | Puerto Zábalo and Los Monos Indigenous Reservation, Solano municipality, Caquetá department. |
| Phone                | +57 316 2046132<br>+57 321 2044735                                                           |
| Email                | Not applicable                                                                               |
| Role                 | Participatory joint project development<br>Implementation of activities                      |



|                      |                                                                                              |
|----------------------|----------------------------------------------------------------------------------------------|
| Name of organization | Puerto Zábalo and Los Monos Indigenous Reservation<br>El Quinche Community                   |
| Contact Person       | Elpidio Capera Riecoche                                                                      |
| Occupation           | Governor                                                                                     |
| Address              | Puerto Zábalo and Los Monos Indigenous Reservation, Solano municipality, Caquetá department. |
| Phone                | +57 316 2046132<br>+57 321 2044735                                                           |
| Email                | Not applicable                                                                               |
| Role                 | Participatory joint project development<br>Implementation of activities                      |

|                      |                                                                                                                    |
|----------------------|--------------------------------------------------------------------------------------------------------------------|
| Name of organization | Carbo Sostenible SAS                                                                                               |
| Contact Person       | Juan Andres Lopez                                                                                                  |
| Occupation           | Legal Representative                                                                                               |
| Address              | Calle 77ª # 12-60, of 301                                                                                          |
| Phone                | +57 311 4814086                                                                                                    |
| Email                | <a href="mailto:jlopezsilva@carbosostenible.com">jlopezsilva@carbosostenible.com</a>                               |
| Role                 | Project Developer<br>Support in the implementation of carbon credit trading activities.<br>Financing of activities |

|                      |                                                                              |
|----------------------|------------------------------------------------------------------------------|
| Name of organization | Terra Commodities SAS                                                        |
| Contact Person       | Federico Ortiz                                                               |
| Occupation           | Director                                                                     |
| Address              | CALLE 70 No. 6-55 AP2 Bogotá, Colombia                                       |
| Phone                | +57 310 223 5070 +351 913608709                                              |
| Email                | <a href="mailto:fortiz@terracommodities.net">fortiz@terracommodities.net</a> |



|      |                                                                                                                      |
|------|----------------------------------------------------------------------------------------------------------------------|
| Role | Project Developer<br>Support in the implementation of activities<br>Carbon credit trading<br>Financing of activities |
|------|----------------------------------------------------------------------------------------------------------------------|

|                      |                                                                                                                           |
|----------------------|---------------------------------------------------------------------------------------------------------------------------|
| Name of organization | Yauto SAS                                                                                                                 |
| Contact Person       | Alicia Micolta                                                                                                            |
| Occupation           | Legal Representative                                                                                                      |
| Address              | URBANIZATION RINCON SAN PEDRO GUAYMARAL,<br>Bogotá, Colombia                                                              |
| Phone                | +57 316 831 2367                                                                                                          |
| Email                | <a href="mailto:amicoltac@gmail.com">amicoltac@gmail.com</a>                                                              |
| Role                 | Project developer<br>Coordination of field work<br>Support in the implementation of activities<br>Financing of activities |

|                      |                                                                                  |
|----------------------|----------------------------------------------------------------------------------|
| Name of organization | VISO CONSULTANTS SAS                                                             |
| Contact Person       | Jorge Giron                                                                      |
| Occupation           | Legal Representative                                                             |
| Address              | Carrera 13ª # 127 - 40 / Office 402 Bogotá, Colombia                             |
| Phone                | +57 315 345 9581                                                                 |
| Email                | <a href="mailto:asociado@vissoconsultores.com">asociado@vissoconsultores.com</a> |
| Role                 | Project developer Activity financing                                             |

## 2. Applicability of the methodology

Table 2. Conditions of applicability of the methodology and its compliance.

| Condition of applicability                                                                                                                                                                 | Compliance                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a) The areas within the geographical boundaries of the project correspond to the forest category at the beginning of the project activities and ten years prior to the project start date. | Compliant. Based on the cartographic analysis, it can be determined that the project area corresponds to forest that was present ten years prior to the start date of the activities.                           |
| b) The identified causes of deforestation include: expansion of the agricultural frontier, mining, timber extraction, and infrastructure expansion.                                        | Complies. The expansion of the agricultural frontier (including illicit crops), mining, and timber extraction for self-consumption and sale were identified as the causes of deforestation in the project area. |
| c) The causes of degradation include: selective logging, firewood extraction, forest fires, forest grazing and expansion of the agricultural frontier - illicit crops.                     | Compliant. In the project area, selective logging, mining, and the expansion of the agricultural frontier - illicit crops - were identified as causes of forest degradation.                                    |
| d) No reduction in deforestation or degradation is expected to occur in the absence of the project.                                                                                        | Compliant. The trend of deforestation and degradation has historically been maintained and may continue in the absence of the project.                                                                          |
| e) It is possible that in deforested areas the carbon stocks in organic matter                                                                                                             | Complies. In deforested areas the reserves carbon in soil organic matter, litter and dead wood decrease.                                                                                                        |

| Condition of applicability                                                                                                                                        | Compliance                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| soil, litter and dead wood decrease or remain stable.                                                                                                             |                                                                                                                                                                            |
| f) The quantification of GHGs other than CO <sub>2</sub> must be included in the quantification of emissions caused by forest fires during the monitoring period. | Compliant. During the monitoring period, if forest fires are detected, GHG emissions will be quantified and included in the associated emissions estimates to the project. |
| (g) The activities constituting the REDD+ project shall not result in the violation of any applicable law.                                                        | Compliant. REDD+ activities comply with national regulations.                                                                                                              |

### 3. Normative references

During the structuring of the project, the applicable legal framework was taken into account in order to address each of the required elements. As a compliance verification mechanism, the *QC-QA Procedure Puerto Zábalo and Los Monos v1.pdf* (located in Annex 7 folder) was defined, which includes a follow-up format called *Matriz Cumplimiento Legal\_Proyecto REDD+ Pto Sábalo Los Monos v1.xlsx* (located in Annex 6). In order to highlight the regulatory framework that applies to the projects and that was taken into account in the development of the project, the following is a list of the standards and reference documents:

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

**Resolution 831 of 2020:** issued by the Ministry of Environment and Sustainable Development (MADS), which modifies Resolution 1447 of 2018, and establishes the requirements for registration in RENARE and the validity of projects to report and cancel in RENARE. It establishes guidelines to save and demonstrate the methodological consistency of the baselines of sectoral projects.



**Law 1931 of 2018:** issued by the national government, establishing guidelines for climate change management in the country.

**Resolution 471 of 2020:** issued by the reserve Instituto Geográfico Agustín Codazzi (IGAC), it indicates the minimum technical specifications that must be included in the official basic cartography products of Colombia, as well as their scope of application, scope, among others.

**Resolution 370 of 2021:** issued by the Instituto Geográfico Agustín Codazzi (IGAC), which establishes the official cartographic projection system for Colombia.

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

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

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

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





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

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

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

**Law 1819 of 2016:** Through which the structural tax reform is adopted, the mechanisms for the fight against tax evasion and avoidance are strengthened, and through which the National Carbon Tax is created in response to the country's need for economic instruments to incentivize compliance with greenhouse gas (GHG) mitigation goals at the national level.

**Decree 926 of 2017:** Establishes the procedure for the Non Causation of the National Carbon Tax. Its purpose is to stimulate the formulation and implementation of mitigation initiatives that generate GHG emissions reductions or removals in exchange for the non-causation of the tax.

**Nationally Determined Contribution:** Colombia signed and ratified the commitment acquired by the Paris Agreement in 2015 to strengthen its efforts to regulate its emissions to avoid global temperature increase. Within the framework of this agreement, Colombia subscribed in its Nationally Determined Contribution (NDC) an initial target of 20% reduction of its emissions with respect to a baseline scenario to 2030. In 2020, Colombia updated its NDC, by making a commitment to



reduce emissions by 51% by 2030 with a clear focus on reducing emissions from deforestation and forest degradation.

**Resolution 032 of 1988:** Issued by the Colombian Institute of Agrarian Reform - INCORA, through which the Puerto Zábalo and Los Monos Indigenous Reserve is constituted.

**Agreement 026 of 2017:** issued by the National Land Agency of the Ministry of Agriculture and Rural Development, whereby Resolution 032 of 1988 is amended and the territory of the Puerto Zábalo and Los Monos Indigenous Reservation is expanded.

**PROCLIMA® Program:** Program for Certification and Registration of GHG Mitigation Initiatives and other Greenhouse Gas Projects, corresponding to the latest published version.

## 4. Carbon sinks and GHG sources

### 4.1. Carbon deposits

The carbon reservoirs included in the project are:

*Table 3. Carbon Deposits.*

| Carbon Deposit                           | Is it included? | Justification                                                                                                                          |
|------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Aerial biomass<br>Arboreal<br>vegetation | Yes             | Represents the largest carbon reservoir derived from the implementation of project activities.                                         |
| Aerial biomass Non-<br>tree vegetation   | No              | This deposit is not included considering that it is planned to develop productive activities based on agricultural species and annual. |
| Subway biomass                           | Yes             | It is a representative carbon pool derived from the implementation of the activities of the project.                                   |
| Dead wood and leaf<br>litter             | No              | See excludes this deposit from at conservative, as it is not expected to increase in the post-deforestation scenario.                  |

| Carbon Deposit      | Is it included? | Justification                                                                                |
|---------------------|-----------------|----------------------------------------------------------------------------------------------|
| Soil organic carbon | Yes             | It is a deposit whose carbon content is expected to change in the scenario with the project. |

#### 4.2. Sources of GHG

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

Table 4. Sources of GHGs.

| Source                      | GEI              | Is it included? | Justification                                                                                                                                                                                            |
|-----------------------------|------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Combustion of woody biomass | CO <sub>2</sub>  | No              | No project activities involving biomass burning are generated.                                                                                                                                           |
|                             | CH <sub>4</sub>  | No              | In the event of fire during the monitoring period of activities, the emissions of the activities will be estimated methane and will be included in the emissions of the corresponding period.            |
|                             | N <sub>2</sub> O | No              | In the event of fire during the monitoring period of activities, the emissions of the activities will be estimated nitrogen dioxide and shall be included in the emissions for the corresponding period. |

## 5. Spatial and temporal limits of the project

### 5.1. Eligible REDD+ project areas

Eligible project areas correspond to the stable forest found within the boundaries of the Indigenous Reservation in the municipality of Solano for at least a period of ten years prior to the project start date, according to the definition of forest adopted by Colombia and used by the SMCByC, namely, land occupied land occupied mainly by trees that may contain shrubs, palms, guaduas, herbs and lianas, in which tree cover predominates with a minimum canopy density of 30%, a minimum canopy height in



situ of 5 meters at the time of identification and a minimum area of one hectare (IDEAM, 2014a).

The Puerto Zábalo and Los Monos Indigenous Reservation comprises a titled area of 211,480 hectares as established in Resolution 032 of 1988, issued by INCORA and was expanded by 413,110 hectares through Agreement 026 of 2017, thus obtaining a total area of the reserve of 624,580 hectares and 6,246 square meters. The project area corresponds to the forest that remains stable for the last 10 years prior to the start date, which for this case amounts to 609,025 ha, all located within the boundaries of the Amazon biome.



Map 3. Delimitation of the indigenous reservation and the forest area corresponding to the project area. Source: Own elaboration.

## 5.2. Land cover and land use

The reserve area is located in the Amazon region in the municipality of Solano, which has close to 90% forest cover. The natural or semi-natural areas of the municipality are mainly made up of native or exotic tree species. The trees are woody perennial plants with

a single main trunk, which has a more or less defined crown. This cover includes natural forests and plantations, including palm and guadua (Alcaldía Municipal de Solano, 2019).

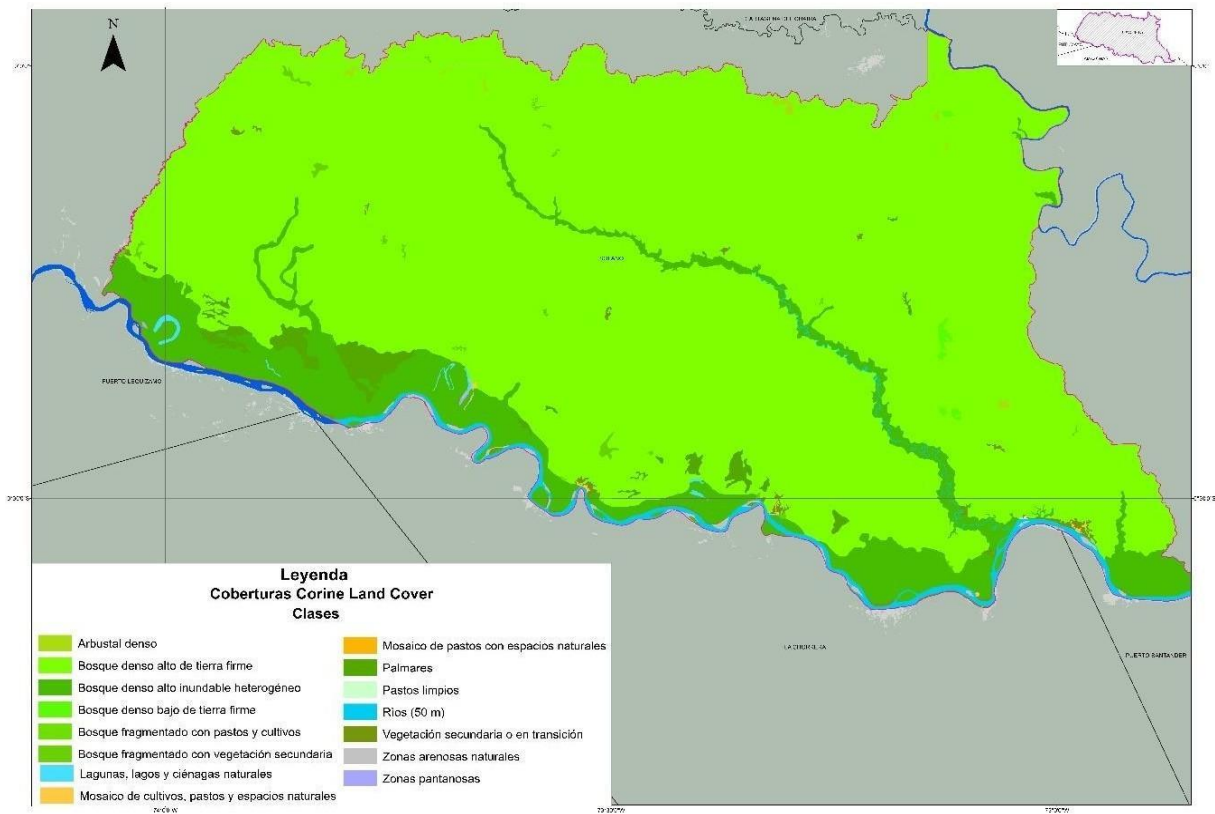
Land cover and land uses include (Gobernación del Caquetá, 2012):

- **Urbanized:** Includes the territories covered by urban infrastructure and all those green spaces and communication networks associated with them, which make up an urban fabric and includes the discontinued urban fabric.
- **Pasture:** Comprises land covered with dense grass devoted to permanent grazing for a period of two or more years.
- **Clean pastures:** This cover includes land occupied by clean pastures with a percentage of cover greater than 70%.
- **Weeded pastures:** These coverages are represented by land with grasses and weeds forming associations of secondary vegetation, mainly due to poor management practices or the occurrence of abandonment processes.
- **Heterogeneous agricultural:** These are units that bring together two or more types of agricultural and natural coverages, arranged in an intricate pattern of geometric mosaics that make it difficult to separate them into individual coverages.
- **Pasture and crop mosaic:** Includes land occupied by pasture and crops.
- **Secondary or transitional vegetation:** That vegetation cover originated by the process of succession of natural vegetation that occurs after the intervention or by the destruction of primary vegetation, which can be found in recovery tending to the original state.
- **Dense forest:** Cover consisting of a vegetation community dominated by typically arboreal elements, which form a more or less continuous canopy stratum whose tree cover area represents more than 70% of the total area of the unit.
- **High dense upland forest:** Corresponds to areas with arboreal vegetation characterized by a more or less continuous stratum whose tree cover area represents more than 70% of the total area of the unit, with a canopy height of more than 15 meters and located in areas that do not present periodic flooding processes.



- **High dense heterogeneous flooded forest:** Corresponds to areas with arboreal vegetation characterized by a more or less continuous stratum whose tree cover area represents more than 70% of the total area of the unit, with a canopy height of more than 15 meters and located in the strips adjacent to water bodies (lotic and lentic), which correspond mainly to the floodplains and floodplains with periodic flooding processes lasting more than two months.
- **Lowland lowland dense forest:** Corresponds to areas with arboreal vegetation characterized by a more or less continuous stratum whose tree cover area represents more than 70% of the total area of the unit, with a canopy height between 5 and 15 meters, and which are located in areas that do not present periodic flooding processes.
- **Dense low flooded forest:** Corresponds to areas with arboreal vegetation characterized by a more or less continuous stratum whose tree cover area represents more than 70% of the total area of the unit, with a canopy height between 5 and 15 meters and located in the strips adjacent to bodies of water (lotic), which correspond mainly to the floodplains and floodplains with periodic flooding processes lasting more than two months.
- **Fragmented forest with secondary vegetation:** Includes areas covered by natural forests where there has been human intervention and forest recovery, so that the forest maintains its original structure. The areas of intervention are represented in zones of secondary vegetation, which are observed as patches of various shapes that are irregularly distributed in the forest matrix. The intervention patches should represent between 5% and 50% of the total area of the unit. The distance between intervention fragments should not be greater than 250 meters.
- **Dense grassland:** Cover consisting of a plant community dominated by typically herbaceous elements developed naturally on different substrates, which form a dense cover (>70% occupancy). There are also coverages associated with dense non-forested dry land grassland, dense forested dry land grassland, dense dry land grassland with shrubs, dense non-forested flooded grassland, dense flooded flooded grassland with trees, open grassland, open rocky grassland.

- **Other cover:** Includes Shrubland, Dense shrubland, Open mesophytic shrubland, Open areas, Natural sandy areas, Inland waters, Lagoons, lakes and natural marshes, Swampy areas.



Map 4. Land use coverages in the territory of the RI Puerto Zábalo and Los Monos. Source: Own elaboration.

### 5.3. Biodiversity

Due to its location, the municipality of Solano has a great natural wealth, in addition to having 73.7% of the Chiribiquete National Park (2,060,217 hectares), the largest natural reserve of its kind in its territory. In addition, the municipality has 36.4% of the Forest Reserve area of Law 2 of 1959 of the Amazon, with the character of "Protective Forest Zones" and "Forests of General Interest", especially type A zones. In other words, areas that guarantee the maintenance of the basic ecological processes necessary to ensure the provision of ecosystem services, mainly related to water and climate regulation; the assimilation of air and water pollutants; soil formation and protection; landscape protection; and the protection of the environment.





and cultural heritage; and support for biological diversity (CORPOAMAZONIA, 2015). The reserve area was expanded to connect the Chiribiquete National Park with the El Predio Indigenous Reserve in Putumayo and create one of the largest conservation corridors in the Amazon (PID Amazonía, 2017).

The region is characterized by the presence of arboreal vegetation abundant in woody leguminous plants. There are *Cesalpináceas*, of the *Dimorphandra*, *Peltogyne*, *Eperua* and *Elizabetha* type; type rich in endemics such as *Dicoryna*, *Macrolobium* and *Swanrtzia*, and families such as *Euforbiácea*, *Guttifera* and *Vochisiácea*. Fruit trees include *Sapotaceae*, *Rapataceae*, *Myristicaceae*, *Malpigiaceae* and *Rutaceae*, among others. In palms, *Leopoldina piassaba* and *Mauritia vinifera* are abundant (CORPOAMAZONIA, n.d.).

Of special importance are the species *Carapa guianensis*, *Cedrela odorata*, *Cariniana micrantha*, *Peltogyne spp.* and *Mimusops huberi* and species of *Calycophyllum*, *Eperua* and *Caryocar* (CORPOAMAZONIA, n.d.).

Among the most representative flora families of the Colombian Amazon are *Mimosaceae*, *Arecaceae*, *Caesalpinaceae*, *Monimiaceae*, *Cecropiaceae*, *Ulmaceae*, *Violaceae*, *Bombacaceae*, *Clusiaceae*, *Piperaceae*, *Flacourtiaceae*, *Fabaceae*, *Myrtaceae*, *Nyctaginaceae*, *Apocynaceae*, *Hippocrateceae*, *Dichapetelaceae* and *Bignoniaceae*. Among the most abundant genera are *Inga*, *Siparuna*, *Ampelocera*, *Bahuinia*, *Leonia*, *Piper*, *Pouruma*, *Matisia*, *Neea*, *Oneocarpus*, *Iriarte*, *Tapura* and *Dendropanax* (CORPOAMAZONIA, n.d.).

Among the most commonly used timber species are Achapo or Guamo Blanco or Guamo Cerindo (*C. cateniformis*), Perillo (*Couma macrocarpa*), Cedro (*C. odorata*), Sangreoro (*Virola spp.*), Carrecillo (*Bombacopsis quinatum*), Bilibil (*Guarea sp.*), Guamo Cerindo (*Inga cf. cylindrica*), Guamo Diablo (*Inga sp.*), Capirón (*Calycophyllum spruceanum*), Ahumado (*Buchenavia cf. congesta Ducke*), Marfil or Papelillo (*Simarouba sp.*), Fono Cabuyo (*Eschweilera sp.*), Canelo (*Ocotea sp.*), Chocho (*Parkia cf. Panurensis*), Laurel Comino (*Protium sp. y Nectandra sp.*), Madura Plátano (*Sterculia sp.*) (CORPOAMAZONIA, s.f.)

The species used as green firewood for cooking are Huesito, (*Memora cladotricha* Sandwith), Bizcocho (*Siparuna decipiens*), Golondrino, (*Guatteria megalophylla* and *Oxandra xylopioides*, Diels), Capirón, (*Calycophyllum spruceanum*), Costillo (*Aspidosperma excelsum* Benth), Aceituno Blanco (*Vitex* sp.), Maíz Tostado (*Hirtrella* sp.), Cobre (*Apuleia leiocarpa*) and Vara Limpia or Resbalamono (*Capirona decorticans*). The species used as dry firewood are Guamo (*Inga* spp), Sangreoro (*Virola* sp.), Maíz Tostado (*Hirtrella* sp.) and Perillo (*Couma macrocarpa*). (CORPOAMAZONIA, n.d.).

The region where the project is located is characterized by high biological biodiversity, including birds, amphibians, reptiles, mammals, and plants. The reserve territory is located near the Serranía de Chiribiquete National Natural Park in an area of high importance for ecological connectivity. More than 1,429 species have been identified in this area, 44 of which are endemic. Some of these species are vulnerable, endangered, and critically endangered, according to the classification defined by the International Union for Conservation of Nature (IUCN).

The following are the species of the region that are included in the red book of reptiles of Colombia (Morales-Betancourt, Lasso, Páez, & Bock, 2015), red book of freshwater fish of Colombia (Mojica, Usma Oviedo, Álvarez León, & Lasso, 2012), red book of birds of Colombia (Renjifo, Amaya-Villarreal, Burbano- Girón, & Velásquez-Tibatá, 2016), red book of plants of Colombia (Calderón-Sáenz, 2006; Cárdenas L. & Salinas, 2007), red book of amphibians of Colombia (RUEDA- ALMONACID, LYNCH, & AMÉZQUITA, 2004). All of these species are of special interest in the project area and it is expected to contribute to their protection through actions aimed at the conservation of the territory:

*Biodiversity identified in the red books for the project area.*

| Common name       | Scientific name                | Ranking         |
|-------------------|--------------------------------|-----------------|
| <b>Reptiles</b>   |                                |                 |
| Charapa Turtle    | <i>Podocnemis expansa</i>      | Critical Danger |
| Terecay Turtle    | <i>Podocnemis unifilis</i>     | Danger          |
| Morrocay Turtle   | <i>Chelonoidis carbonarius</i> | Vulnerable      |
| Black cayman      | <i>Melanosuchus niger</i>      | Vulnerable      |
| <b>Amphibians</b> |                                |                 |

| Common name                    | Scientific name                      | Ranking         |
|--------------------------------|--------------------------------------|-----------------|
| Rain frog with hooked hooks    | <i>Eleutherodactylus fallax</i>      | Vulnerable      |
| Inger Poison Frog              | <i>Epipedobates ingeri</i>           | Vulnerable      |
| Johnson's horned frog          | <i>Hemiphractus johnsoni</i>         | Vulnerable      |
| <b>Freshwater fishes</b>       |                                      |                 |
| Pirarucú                       | <i>Arapaima gigas</i>                | Vulnerable      |
| Plumita or Lechero             | <i>Brachyplatystoma filamentosum</i> | Vulnerable      |
| Striped                        | <i>Brachyplatystoma juruense</i>     | Vulnerable      |
| Striped catfish                | <i>Pseudoplatystoma punctifer</i>    | Vulnerable      |
| Striped catfish                | <i>Pseudoplatystoma tigrinum</i>     | Vulnerable      |
| Flemoso or Saliboro            | <i>Brachyplatystoma platynemum</i>   | Vulnerable      |
| Dorado                         | <i>Brachyplatystoma rousseauxii</i>  | Vulnerable      |
| Pirabuton or capable           | <i>Brachyplatystoma vaillantii</i>   | Vulnerable      |
| Arawana or arahuana or aroana. | <i>Osteoglossum bicirrhosum</i>      | Vulnerable      |
| Gambitana                      | <i>Colossoma macropomum</i>          | Near threatened |
| Duck bill or Charuto           | <i>Sorubim lime</i>                  | Near threatened |
| ax handle                      | <i>Sorubimichthys planiceps</i>      | Near threatened |
| <b>Birds</b>                   |                                      |                 |
| Black duck                     | <i>Netta erythrophthalma</i>         | Critical Danger |
| red-breasted peacock           | <i>crax globulosa</i>                | Vulnerable      |
| Tufted eagle                   | <i>Morphnus guianensis</i>           | Near threatened |
| <b>Plants</b>                  |                                      |                 |
| Epiphytic orchid               | <i>Coryanthes bruchmuelleri</i>      | Near threatened |
| Epiphytic orchid               | <i>Coryanthes leucocorys</i>         | Near threatened |
| Lily                           | <i>Cattleya schroederiae</i>         | Vulnerable      |
| Cedar                          | <i>Cedrela odorata L.</i>            | At risk         |

The following list of species present in the project area are listed as Endangered, Vulnerable or Near Threatened by the International Union for Conservation of Nature (IUCN) in the project area (IUCN, 2021).

Table 6. Species identified in the IUCN Red List in the project area (IUCN, 2021).

|                             |
|-----------------------------|
| <b>Category: Endangered</b> |
|-----------------------------|



|                      |          |                      |                               |
|----------------------|----------|----------------------|-------------------------------|
| Animalia             | Mammalia | Giant otter          | <i>Pteronura brasiliensis</i> |
| Animalia             | Mammalia | Tucuxi               | <i>Sotalia fluviatilis</i>    |
| Animalia             | Mammalia | Common spider monkey | <i>Ateles belzebuth</i>       |
| Animalia             | Birds    | Paujil Moquirrojo    | <i>Crax Globulosa</i>         |
| Category: Vulnerable |          |                      |                               |

|                                  |              |                                                      |                                |
|----------------------------------|--------------|------------------------------------------------------|--------------------------------|
| Animalia                         | Mammalia     | Amazonian tapir or tapir                             | <i>Tapirus terrestris</i>      |
| Animalia                         | Mammalia     | Humboldt monkey, choyo monkey, or gray woolly monkey | <i>Lagothrix lagothricha</i>   |
| Animalia                         | Mammalia     | Giant Armadillo                                      | <i>Priodontes maximus</i>      |
| Animalia                         | Mammalia     | Tigrillo or tiger leopard                            | <i>Leopardus tigrinus</i>      |
| Animalia                         | Mammalia     | Giant anteater                                       | <i>Myrmecophaga tridactyla</i> |
| Animalia                         | Mammalia     | Bearded peccary                                      | <i>Tayassu pecari</i>          |
| Animalia                         | Mammalia     | Calimico                                             | <i>Callimico goeldii</i>       |
| Animalia                         | Mammalia     | Pygmy Marmoset                                       | <i>Cebuella pygmaea</i>        |
| Animalia                         | Mammalia     | Sword-nosed bat                                      | <i>Lonchorhina marinkellei</i> |
| Animalia                         | Mammalia     | Primate                                              | <i>Pithecia milleri</i>        |
| Animalia                         | Mammalia     | Tití de Manos negras                                 | <i>Cheracebus medemi</i>       |
| Animalia                         | Birds        | Yellow furrowed toucan                               | <i>Ramphastos culminatus</i>   |
| Animalia                         | Birds        | Wine pigeon                                          | <i>Patagioenas subvinacea</i>  |
| Animalia                         | Birds        | White-winged curassow or turkey curassow guayanese   | <i>Crax alector</i>            |
| Animalia                         | Birds        | Gara agami                                           | <i>Agamia agami</i>            |
| Animalia                         | Birds        | Red-winged Parakeet                                  | <i>Touit huetii</i>            |
| Animalia                         | Birds        | Spiny swift or swift of fireplace                    | <i>Chaetura pelagica</i>       |
| Plantae                          | Magnolipside | American Cedar                                       | <i>Cedrela odorata</i>         |
| Plantae                          | Magnolipside | Majagua                                              | <i>Guatteria maguirei</i>      |
| <b>Category: Near threatened</b> |              |                                                      |                                |
| Animalia                         | Mammalia     | Short-eared fox                                      | <i>Atelocynus microtis</i>     |
| Animalia                         | Mammalia     | Margay or tiger cat                                  | <i>Leopardus wiedii</i>        |
| Animalia                         | Mammalia     | Mountain dog                                         | <i>Speothos venaticus</i>      |
| Animalia                         | Mammalia     | Jaguar                                               | <i>Panthera onca</i>           |
| Animalia                         | Mammalia     | Spectral bat                                         | <i>Vampyrus spectrum</i>       |
| Animalia                         | Mammalia     | Giant otter or water dog                             | <i>Lontra longicaudis</i>      |
| Animalia                         | Birds        | Harpy eagle                                          | <i>Harpia harpyja</i>          |
| Animalia                         | Birds        | Goshawk ventrigris                                   | <i>Accipiter poliogaster</i>   |
| Animalia                         | Birds        | Pibí oreál or colicorto                              | <i>Contopus cooperi</i>        |
| Animalia                         | Birds        | Common corcovado or codornis redhead                 | <i>Odontophorus gujanensis</i> |
| Animalia                         | Birds        | Crested eagle                                        | <i>Morphnus guianensis</i>     |
| Animalia                         | Birds        | Culicolored curassow                                 | <i>Mitu tomentosum</i>         |
| Animalia                         | Birds        | Striated warbler or chipe sparrow                    | <i>Setophaga striata</i>       |
| Animalia                         | Birds        | Zebra heron or little egret                          | <i>Zebrilus undulatus</i>      |



|          |       |                                     |                       |
|----------|-------|-------------------------------------|-----------------------|
| Animalia | Birds | Orinoco goose or duck<br>cartwright | <i>Neochen jubata</i> |
|----------|-------|-------------------------------------|-----------------------|

|          |          |                                  |                               |
|----------|----------|----------------------------------|-------------------------------|
| Animalia | Birds    | Orange-faced parrot              | <i>Pyrilia barrabandi</i>     |
| Animalia | Birds    | Golden crested eagle             | <i>Spizaetus ornatus</i>      |
| Animalia | Birds    | Red Knotted Sandpiper            | <i>Calidris subruficollis</i> |
| Animalia | Birds    | Tinamú grande or tinamú olive    | <i>Tinamus major</i>          |
| Animalia | Birds    | Green parrot                     | <i>Amazona farinosa</i>       |
| Animalia | Birds    | Inambú hen or tinamú gorgiblanco | <i>Tinamus guttatus</i>       |
| Animalia | Reptilia | Gray ground snake                | <i>atractus occipitoalbus</i> |

#### 5.4. Characteristics of the indigenous reserve communities

Cultural Management Principles: Indicate the decision-making processes within the social structure of the Indigenous Reserve, which corresponds to a process linked to both cosmological and organizational visions of the authorities. Under the mythical and material form of the maloca, the different issues concerning the community are dealt with. In this place humans enter into communion with their spiritual guides (through the ambil, the mambe and the manicuera) and with other men. Specifically, in the dance, agreements regarding the use of the territory are produced. The management principles represented in the four main dances that serve as symbolic pillars supporting the maloca are: Yadiko dance (protection from diseases produced by aquatic animals such as boa or fish and land animals); Fruit dance (ward off epidemics, prevent diseases and to collect seeds, purification of nature); Charapa dance (prevent water and air diseases such as scratching and smallpox. Also to protect people's life and life in society, to harmonize women.

-woman reproduction and life/territory reproduction and life-); and, Hunting dance (strengthening health, education and transmitting traditional knowledge) (reserve Puerto Zábalo and Los Monos, 2016). Given their cultural importance the project aims to conserve and contribute to the strengthening of these cultural practices.

Principle of word: it is related to the form of communication and manifestation. It is of special interest for protection because it contains the word of coca and tobacco (spirit of protection, legacy that comes from the ancestors), and sweet cassava (refers to the oral tradition and the knowledge of grandfathers and grandmothers who are the basis for the strengthening of culture for the good management of tradition, courage, and the knowledge of their grandfathers and grandmothers, who are the



basis for the strengthening of culture.







and tolerance). Given its cultural importance, the project aims to conserve and contribute to the strengthening of this cultural practice (reserve Puerto Zábalo and Los Monos, 2016).

## 5.5. Values to be conserved

The definition of the Values under Conservation (VOC) in the project area is based on the identification of biological, ecological, social and cultural attributes that stand out for the goods and services they provide to the communities of the Puerto Zábalo and Los Monos Indigenous Reserve.

The values under conservation (VOC) were identified based on the community workshops and the biological information available for the reserve (see workshops 1, 2 and 3 in the Workshops folder, and the documents *Environmental Management Plan Puerto Zabalo\_10\_11\_2016.pdf* located and *Safeguard Plan 2012 Pueblo Uitoto Araracuara.pdf* located in Annex 3). All sources of information point to the importance of the selected VOCs from a social, cultural and ecological point of view. In addition, the activities that help protect these COVs favor other cultural and biological elements of interest, thus fulfilling a function known as "umbrella". This means that by conserving the chagra, traditional medicine and the jaguar and tapir, multiple additional elements that are closely related to these will be favored and protected. The chagra is the center of life of the communities. Ancestral medicine must be strengthened in order to preserve its characteristics and be transmitted to the next generations. Fauna species such as the jaguar and the tapir are indicators of the state of the ecosystems and require vast healthy extensions of territory in order to live, so the activities that protect these species will favor all the biodiversity that the forests of this region harbor.

The VOCs of the project correspond to:

- Fauna species under conservation: jaguar and tapir. These species can be observed in the reserve and are an indicator of the good conservation status of the territory. In addition, these species are of high cultural importance because they are immersed in the beliefs, worldview and

ritual practices (dances) of the indigenous communities. The tapir is also a source of food of special importance for the indigenous people. For these reasons, the project activities promote the protection of these species and actions will be developed for their conservation.

- Traditional medicine: As part of the cultural richness of the indigenous communities of the reserve, there is traditional medicine based on the relationship between man and his natural environment. Protecting this knowledge of the traditional doctors and guiding the younger generations in the procedures and identification of medicinal plants for ethnocultural healing is fundamental to preserving the identity and knowledge of the ethnic communities. However, this knowledge is continually threatened by the interaction with other cultures, by the lack of a good internal health service and by the State and the increase of vices, drug addiction and alcoholism by the young population of the communities.
- Traditional subsistence agricultural production systems (Chagras): Traditionally, the communities of the indigenous reserve have been dedicated to hunting, fishing and gathering forest resources. They grow rotational crops combined with slash-and-burn agriculture (chagra). The Amazonian soils contain few nutrients and the minerals in the ash, spread before the rainy season, improve their growing conditions. They also have a reforestation system with fruit trees (such as cucuy, chontaduro, laurel, umarí, caimo, grape, yarumo and others) and the natural recovery of the forest cover in the stubble area. Given the economic situation of the communities, they have resorted to the commercialization of chagra products. Given their cultural and food importance, the project aims to conserve and contribute to the continued development of these production systems (reserve Puerto Zábalo and Los Monos, 2016).

## 5.6. Reference region for baseline estimation

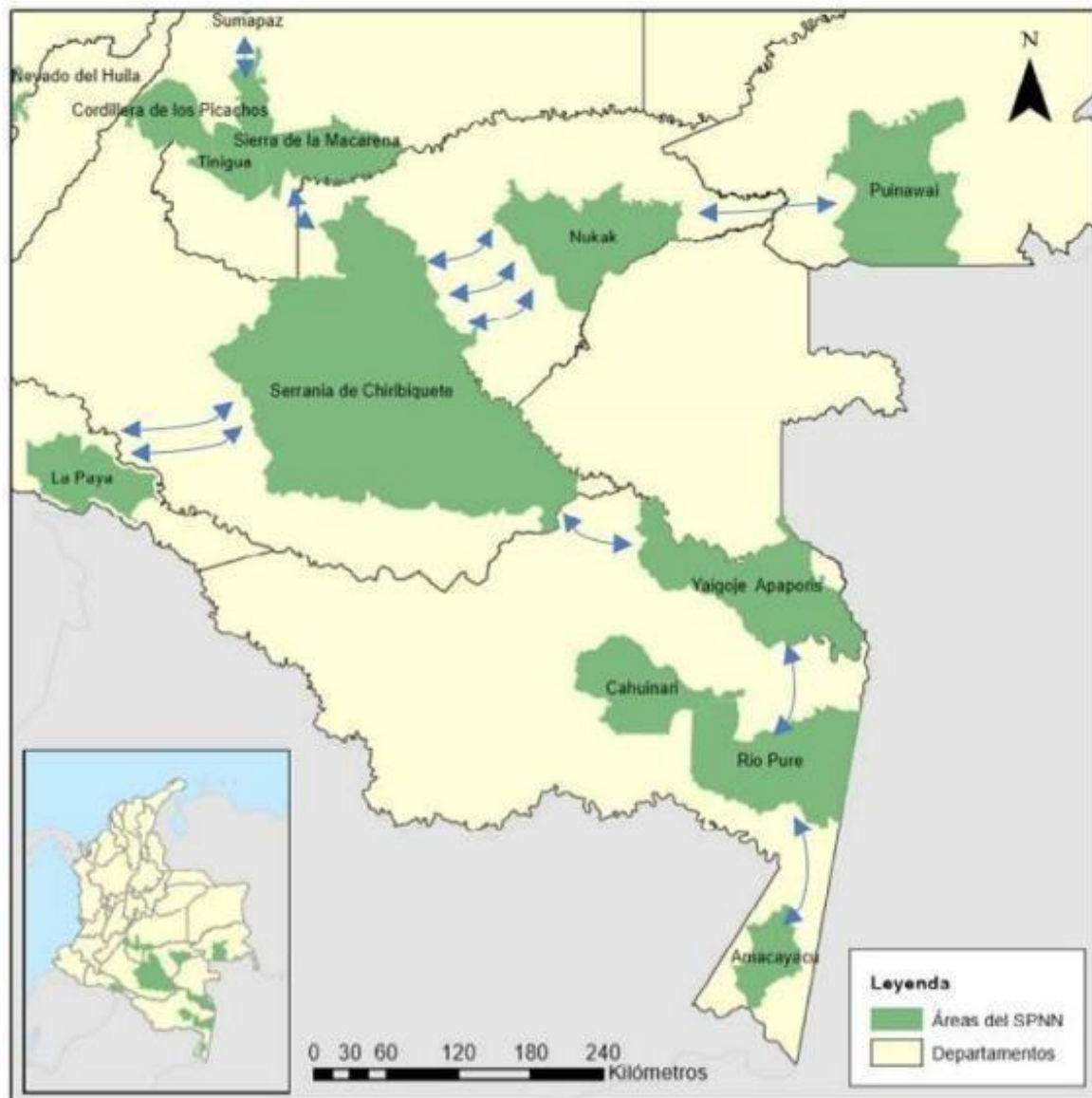
The reserve's area is located in the Amazon region in the municipality of



Solano, which has a forest cover of close to 90%. The natural or semi-natural areas of the municipality where it is located are mainly made up of tree elements of native or exotic species. This coverage includes natural forests and plantations, including palm and guadua (Alcaldía Municipal de Solano, 2019).

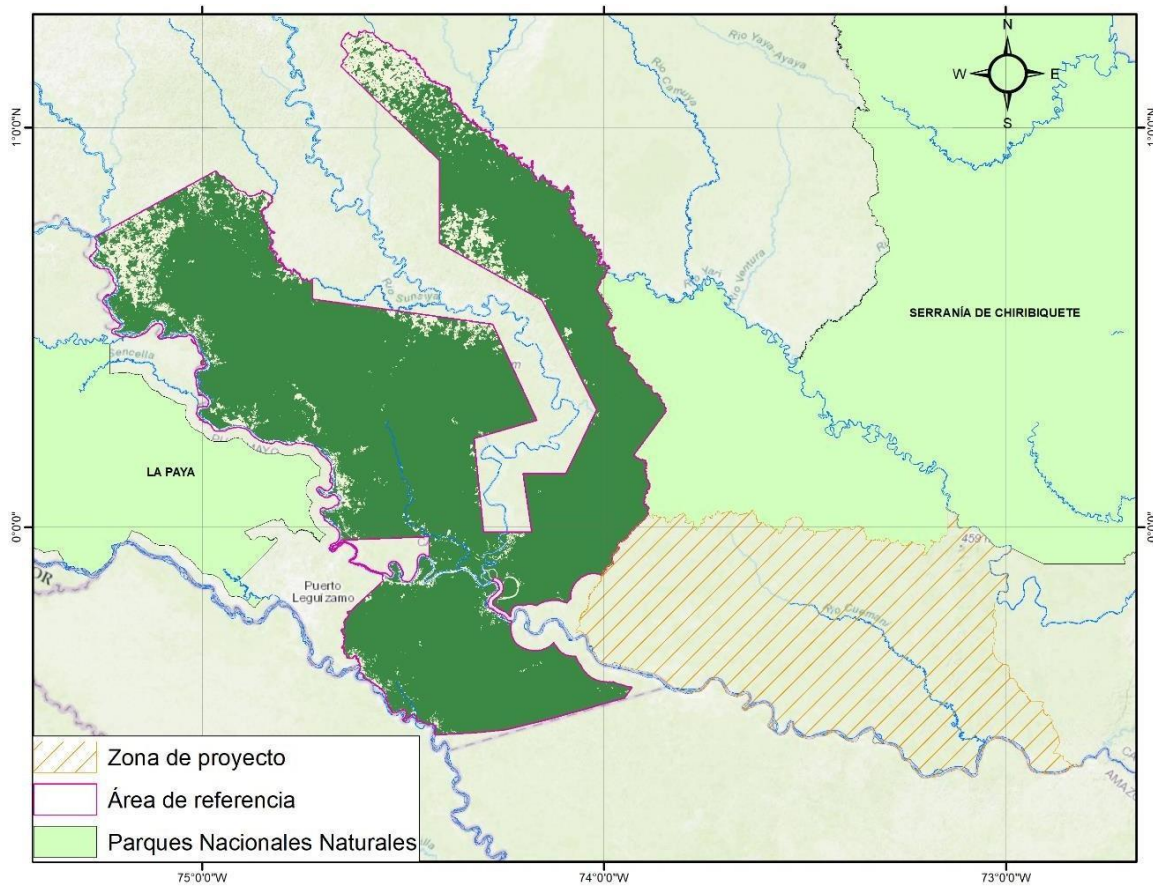
To select the boundaries of the reference region, in accordance with the methodology and the context of the project's indigenous territory, the forest areas located in the area neighboring the reserve participating in the project were selected, taking into account the definition of forest adopted by the country. The Proclima methodology establishes that *"The REDD+ project holder must demonstrate that the areas in the geographical boundaries of the project correspond to the forest category (according to the SMByC definition, at the beginning of the project activities, and ten years before the project start date, defined as stable forest)"*. For the case of the project, the SMByC territory data was downloaded and the change in forest cover that was present 10 years prior to the project start date was analyzed. In 2007, 1,154,982 ha of forest were identified, moving to 1,105,550 ha in 2017.

The boundaries of the reference region were defined as follows: the first thing that was identified was the regional context of deforestation where the project will take place, determining that the location of the project is close to a national protected area and that it plays an important role as a conservation and buffer zone.



Map 5. Biological corridors between national protected areas (taken from USAID, 2021).

The parameters required by the Proclima methodology were also taken into account, namely: i) access to the area, ii) agents and drivers of deforestation, iii) land tenure, iv) post-deforestation land uses, v) forest and ecosystems present, vi) political context, and vii) enforceable standards.



Map 6. Spatial location of the project area and reference region. Source: Own elaboration.

The department of Caquetá and the municipality of Solano are considered areas that have shown a great loss of forest in the last 10 years, with a significant increase in the historical average deforestation rate starting in 2016. The latter is due to national circumstances such as the signing of the peace agreements, absence of control and government presence and the expectation of land titling, among other reasons. The main causes of deforestation in the reference region and the project area are associated with the expansion of the agricultural frontier, the introduction of illicit crops, timber extraction and mining activities, according to regional reports and primary information provided by the communities of the reserve (See Annex 2.1 - Workshop 1 Puerto Zábalo and Los Monos).

Taking into account the similarity of the aforementioned characteristics of the reference region and the project area, in addition to sharing climatological variables





geomorphologic features mentioned below, it can be concluded that the reference region (see Map 6) is a representation of the conditions and pressures faced by the project area, and that the deforestation agents operating in the reference region are regional in scope and access the territories of the indigenous reservation involved in the project.

- a) **Access to the area:** Access to both the reference area and the project area is mainly by river transport using the main Caquetá and Ortegúaza rivers. The strategic location of the project area is due to the fact that it is geographically adjacent to Guaviare, Vaupés, Amazonas and Putumayo. There is no means of land transportation that would allow the population to move around. In the project area, agricultural and livestock production and trade of goods is done via waterways. There are few tertiary land routes in the region that allow access to the area. There are two airports in the municipality of Solano: one is located at the Tres Esquinas Base, which, as a military base, is directed and managed by the Colombian Air Force (FAC). This airport is strictly for military use, and the second airport is located in Inspección de Araracuara, where the Satena airline offers a public service approximately every week.
- b) **Agents and Causes of deforestation/degradation:** The main deforestation agents identified in the reference region and in the project area are similar, among the following:
- i. Agricultural producers for self-consumption and sale (indigenous community and settlers)
  - ii. Livestock producers for self-consumption and sale (Indigenous community and settlers)
  - iii. Intermittent agricultural producers of illicit crops (coca) for sale (External actors).
  - iv. Extractors from wood for self-consumption (construction, firewood, tools, canoes).
  - v. Timber harvesters for commercialization (Indigenous community and settlers)



- vi. Extractors of mineral resources (External Actors).
- vii. New families and settlements

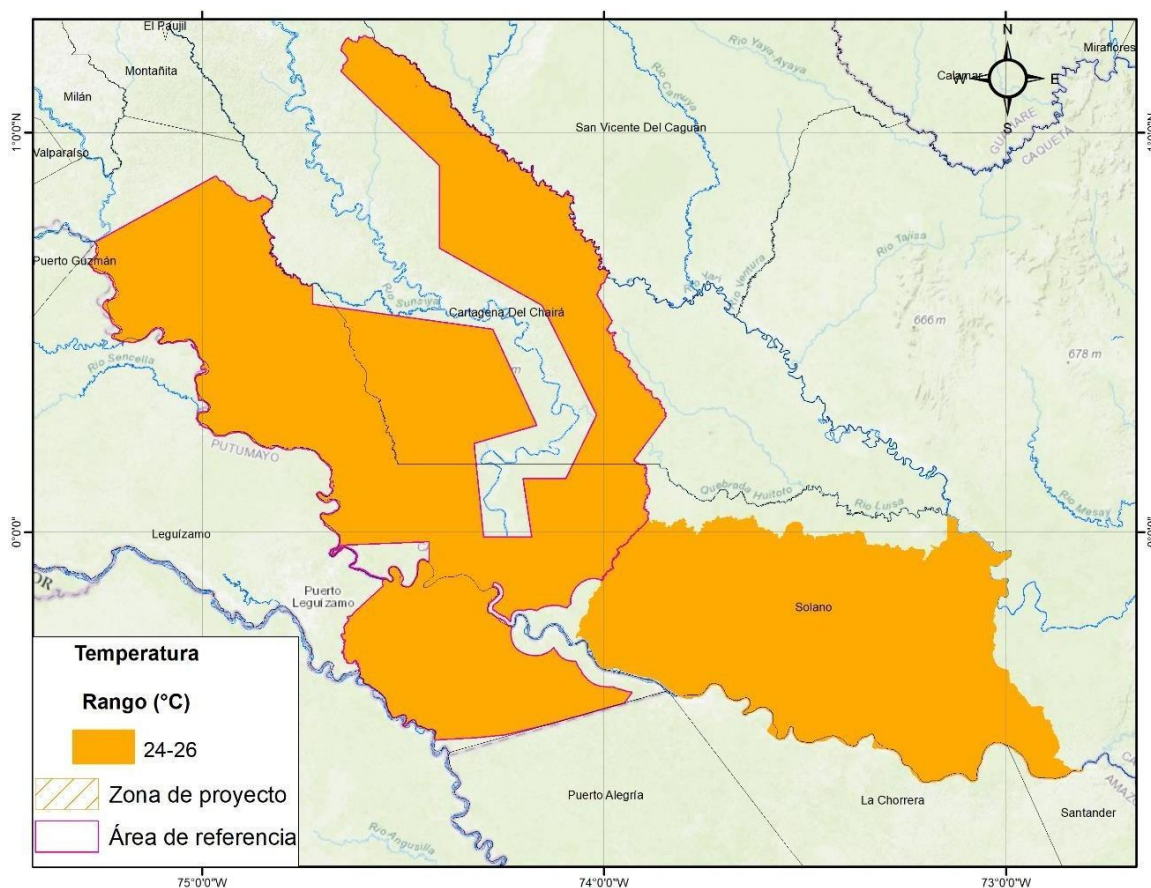
The direct causes of deforestation present in the project area and in the reference region are as follows:

- i. Livestock production for sale and self-consumption.
  - ii. Subsistence agricultural production (chagras) and generation of surpluses for sale.
  - iii. Timber extraction for self-consumption and sale.
  - iv. Mining activity
  - v. Presence of illicit crops.
  - vi. Settlements.
- c) **Land tenure:** There are indigenous reserves in the region that have the same land tenure as the Puerto Zábalo and Los Monos reserves. There are also special protection areas that correspond to forest reserves established under the Second Law of 1959. Tenure in the project area corresponds to areas titled as collective property. For the case of the project area, Resolution 032 of 1988 issued by INCORA grants collective property title for the territory of the Puerto Zábalo and Los Monos Indigenous reserve, which was extended by Agreement 026 of 2017 of the National Land Agency.
- d) **Land uses:** The main land uses in the project area and in the reference region are dense forests, fragmented forests, heterogeneous areas, and areas with herbaceous and/or shrub vegetation.
- e) **Forest and ecosystems present:** The forests and ecosystems belong to the following biomes: i) Tropical Rainforest Zonobiome, ii) Amazonian-Orinoquia Peinobiome iii) Amazonian-Orinoquia Helobiome, and iv) Amazonian-Orinoquia Lithobiome.
- f) **Political context and required standards:** The project is located within the administrative boundaries of the Department of Caquetá.



The environmental authority is the responsibility of the indigenous communities, who are in charge of administering and managing the lands in accordance with their traditions, customs and needs. Outside of the indigenous territories, the Corporation for the Sustainable Development of the Southern Amazon - CORPOAMAZONIA is the environmental authority responsible for structuring and implementing policies, plans, programs and projects that promote the conservation, protection and recovery of the environment and renewable natural resources.

- g) Climate:** The climate of the region where the project area is located corresponds to a tropical rainforest climate, which has a significant amount of rainfall during the year (annual precipitation of 1,588.0 mm). The average temperature in Solano is 25.7 °C (Alcaldía Municipal de Solano, 2019).

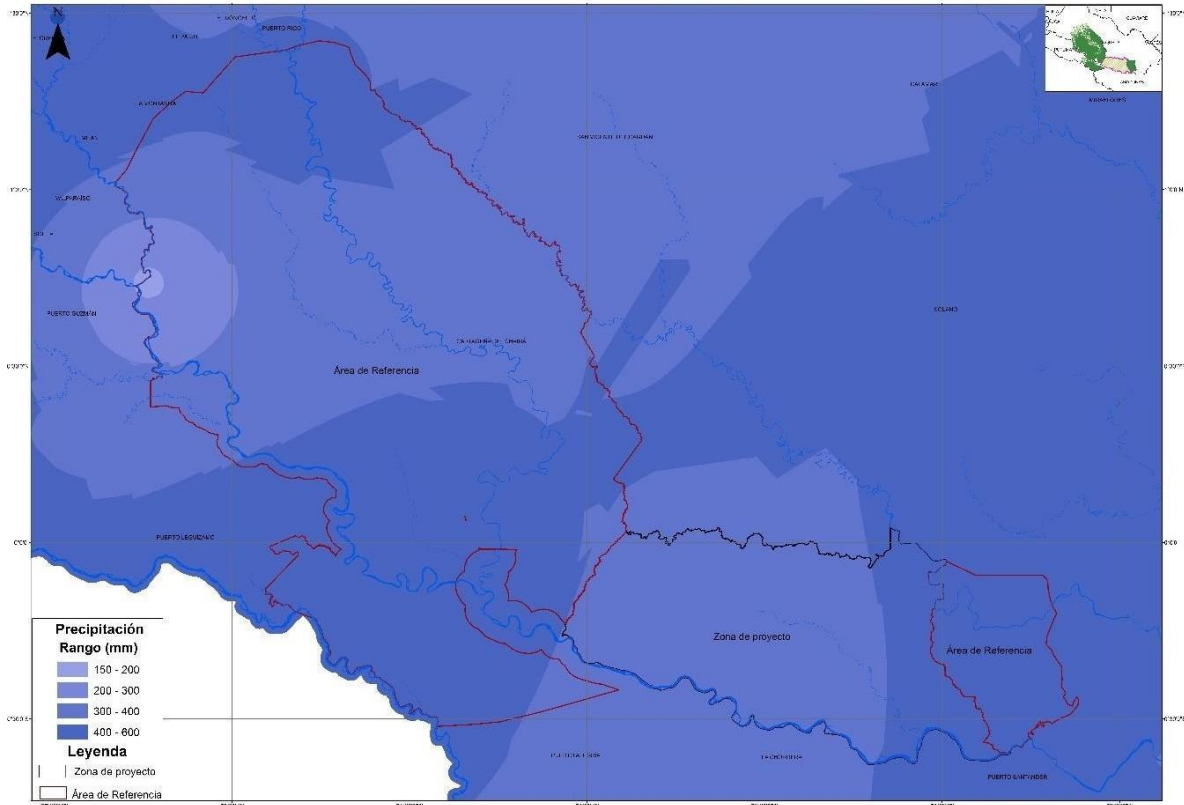


## h) Hydrology

The water wealth of the department of Caquetá is due to geographical conditions and the influence of factors such as atmospheric circulation, the physiographic characteristics of the relief and the influence of the jungle zone under the dominance of trade winds from the northeast and southeast converge in a strip called "Intertropical Confluence Zone" that contributes to the formation of cloudiness, a phenomenon that is reinforced by being located in the equatorial zone and is responsible for the heating of the earth's surface by the almost vertical incidence of solar radiation. The interaction of the ITCZ with the Eastern Cordillera and the effects of low pressure from the Amazon interact with the movement of the sun and the characteristics of the relief are responsible for generating the highest frequency of rainfall between the months of March and November, generating convective precipitation throughout the municipality given the predominance of hilly landscapes (Gobernación del Caquetá, 2012).

For the municipality of Solano there are different weather stations, Coemaní, Araracuara and Tres Esquinas. The rainfall regime is bimodal, with two periods of higher rainfall interspersed by two periods of lower rainfall during the year. The period of lower rainfall begins in December and lasts until mid-March, followed by a long period of abundant rainfall that begins in mid-March until July, with a slight decrease in the months of August and September that practically lasts until November (Alcaldía Municipal de Solano, 2019). Annual precipitation is around 1,588 mm. For the rainiest months the average precipitation ranges between 337 mm and 387 mm and for the driest months the precipitation varies between 136 mm and 183 mm.

According to what is reported by the IDEAM stations, the highest frequency of rainfall occurs in the afternoon and evening hours, with a trend where it occurs with greater intensity (torrential) and shorter duration, which causes greater damage due to its high erosive power and greater runoff that drastically raises the flows of water sources and provides them with a large amount of sediment (Alcaldía Municipal de Solano, 2019).



Map 8. Precipitation in the project area and reference region.

## i) Hydrography

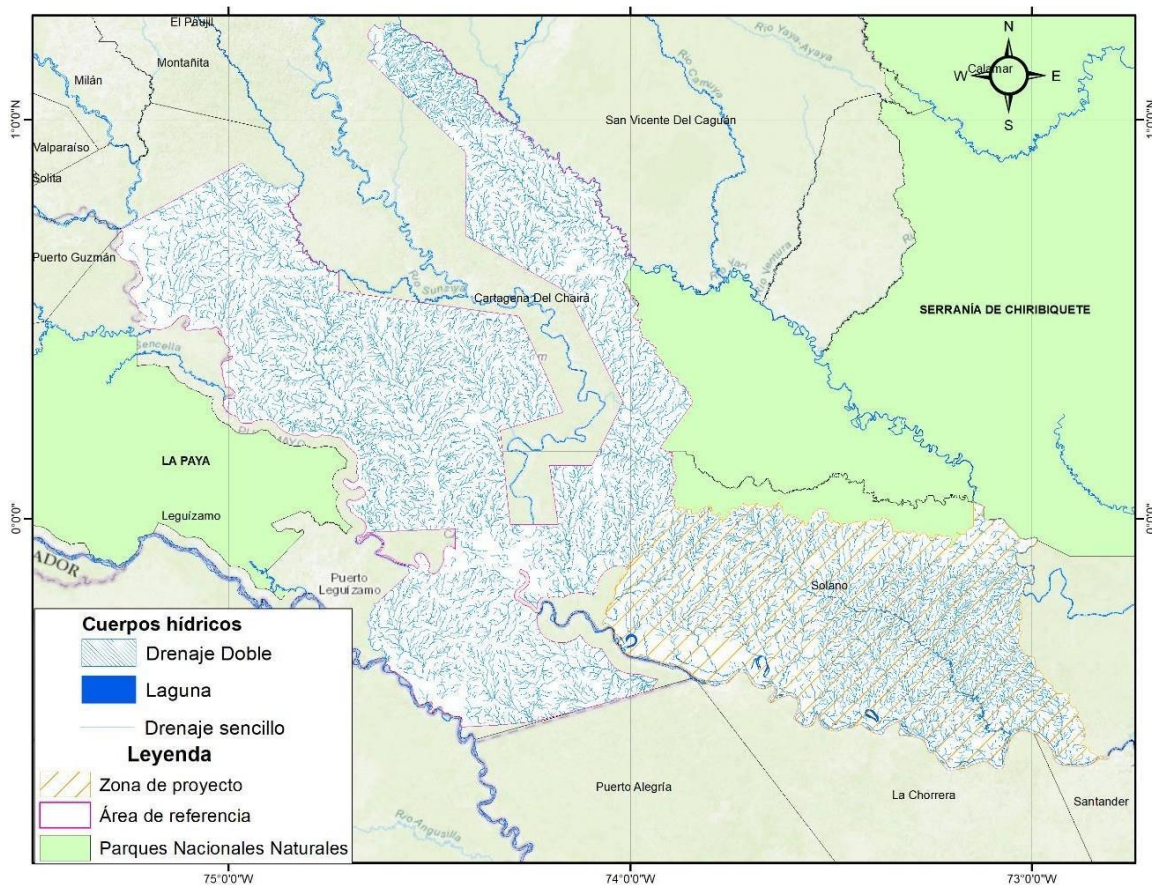
The hydrographic network of the municipality is formed by the streams that descend from the Eastern Cordillera. In the municipality of Solano there are 8 basins that correspond to the Apaporis, Caguán, Caquetá, Cuñare, Luisa, Orteguzza, San Jorge and Yari rivers. There are also several water tributaries that feed basins, sub-basins and micro-basins in the municipal territory. Some of the watersheds present in the municipality of Solano share the area of influence with other departments such as the Rutuya River, the Peneyita River and the Angosturas River (Alcaldía Municipal de Solano, 2019). Similarly, the streams that descend from the eastern mountain range flow into the different tributaries of the Orteguzza River, such as the Peneya River and the Potrerros, Diamante, El Quince, Hericha and Sevilla streams. The final collector of all the water sources that surround Solano's territory is the Caquetá River (Gobernación del Caqueta, 2012).



**Great Caquetá River Basin.** The Caquetá River originates in the Colombian Massif, in the Páramo Del Letrero (Puracé National Natural Park), approximately 2.5 km from the source of the Magdalena River, in the department of Cauca. In its upper course, it flows in a southerly direction, crossing the southern part of the department of Cauca and forming the natural border between Cauca and the department of Putumayo. Then in a southeasterly direction, it enters the dense Amazon jungle, also forming the border between Putumayo and the department of Caquetá, in a long stretch of more than 400 km, in which it first crosses the municipalities of Solita and Solano, and in which near the town of Tres Esquinas, it receives the Orteguaza River. In this same section, further on, it also receives the Caguán River. In its easternmost stretch, it forms the border between Caquetá and the department of Amazonas, in another long stretch of about 500 km in which there are numerous rapids and waterfalls. Near the Munoir hills it forms the Araracuara rapids and receives one of its most important tributaries, the Yará River, from which point the river enters the department of Amazonas and receives the Cahuinari River and the Miritiparaná River (Gobernación del Caquetá, 2012).

**Orteguaza River Basin:** The Orteguaza River rises in the Eastern Cordillera east of the municipal capital of Florencia. It flows through the department from north to south and empties into the Caquetá River near the municipality of Solano. It is one of the most important rivers in the department of Caquetá, since it is 130.6 kilometers long and is of great economic importance because it allows navigability between Puerto Arango in Florencia and other towns such as Puerto Milán, San Antonio de Getuchá and Solano.





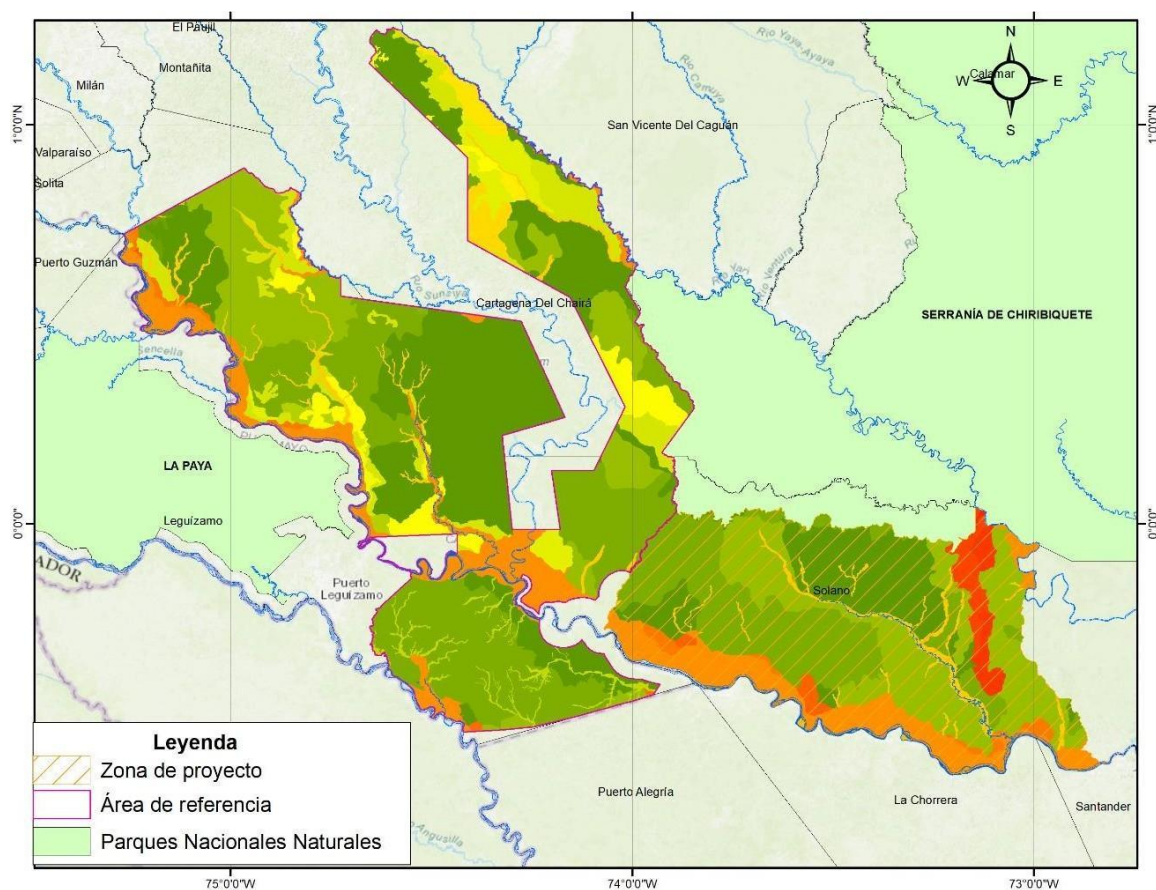
Map 9. Hydrography of the project area and reference region.

## j) Geology

Much of the territory of the municipality of Solano is part of the provinces: Paleoproterozoic Amazonian Continental Lithospheric Paleoproterozoic - PLCPA and the Mesoproterozoic Mesoproterozoic Grenvillian Continental Lithospheric - PLCMG, with the following geological structures:

- **Alluvial terraces (Q<sub>1-t</sub>):** these are found on the Caquetá River where small sedimentary platforms or tables have been formed in the river valley by the river's own sediments that are deposited on the sides of the riverbed in places where the slope of the river becomes less steep, which also reduces its dragging capacity (Gobernación del Caquetá, 2012).

- **Alluvial deposits (Q-al):** They consist of a mass of detrital sediments that accumulate or have been transported by the activity or flow of rivers such as the Orteguaza and Caquetá, and also involve other processes such as gravity sliding associated with their banks. These deposits also have economic importance, as they become suppliers of construction material, containers of mineral deposits and groundwater. Alluvial deposits are considered to be of very recent origin (geological age - millions of years), when the deposit is broad and flat and can be called alluvial plain. It presents a more varied relief that is concealed under the dense Amazon rainforest and the floodable alluvial bottom is found with an average width of 70 kilometers. The floods have caused seasonal lagoons to form and the rivers tend to divide into numerous branches or meander in meanders. At some distance from the main courses, extensive terraces of sands, clays and debris are developed, which constitute the non-floodable dry land (Gobernación del Caquetá, 2012).
- **E<sub>3</sub>N<sub>1</sub>-Sct:** For the municipality of Solano they are classified in the Paleogene period, between the ages called Chatian and Rupelian and correspond to the conformation of: Lodolites, lithic arenites, and intercalations of ferruginous conglomerates, also presents gypsum crusts and coal layers.



Map 10. Soils in the project area and in the reference region. Source: IGAC, 2021.

| Landscape           | Relief               | Lithology                                                                                                        | UCS | UCS2  | Area (ha) |                                                                                       |
|---------------------|----------------------|------------------------------------------------------------------------------------------------------------------|-----|-------|-----------|---------------------------------------------------------------------------------------|
| Body of water       | Body of water        | Water body                                                                                                       | CA  | CA    | 20864,22  |    |
| Lomerio             | Lomas                | Tertiary sandstones, claystones and conglomerates continental                                                    | LE  | LEc   | 1,64      |    |
| Lomerio             | Lomas                | Tertiary sandstones, claystones and conglomerates continental                                                    | LF  | LFd   | 2,59      |    |
| Lomerio             | Lomas                | Tertiary sandstones, claystones and conglomerates continental                                                    | LG  | LGc   | 0,23      |    |
| Lomerio             | Lomas                | Tertiary sandstones, claystones and conglomerates continental                                                    | LH  | LHf   | 3,64      |    |
| Lomerio             | Varanicos            | Conuvare-anuviar deposits                                                                                        | LW  | LWc   | 0,05      |    |
| Lomerio             | Hills and hills      | Variegated clays of the Orito and Upper Tertiary formation                                                       | LVA | LVAa  | 137,24    |    |
| Lomerio             | Hills and hills      | Variegated clays of the Orito and Upper Tertiary formation                                                       | LVA | LVAc  | 441041,61 |    |
| Lomerio             | Lomas and hills      | Claystones                                                                                                       | LVA | LVAc  | 33922,37  |    |
| Lomerio             | Hills and hills      | Variegated clays of the Orito and Upper Tertiary formation                                                       | LVA | LVAc2 | 3879,32   |    |
| Lomerio             | Hills and hills      | Variegated clays of the Orito and Upper Tertiary formation                                                       | LVA | LVAa  | 324530,08 |    |
| Lomerio             | Lomas and hills      | Claystones                                                                                                       | LVA | LVAa  | 134154,95 |    |
| Lomerio             | Hills and hills      | Variegated clays of the Orito and Upper Tertiary formation                                                       | LVA | LVAa2 | 506,50    |    |
| Lomerio             | Hills and hills      | Variegated clays of the Orito and Upper Tertiary formation                                                       | LVA | LVAe  | 337268,64 |    |
| Lomerio             | Lomas and hills      | Claystones                                                                                                       | LVA | LVAe  | 5928,77   |    |
| Lomerio             | Depression           | Poorly decomposed organic deposits on clays gliciradas                                                           | LVB | LVBa  | 338,55    |    |
| Lomerio             | Tables               | Highly claystones and mudstones altered                                                                          | LVC | LVCa  | 6104,02   |    |
| Lomerio             | Varanicos            | Conuvare-anuviar deposits                                                                                        | LVC | LVCa2 | 14553,00  |    |
| Lomerio             | Tables               | Highly claystones and mudstones altered                                                                          | LVC | LVCb  | 84550,88  |    |
| Lomerio             | Tables               | Highly claystones and mudstones altered                                                                          | LVC | LVCc  | 37262,89  |    |
| Lomerio             | Hillock s and tables | Alternating claystones and mudstones with ferruginous sands of the Orito formation                               | LVD | LVDa  | 3696,37   |    |
| Lomerio             | Hillock s and tables | Alternating claystones and mudstones with ferruginous sands of the Orito formation                               | LVD | LVDb  | 55949,65  |  |
| Lomerio             | Hillock s and tables | Alternating claystones and mudstones with ferruginous sands of the Orito formation                               | LVD | LVDc  | 3240,71   |  |
| Lomerio             | Hillock s and tables | Claystones and mudstones alternating with ferruginous sands from the Orito traming                               | LVD | LVDd  | 12832,36  |  |
| Lomerio             | Hillock s and tables | Claystones and mudstones alternating with ferruginous sands from the Orito traming                               | LVD | LVDc  | 14507,39  |  |
| Lomerio             | Vallecitos           | Colluvial alluvial sediments heterometric                                                                        | LVE | LVEa  | 47928,21  |  |
| Alluvia l plain     | Flood plans          | Recent mixed heterometric recent alluvium from the eastern cordillera and the landscape of the amazonian lomerio | RA  | RAa   | 944,82    |  |
| Plain alluvia l     | Plans of flood       | Fine alluvium and materials organic                                                                              | RB  | RBa   | 112,75    |  |
| Alluvia l plain     | Flood plans          | Sub-receding alluvium from the eastern cordillera and from the lomerio landscape Amazonian                       | RC  | RCa   | 2,53      |  |
| Alluvia l plain     | Flood plans          | Heterometric subrecent alluvium, predominantly coming from the lomerio Amazonian                                 | RD  | RDb   | 2,94      |  |
| Valley              | Plan of flood        | Heterogeneous alluvial deposits                                                                                  | VVA | VVAa  | 18374,80  |  |
| Alluvia l valley    | Plan of flood        | Deposits of alluvial materials coarse to fine                                                                    | VVA | VVAa  | 185426,27 |  |
| Alluvia l valley    | Flood plane          | Organic deposits with alternation of alluvial materials fine                                                     | VVB | VVBa  | 563,89    |  |
| Alluvia l valley    | Middle terrace       | Fine to moderately fine alluvial sediments, in sectors sand and gravel deposits                                  | VVC | VVCa  | 16176,73  |  |
| Valley              | Terrace level 2      | Heterogeneous alluvial deposits old                                                                              | VVC | VVCb  | 1151,20   |  |
| High terrace valley | High terrace         | Fine and medium anuviar deposits                                                                                 | VVD | VVDa  | 19991,29  |  |
| High terrace valley | High terrace         | Fine and medium anuviar deposits                                                                                 | VVD | VVDc  | 24,000    |  |





|                 |          |                                                                                                        |     |      |          |                                                                                     |
|-----------------|----------|--------------------------------------------------------------------------------------------------------|-----|------|----------|-------------------------------------------------------------------------------------|
| Tectonic massif | Plateaus | Sands from the quartzites and quartz-sandstones of the Chiribiquete massif or Serranía de Chiribiquete | ZVB | ZVBb | #6219.29 |  |
|-----------------|----------|--------------------------------------------------------------------------------------------------------|-----|------|----------|-------------------------------------------------------------------------------------|



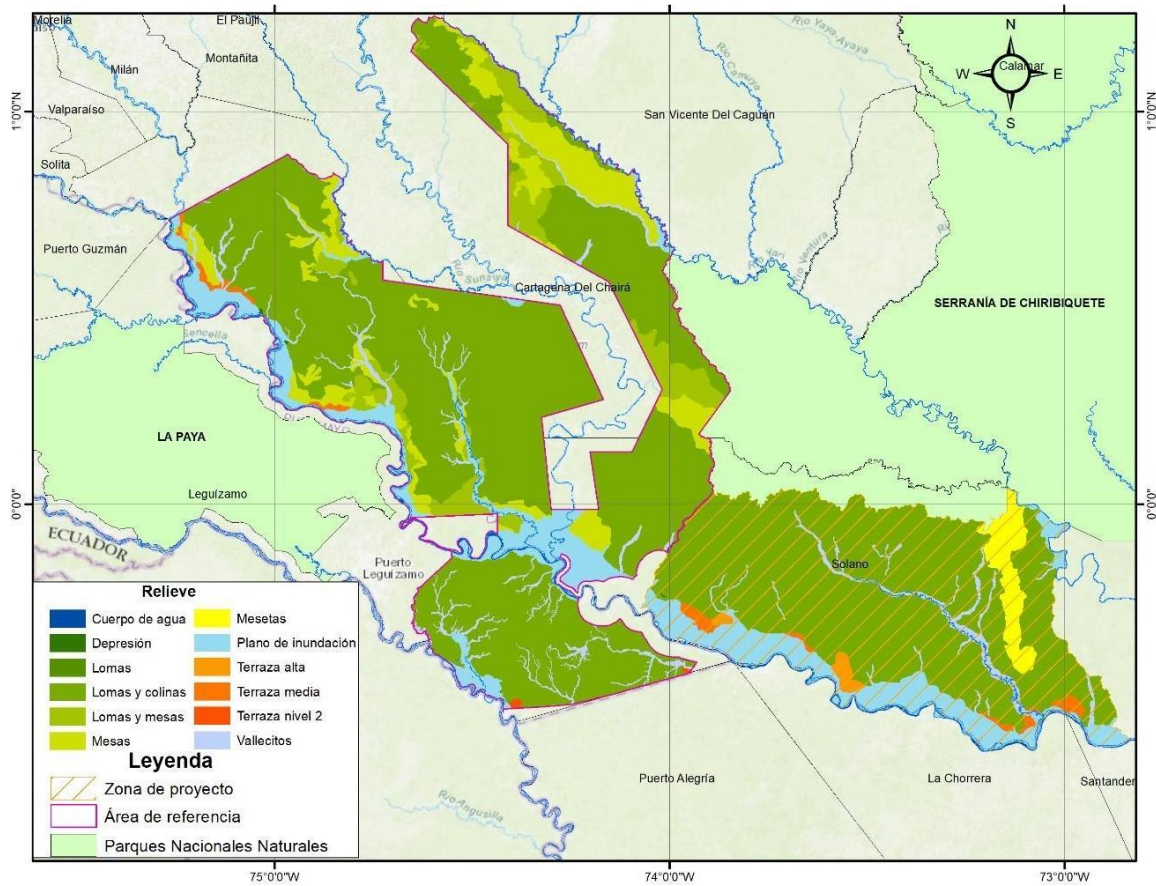
|                 |          |                                                                                                        |     |      |          |                                                                                     |
|-----------------|----------|--------------------------------------------------------------------------------------------------------|-----|------|----------|-------------------------------------------------------------------------------------|
| Tectonic massif | Plateaus | Sands from the quartzites and quartz-sandstones of the Chiribiquete massif or Serranía de Chiribiquete | ZVB | ZVBF | 15179.11 |  |
| Tectonic massif | Plateaus | Sands from the quartzites and quartzarenites of the Chiribiquete massif or mountain range              | ZVB | ZVBg | 441.04   |  |

### k) Geomorphology

The relief of the municipality of Solano can be grouped into four major units or landscapes: mountain, piedmont, lomerío (undulating plain) and alluvial valleys. There are also denudation surfaces:

- **Mountain Landscape:** It is located in the upper part of the basins and micro-basins, and includes the catchment and accumulation areas. It is characterized by its abrupt and steep relief, with broken angular slopes and unequal alignments in its crests or watersheds. The surface of these mountain slopes is very fragile and mass movements play an important role on them, the most frequent being solifluxion and graben blows (Alcaldía Municipal de Solano, 2019).
- **Lomerio Landscape:** This landscape unit comprises the lower and some of the middle part of the micro-watershed, its surface is undulating to flat dissected, resulting from convex slopes, corresponding to torrential cones; the underlying materials are generally blocks, gravel and clasts of larger diameter, heterogeneous and angular embedded in a matrix of fine silts and clay at the base of the torrential cones (Alcaldía Municipal de Solano, 2019).
- **Denudation surfaces:** Corresponds to relief forms originated predominantly by climatic events that have acted directly on the rock over long periods of time and have caused a slow and continuous weathering process. These events have a notorious influence on pedogenetic processes, giving rise to soils with a high degree of evolutionary development. In this unit there are almost no mass movements and the resulting forms are characterized by undulating reliefs with relatively smooth topography. Natural erosive processes are of low intensity, but given the fragility of the ecosystems, once deforested these places have a great tendency to rapid and progressive degradation, giving way to gullies and sectors with concentrated runoff, highly eroded (Gobernación del Caquetá, 2012).

- **Piedemonte Landscape:** This large landscape has a flat to slightly sloping relief with slopes of less than 7% and is mostly represented by the alluvial-colluvial fan formed by the different tributaries of the Caquetá and Orteguaza rivers, on the left bank of the Caquetá River, where the urban area of the municipality of Solano and most of the towns and valleys formed by the same rivers are located (Gobernación del Caquetá, 2012). This landscape has steep slopes and particularly active watershed dynamics; this, together with the intense human activity in this area of the watersheds and micro- basins. It is highly prone to destabilization (Alcaldía Municipal de Solano, 2019).
- **Landscape surfaces, plains or alluvial valleys:** Alluvial valleys associated with the Caquetá and Orteguaza rivers with variable stoniness and effective depth. Some are integrated by fine sediments that result in better conditions for the development of agricultural activities related to rice, corn and livestock crops, but due to the intensity of rainfall, they are considered vulnerable areas (Alcaldía Municipal de Solano, 2019). It is also considered as the orographic part that contains the bed of these rivers and that can be flooded before the ordinary and extraordinary floods of the waters of these rivers. Often the topography of the floodplains of these rivers is in the form of cones, called dejection cones, which means that the riverbed could move quite easily, flooding areas far from the main riverbed (Gobernación del Caqueta, 2012).



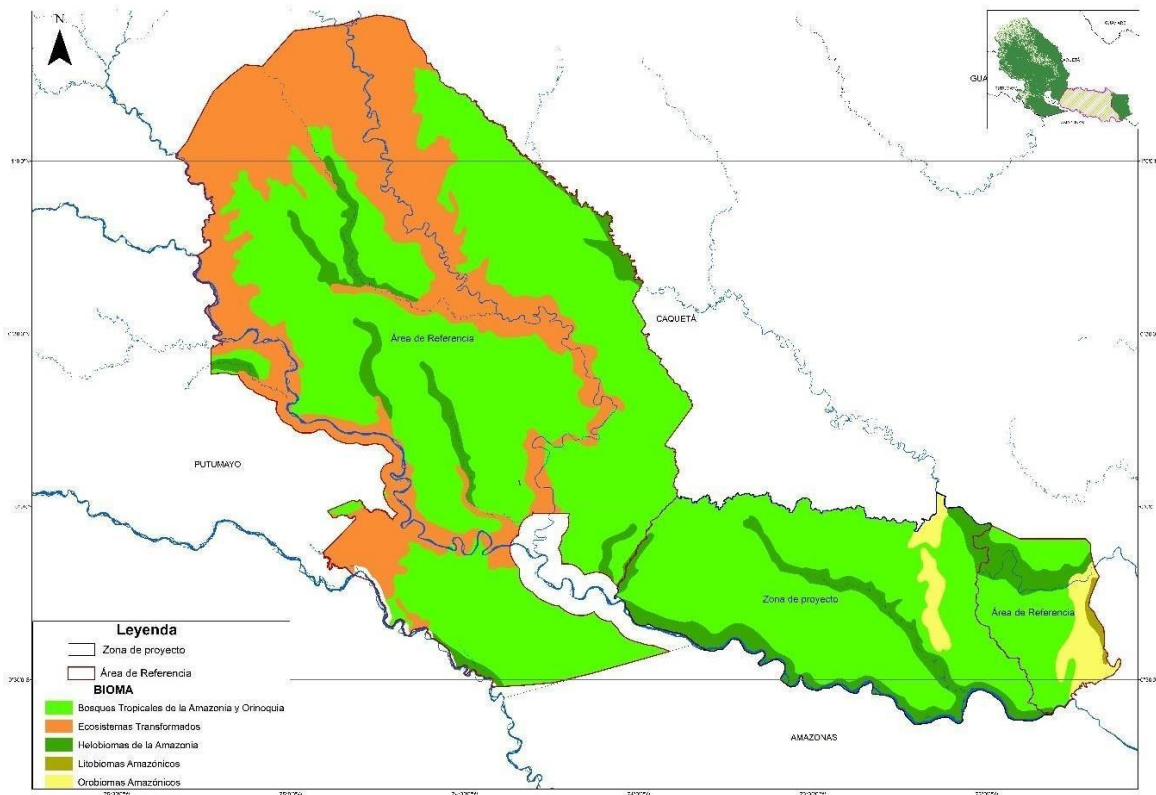
Map 11. Relief in the project area and in the reference region.

## 1) Ecosystems

As described by the Governor's Office of Caquetá based on the Ecosystems of Colombia map developed by IDEAM, the project area and the reference region contain terrestrial (forests and rocky mountain complexes) and continental aquatic ecosystems, as shown below:

Table 7. Ecosystems present in the project area and in the reference region (Gobernación de Caquetá, 2013).

| Biome Type                                         | Features                                                                               | Weather                                   | Ecosystem / unit geomorphological                                                                |
|----------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------|
| Tropical Humid Zonobiome of the Amazon - Orinoquía | Zonal biome delimited by climatic conditions with a determined vegetation type         | Warm humid (40%)<br>Warm very humid (60%) | -<br>fluviogravitational and erosional structural lomeria<br>- Alluvial plains                   |
| Peinobioma of the Amazon - Orinoco region          | Slow soil formation. Rocky outcrops may be present                                     | Warm humid (85%)<br>Warm very humid (15%) | - Erosional structural plateau<br>- Alluvial plain<br>- Alluvial and colluvio- alluvial piedmont |
| Amazon Helobiome                                   | Poor drainage, permanent waterlogging or with prolonged periods of waterlogging. flood | Warm humid (65%)<br>Warm very humid (35%) | - Alluvial plain<br>- Alluvial valley                                                            |
| Amazonian - Orinoco lithobiome                     | Incipient soil on hard rock                                                            | Warm humid (24%)<br>Very warm wet (76%)   | -<br>Fla<br>ttening surfaces                                                                     |



Map 12. Ecosystems present in the project area and in the reference region.

## 5.7. Leakage area

The leakage area comprises the forest area to which deforestation and degradation agents and activities may be displaced, but which is outside the project boundaries. The leakage area was defined taking into account the mobilization tendency of deforestation agents in the territory, as well as the characteristics of relationships and development of activities that were identified in the territory and with the help of the communities (see Annex 2). The mobilization of members of the Indigenous Reserve to other regions of the department occurs mainly through the Caquetá River.

Taking into account that the Monochoa reserve REDD+ Project is being developed on the eastern side of the reserve, it was agreed with the developers of the other project that the boundaries of the leakage area should not overlap in order to avoid the risk







To avoid double carbon accounting. For this reason, the boundary of the leakage area on the eastern side reaches the eastern boundary of the reserve Pto. This also implies that monitoring reporting activities are also confined to this boundary. Activity indicator A-15.4 shows the forest cover in the project leakage area. The following criteria were also applied to determine the leakage area of the project:

*Table 8. Criteria for defining the leakage area and its compliance.*

| Criteria                                                                             | Compliance                                                                                                                             |
|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| All the areas in forest that are within the mobility range of the identified agents. | Compliant. The total area of forest included is the total area of forest that is within the range of mobility of deforestation agents. |
| Exclude areas of restricted access to the agents of deforestation and degradation.   | Compliant. Park areas are excluded. National Parks of Colombia.                                                                        |

The leakage area has a total area of 120,408 ha, of which 111,907 ha were forest in 2007 and 110,715 ha remain stable at the time of project initiation, observing a loss of cover equivalent to 0.11% per year. The change in forest cover during 2007 and 2017 can be seen in the following illustration:



Map 13. Leakage area of the project. Source: Own elaboration.

Leakage management and monitoring is based on three elements: i) Monitor the forest cover present in the leakage area (indicator A-15.4). ii) Involve community members in the productive activities of the project, to reduce the need to participate in deforestation processes inside and outside the territory and contribute to project ownership (Activities A- 2 and A-3, follow-up to Safeguards 8 and 10, through indicators SVG-8.1 and SVG-10.1).

iii) Articulate land-use planning exercises, sectoral regulatory framework and carry out control and surveillance actions as appropriate (follow-up through indicators SVG-11.1, SVG-13.1, SVG-14.1, SVG-15.1).

## 5.8. Time limits and analysis periods

The time limits of the project are presented below:



#### 5.8.1. Project start date: 17-Jan-2018.

The start date of the project corresponds to the moment when a Letter of Intent and Exclusivity was signed by the representative of the reserve and the project developers, an event that occurred on January 17, 2018 (see *Letter of Intent reserve Pto. Zábalo vl.pdf*, located in *Annex II.*) After a process of management and community consultation, the interest and commitment of the community to develop a REDD+ project was formalized, with the understanding of receiving economic resources as an incentive to protect the forest and reduce deforestation. From this moment on, a series of activities directly motivated by the community's commitment to participate in the REDD+ project continue. These implemented activities are reported in the Monitoring Report according to the schedule, actors, follow-up methodologies and other planning parameters defined in the monitoring plan, which is based on the requirements of the ProClima methodology.

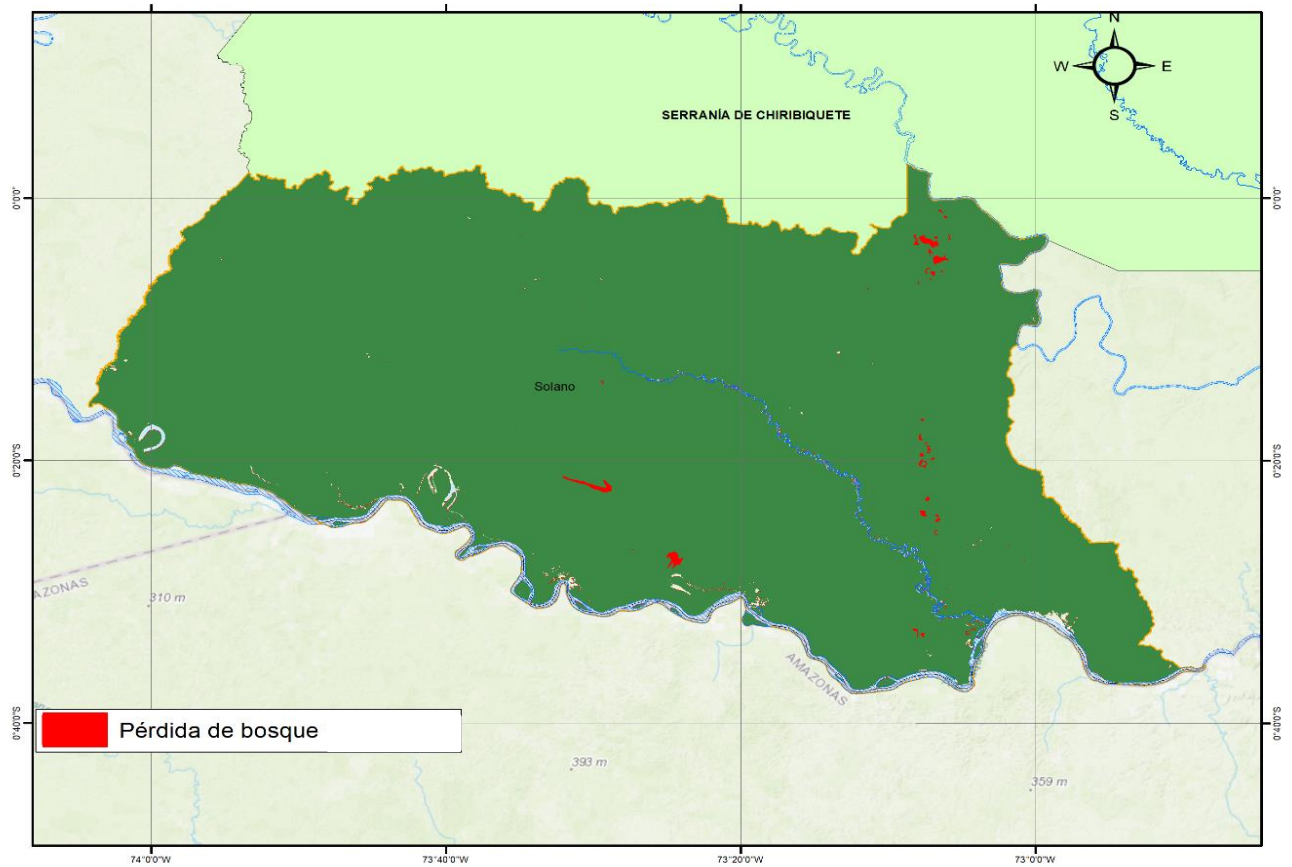
It is important to highlight that the oral tradition characterizes these communities of the REDD+ Project Puerto Zábalo and Los Monos, which implies that they transmit their knowledge and guidance on land management orally and respecting the knowledge and wisdom of grandfathers and grandmothers. This makes it difficult to have the record of the initial reforestation actions that they carried out since 2018, so it is necessary to verify the activity from the testimonies of the community and field observation of the trees and planted areas (see *Annex 2*).

Map 14 presents the forest loss that occurred for the period between 2007 and 2017, in the reference area, which amounts to a total of 193,735 hectares of forest cover, and is equivalent to a deforestation rate of 0.43% per year.



Map 15 presents the loss of forest cover for the period from 2018 to 2021 in the project area, showing a significant reduction in the deforestation rate compared to that estimated for the reference area (2007-2017). For the period after the start date, the loss of 1,444 hectares of forest was recorded, equivalent to a deforestation rate of 0.06% per year.





Map 15. Forest loss in the project area for the period from 2018 to 2021. Source: Own elaboration.

### 5.8.2. Emission quantification period

January 17, 2018 to January 16, 2048 (30 years).

### 5.8.3. Monitoring periods

The first period corresponds to 17-January-2018 to 30-June-2021. Subsequently, monitoring reports are expected to be conducted on a biannual basis.

### 5.8.4. Historical period of deforestation

To estimate the deforestation trend in the reference area and the leakage area, the forest cover changes observed during the historical period 2007-2017, which corresponds to the ten-year period before the start of the project, were analyzed. The estimation of forest degradation was performed based on three historical dates to analyze the trend in two reference periods, between the years 2007-2014 and 2014-2017.

### 5.8.5. REDD+ project emissions estimation

Table 9. GHG emission reductions resulting from project implementation.

| Year | Dates                   | Estimated GHG reductions from deforestation (tCO <sub>2</sub> ) | Estimated cumulative GHG reductions from deforestation (tCO <sub>2</sub> ) | Estimated GHG reductions from degradation (tCO <sub>2</sub> ) | Estimated cumulative GHG reductions by degradation (tCO <sub>2</sub> ) | Estimated total GHG reductions (tCO <sub>2</sub> ) |
|------|-------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------|
| 1    | 17/01/2018 a 31/12/2018 | 1.275.569,9                                                     | 1.275.569,9                                                                | 26.172,15                                                     | 26.172,1                                                               | 1.301.742,1                                        |
| 2    | 01/01/2019 a 31/12/2019 | 1.397.570,3                                                     | 2.673.140,3                                                                | 27.365,25                                                     | 53.537,4                                                               | 1.424.935,5                                        |
| 3    | 01/01/2020 - 31/12/2020 | 1.452.202,3                                                     | 4.125.342,5                                                                | 27.358,16                                                     | 80.895,6                                                               | 1.479.560,4                                        |
| 4    | 01/01/2021 - 31/12/2021 | 1.496.496,1                                                     | 5.621.838,6                                                                | 27.351,08                                                     | 108.246,6                                                              | 1.523.847,2                                        |
| 5    | 01/01/2022 - 31/12/2022 | 1.529.381,1                                                     | 7.151.219,7                                                                | 27.344,01                                                     | 135.590,7                                                              | 1.556.725,1                                        |
| 6    | 01/01/2023 - 31/12/2023 | 989.458,7                                                       | 8.140.678,4                                                                | 27.336,93                                                     | 162.927,6                                                              | 1.016.795,7                                        |
| 7    | 1/01/2024 - 31/12/2024  | 985.202,9                                                       | 9.125.881,4                                                                | 27.329,86                                                     | 190.257,4                                                              | 1.012.532,8                                        |
| 8    | 01/01/2025 - 31/12/2025 | 980.965,4                                                       | 10.106.846,7                                                               | 27.322,78                                                     | 217.580,2                                                              | 1.008.288,1                                        |
| 9    | 01/01/2026 - 31/12/2026 | 976.746,0                                                       | 11.083.592,7                                                               | 27.315,71                                                     | 244.895,9                                                              | 1.004.061,7                                        |
| 10   | 01/01/2027 - 31/12/2027 | 972.544,6                                                       | 12.056.137,3                                                               | 27.308,64                                                     | 272.204,6                                                              | 999.853,3                                          |
| 11   | 01/01/2028 - 31/12/2028 | 968.361,3                                                       | 13.024.498,6                                                               | 27.301,58                                                     | 299.506,2                                                              | 995.662,9                                          |
| 12   | 01/01/2029 - 31/12/2029 | 964.195,9                                                       | 13.988.694,6                                                               | 27.294,51                                                     | 326.800,7                                                              | 991.490,4                                          |
| 13   | 01/01/2030 - 31/12/2030 | 960.048,4                                                       | 14.948.742,9                                                               | 27.287,45                                                     | 354.088,1                                                              | 987.335,8                                          |
| 14   | 01/01/2031 - 31/12/2031 | 955.918,6                                                       | 15.904.661,5                                                               | 27.280,39                                                     | 381.368,5                                                              | 983.199,0                                          |
| 15   | 01/01/2032 - 31/12/2032 | 951.806,5                                                       | 16.856.468,1                                                               | 27.273,33                                                     | 408.641,8                                                              | 979.079,9                                          |
| 16   | 01/01/2033 - 31/12/2033 | 947.712,1                                                       | 17.804.180,1                                                               | 27.266,27                                                     | 435.908,1                                                              | 974.978,3                                          |
| 17   | 01/01/2034 - 31/12/2034 | 943.635,2                                                       | 18.747.815,3                                                               | 27.259,21                                                     | 463.167,3                                                              | 970.894,4                                          |
| 18   | 01/01/2035 - 31/12/2035 | 939.575,7                                                       | 19.687.391,0                                                               | 27.252,16                                                     | 490.419,5                                                              | 966.827,9                                          |
| 19   | 01/01/2036 - 31/12/2036 | 935.533,7                                                       | 20.622.924,7                                                               | 27.245,11                                                     | 517.664,6                                                              | 962.778,8                                          |
| 20   | 01/01/2037 - 31/12/2037 | 931.509,0                                                       | 21.554.433,7                                                               | 27.238,06                                                     | 544.902,6                                                              | 958.747,0                                          |
| 21   | 01/01/2038 - 31/12/2038 | 927.501,5                                                       | 22.481.935,2                                                               | 27.231,01                                                     | 572.133,6                                                              | 954.732,5                                          |
| 22   | 01/01/2039 - 31/12/2039 | 923.511,2                                                       | 23.405.446,4                                                               | 27.223,96                                                     | 599.357,6                                                              | 950.735,2                                          |
| 23   | 01/01/2040 - 31/12/2040 | 919.538,0                                                       | 24.324.984,4                                                               | 27.216,92                                                     | 626.574,5                                                              | 946.754,9                                          |





|    |                            |           |              |           |           |           |
|----|----------------------------|-----------|--------------|-----------|-----------|-----------|
| 24 | 01/01/2041 -<br>31/12/2041 | 915.581,8 | 25.240.566,3 | 27.209,87 | 653.784,4 | 942.791,7 |
| 25 | 01/01/2042 - 31/12/2042    | 911.642,6 | 26.152.208,9 | 27.202,83 | 680.987,2 | 938.845,5 |
| 26 | 01/01/2043 - 31/12/2043    | 907.720,3 | 27.059.929,2 | 27.195,79 | 708.183,0 | 934.916,1 |

|                                                                      |                         |            |              |           |           |            |
|----------------------------------------------------------------------|-------------------------|------------|--------------|-----------|-----------|------------|
| 27                                                                   | 01/01/2044 - 31/12/2044 | 903.814,8  | 27.963.744,0 | 27.188,75 | 735.371,8 | 931.003,5  |
| 28                                                                   | 01/01/2045 - 31/12/2045 | 899.926,0  | 28.863.669,9 | 27.181,72 | 762.553,5 | 927.107,7  |
| 29                                                                   | 01/01/2046 - 31/12/2046 | 896.053,9  | 29.759.723,8 | 27.174,68 | 789.728,2 | 923.228,5  |
| 30                                                                   | 01/01/2047 - 31/12/2047 | 892.198,3  | 30.651.922,1 | 27.167,65 | 816.895,8 | 919.366,0  |
| 31                                                                   | 01/01/2048 - 16/01/2048 | 38.941,8   | 30.690.863,9 | 1.190,60  | 818.086,4 | 40.132,4   |
| <b>Total Reduction of Estimated GHG emissions (tCO<sub>2</sub>e)</b> |                         | 30.690.863 |              | 818.086   |           | 31.508.950 |
| <b>Accreditation period (years)</b>                                  |                         | 30 years   | 30 years     | 30 years  | 30 years  | 30 years   |
| <b>Emissions Reduction GHG annual (tCO<sub>2</sub>e/year)</b>        |                         | 1.023.028  |              | 26.389    |           | 1.049.418  |

## 6. Baseline scenario and additionality analysis

For the identification of the baseline scenario, the criteria considered were the changes in carbon stocks in the project boundaries, establishing the most probable land use at the beginning of the project and according to the steps established by the methodological document for the AFOLU sector, PROCLIMA REDD+ projects version 2.2 of 2021.

The following steps are used to identify the baseline scenario:

### 6.1. Step o. REDD+ project start date

The project start date, January 17, 2018, was defined based on the letter of intent signed by the community for the development of a REDD+ project in their territory. From this moment on, a series of activities that contribute to reducing emissions from avoided deforestation and degradation of the forests located in the area of the reserve will begin. These activities include strengthening the territorial governance that the communities and their leaders undertook with the formulation of the Environmental Management Plan, the development of nurseries for passive assisted forest restoration, care of the diversity of species in the chagras, development of events and dances that are part of their community plan and forest restoration actions, among others.

## 6.2. Step 1. Identification of land use alternatives

In accordance with the provisions of the Methodological Document AFOLU sector, ProClima REDD+ Projects, the identification and selection of alternatives for land use in the absence of the project and that can be defined as baseline.

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

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

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

Historically, activities have been carried out in the territory of the indigenous reserve that put pressure on the region's natural and forest resources. The trend of deforestation and forest degradation in the territory has increased in recent years and threatens the sustainability of the territory, local communities, and biodiversity. These pressures are due to land management practices that include timber extraction for self-consumption and commercialization, the expansion of the agricultural frontier, mining activities, and the presence of illicit crops, all of which are pressured by the communities and external actors. The socioeconomic conditions faced by the indigenous communities in their territory make it difficult to effectively control activities that threaten the forests and reduce the availability of other natural resources. Likewise, pressure from external actors and behaviors far removed from their culture and tradition have compromised their capacity for governance and management of their territories.

Consequently, the trend of forest loss would continue in the future and the community's capacity to control and manage the territory in a sustainable manner would continue to be undermined by conditions of low governance and few opportunities to generate income and provide wellbeing for the population.



Based on the observations and workshops conducted with the members of the Indigenous Reserve and the multi-temporal analyses of land use, the continuation of existing practices involves the following activities:

- *Subsistence agriculture (chagras)*: this is a traditional agricultural production system of the communities living in the indigenous reserve, and is the basis for food production. The chagras correspond to a system in which several transitory and perennial species (pineapple, cassava, grapes, fariña, sugar cane, plantain, chili, tubers, among others) are cultivated in a cyclical manner. This system is complemented by activities such as fishing, hunting and gathering of available forest products.
- *Colonization and clearance zone*: since the 1990s, colonization processes have been developed, understood as a form of social construction that manifests itself in the occupation of territories for the development of productive activities. The colonization process has been influenced by dynamics associated with the displacement caused by illegal armed groups that force the local population to migrate to other areas or the entry of young people from indigenous communities into the insurgent ranks. After the signing of the Peace Agreement in 2016, some members of these communities have returned; in turn, settlers from other regions have seen an opportunity to enter this region and settle. The colonization of new areas involves the clearing of forested areas to establish housing and a subsequent expansion of cleared areas for the development of productive activities.
- *Expansion of the agricultural frontier*: Development of crops and livestock activities.
- *Timber extraction*: this activity is a cause of historical forest degradation. The harvesting and commercialization of timber species is an opportunity to generate economic resources for some members of the community.

### **Scenario ii: REDD+ projects without certification of emission reductions**



This scenario consists of community members voluntarily controlling the activities that generate forest loss in their territories: they avoid timber extraction and the establishment of new areas for agricultural and livestock systems. In this scenario, these activities are progressively replaced by productive activities that do not affect forest cover. The communities of the Indigenous Reserve could implement REDD+ project activities without registering the project with a carbon market. The community is interested in preserving its territory and protecting its culture, so the community is willing to move forward with activities that contribute to avoiding forest loss.

REDD+ activities include efforts to maintain livelihood strategies that do not threaten the integrity of the forests, development of nurseries, constant presence in the territory and greater control over its natural resources to avoid the extraction of forest resources and reduce pressures on the forest, either by external or internal actors of the reserve. These activities are also coordinated with the municipal strategies to control deforestation (see Annex 3.2), the environmental determinants and the municipal development plan (see Annex 3.3 and 3.5).

By not registering the project with the REDD+ mechanism, the members of the indigenous reservation do not have access to economic income associated with the reduction of GHG emissions from deforestation and forest degradation in their territories.

### **Scenario iii: Improvement of agricultural systems and increase of forest economy**

This scenario consists of the establishment of agricultural systems above the historical trend, and is based on the promotion currently being carried out by municipal and departmental authorities in the region. Taking into account the land use vocation and the most promising activities, there is an interest in promoting an economy based on the use of forests, together with the national forest policy and the national forest development plan, which seeks to promote the competitiveness of timber and non-timber forest products in the market.



(Alcaldía Municipal de Solano, 2019). Although to date the participation of indigenous communities in these initiatives has been incipient, the process can be strengthened if budgetary restrictions are overcome and the geographic scope includes the indigenous reserve.

An economy based on sustainable forest products would progressively displace activities that result in deforestation of the territory and counteract the population's economic dependence on these activities; however, it would also increase the establishment and expansion of agricultural activities, which could intensify and accelerate forest loss in the project area. Considering these elements, and analyzing the dynamics of forest loss in the project area, the third scenario envisages productive development promoted by the national government and limiting the unsustainable use of forests and counteracting the population's economic dependence on these activities.

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

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

Although there are laws that regulate the use of natural resources and changes in land use, it is important to consider the limited capacity of the State to enforce regulations that protect natural resources in these areas far from urban centers. Non-compliance with regulations does not necessarily result in legal or penal consequences that discourage those involved from correcting their actions.

practices. The scarce, and in some cases nonexistent, presence of government representatives in the area makes it impossible to guarantee compliance with the laws.

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

| Scenario | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| i        | It involves the continuation of historical land use (colonization, chagras, timber extraction, and illicit crops). Although these activities are not aligned with current regulations, they are carried out by the population established in the project area and in the reference region. Therefore, it is assumed that this scenario could be maintained over time and constitute an important source of income for the project. probable alternative land use.                                                                                                                                                                                                                                              |
| ii       | Involves all REDD+ project activities but without registering the project with a carbon market to certify emission reductions. It involves a reduction in practices that have deteriorated the forest through the implementation of productive alternatives that are friendly to the natural environment (cucuy, yucca, chili, pineapple, peanuts, sustainable forest products) and greater territorial control. These activities comply with current regulations. Considering that the community seeks to improve its living conditions and its capacity to manage the territory in a sustainable manner, this scenario is configured as an alternative that the community can seek. using its own resources. |
| iii      | It consists of the development and improvement of sustainable forestry activities, agriculture and livestock farming, production in chagras, timber species systems, and productive linkages. These activities are aligned with the interests of municipal and departmental authorities. Therefore, it is considered a probable future land use alternative.                                                                                                                                                                                                                                                                                                                                                   |

### 6.3. Step 2. Barrier analysis

Barriers that may prevent the implementation of the REDD+ project, but do not prevent the implementation of the land use alternatives considered in the scenarios





### 6.3.1. Sub-step 2a. Identification of barriers to project implementation

#### **Investment barriers:**

The indigenous communities do not have access to investment credits, and the government does not have sufficient resources to implement activities that ensure adequate land management and offer economic alternatives that do not involve deforestation and that meet the basic needs of the indigenous communities.

The sustainable production systems that can be implemented and strengthened have low profit margins and profits must be reinvested and directed to sustaining them and paying salaries. The other project activities (governance, monitoring and social investment) will not generate any profitability and their implementation depends entirely on resources that are not currently available to the indigenous people.

Activities to control deforestation do not offer a financial return that allows them to be sustained over time. For this reason, a viable instrument for financing activities consists of accessing the REDD+ mechanism, which offers the possibility of trading carbon credits associated with the forest that is being protected and receiving resources to make investments to implement the activities necessary to ensure its conservation. This mechanism also covers the costs of the formulation, validation and verification stages of the project, which could not be financed in the absence of carbon credit trading.

#### **Social barriers:**

The social conflict between the indigenous community and settlers and external actors (e.g. illegal armed groups) associated with immigration processes, illegal occupation of indigenous territory and the development of widespread illegal practices, are part of the situations that affect the implementation of actions to change the trend of historical land use. In the area of the

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

### 6.3.2. Sub-step 2b. Analysis of barriers to the implementation of the scenarios.

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

Table 10. Analysis of barriers with respect to the identified land use scenarios.

| Alternatives of land use | Type of barrier |                  | Scenario analysis and implementation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------|-----------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          | Investment      | Condition Social |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| i                        | No              | No               | None of these barriers prevent the continuation of the activities that have been developed historically in the territory.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| ii                       | Yes             | Yes              | <p><b>Investment:</b> Without the availability of investment capital, there is no transition from current productive activities to those that do not affect forest cover.</p> <p><b>Social:</b> Considering the economic dependence among the population groups present in the reserves and the fact that this promotes the development of activities that generate deforestation, if the population does not have a financial mechanism to counteract this dependence, it is unlikely that economic alternatives that offer opportunities will be developed. employment and mitigate those that generate deforestation.</p> |



|     |     |    |                                                                                                                                                                                                                                                                                                                                                        |
|-----|-----|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| iii | Yes | No | <b>Investment:</b> Although there are plans and programs in place by the Mayor's Office of Solano and the Governor's Office of Caquetá to control deforestation and forest degradation, these entities have limited investment resources. Therefore, it is considered that there is little<br>These institutions are likely to have resources at their |
|-----|-----|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                             |                 |                  | disposal.                                                                                                 |
|-----------------------------|-----------------|------------------|-----------------------------------------------------------------------------------------------------------|
| Alternatives<br>of land use | Type of barrier |                  | Scenario analysis and implementation                                                                      |
|                             | Investment      | Condition Social |                                                                                                           |
|                             |                 |                  | for invest in the the project area to achieve counteract activities that cause deforestation in the area. |

According to the results presented in Table 10, the most probable and conservative land use alternative to define the project baseline (different from the project activity), is the continuation of the use that was present at the time the project was initiated, which corresponds to Scenario i.

#### 6.4. Impact of project registration

The economic benefits derived from the commercialization of carbon credits are a source of investment resources that allow the implementation of project activities, which are necessary to address practices and factors that represent a threat to forests. REDD+ activities represent job opportunities and income generation, which reduces dependence on activities that involve deforestation of the territory.

The resources from the registration of this REDD+ project are configured as working capital available to materialize the interests and opportunities identified by the community members, who seek the sustainability of their culture and territory. It is also true that REDD+ activities do not offer significant profitability and the focus of the project is on territorial and cultural conservation. REDD+ project activities can only be sustained and increase their impact if resources are obtained through the sale of carbon credits. The indigenous community does not have access to bank credits or financial support from the government or banking entities, so the resources derived from the sale of carbon credits constitute a unique opportunity to finance REDD+ activities. These resources will also help strengthen territorial management and governance capacity, resulting in a cultural strengthening of the communities and an improvement in their quality of life.



By accessing the REDD+ mechanism, the benefits associated with the reduction of GHG emissions translate into direct economic income for the community, which ensures the continuity of actions to reduce deforestation.

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

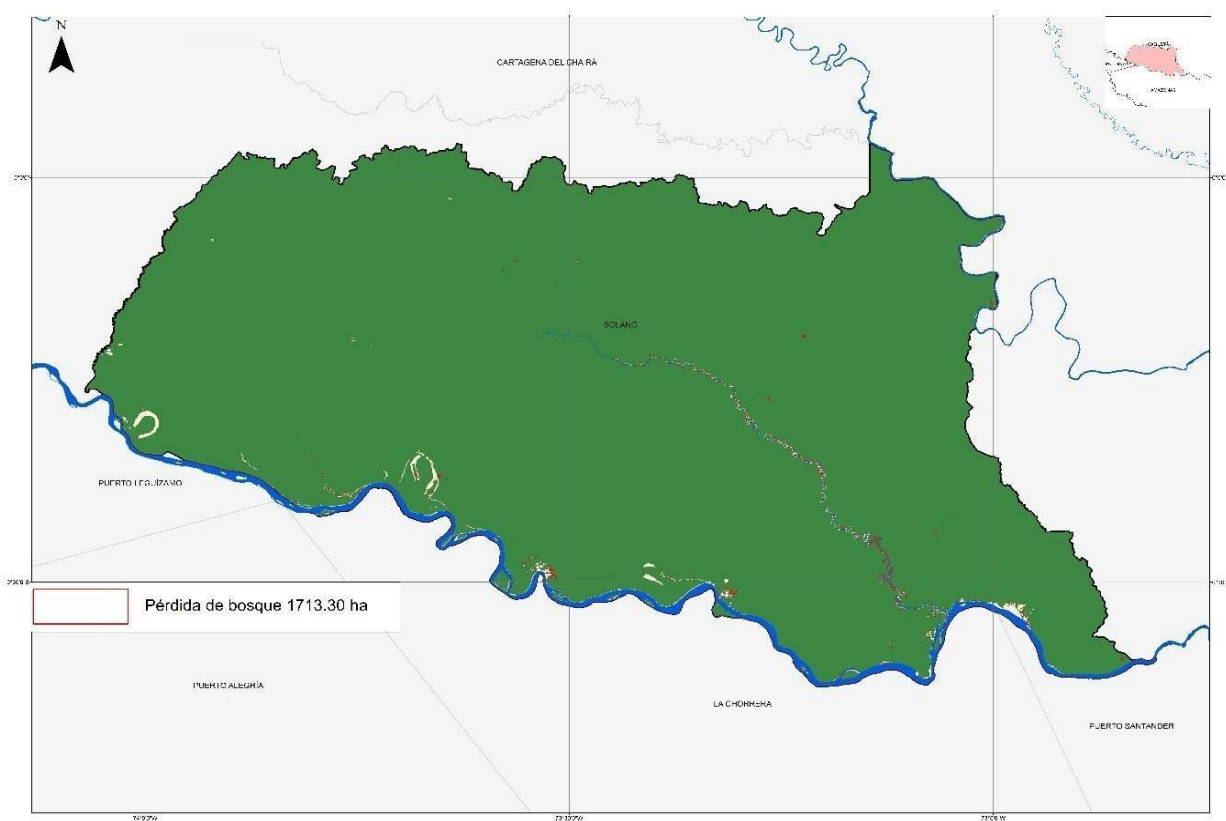
## 7. Causes and drivers of deforestation and degradation

The identification of the causes and drivers of deforestation and forest degradation in the project area is fundamental to: i) design the relevant actions and measures of the REDD+ project to mitigate deforestation and forest degradation and ii) delimit the reference region.

The following is the identification, description and analysis of the causes and agents of deforestation, from which measures and actions were designed to mitigate deforestation and forest degradation in the project area. This identification was made by based on the workshops held with the communities and the consultation of documentation, including the Environmental Management Plan of the Indigenous Reserve (See Annex 3.1).

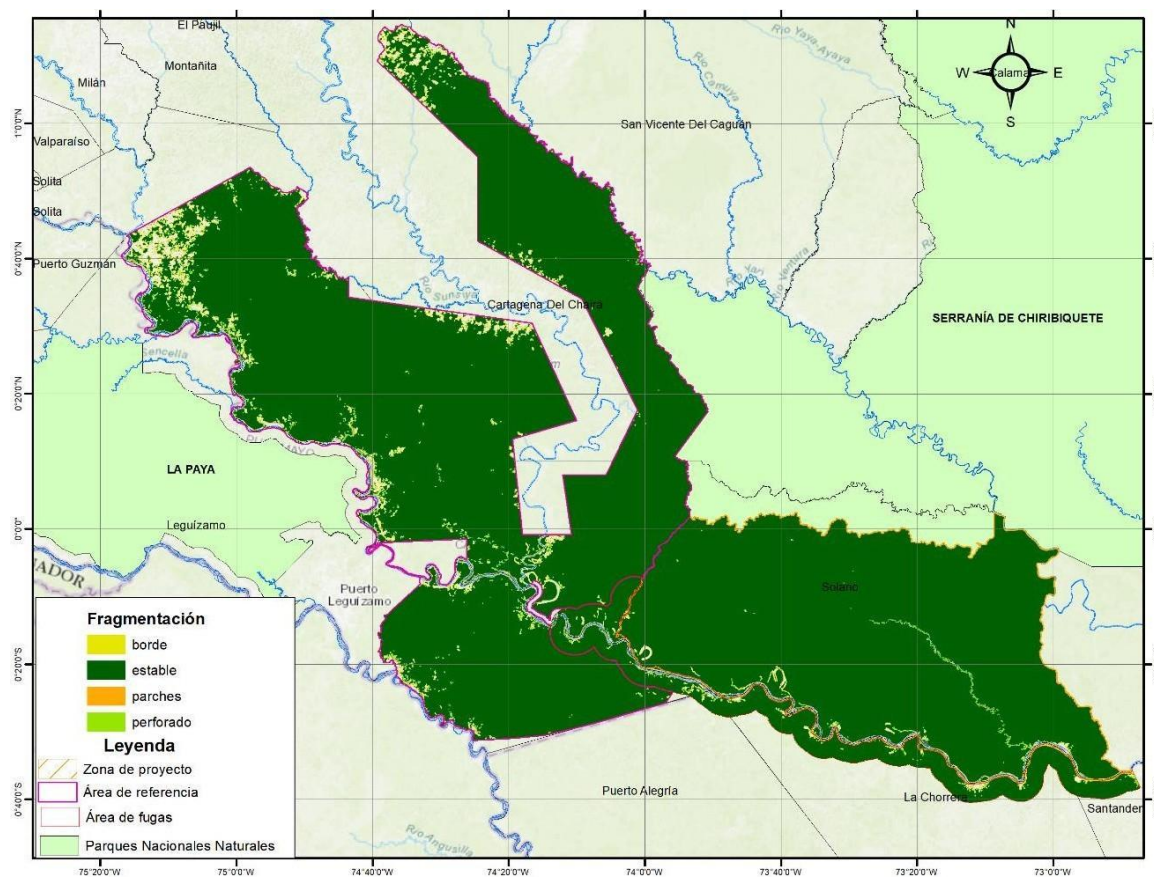
### 7.1. Spatial and temporal dimensions

Deforestation and degradation present in the reference region were characterized spatially and temporally. The analysis was also conducted for the project area. For this, a period of analysis was taken for deforestation between 2007 and 2017, and for degradation the periods 2007-2014 and 2014-2017 were taken.

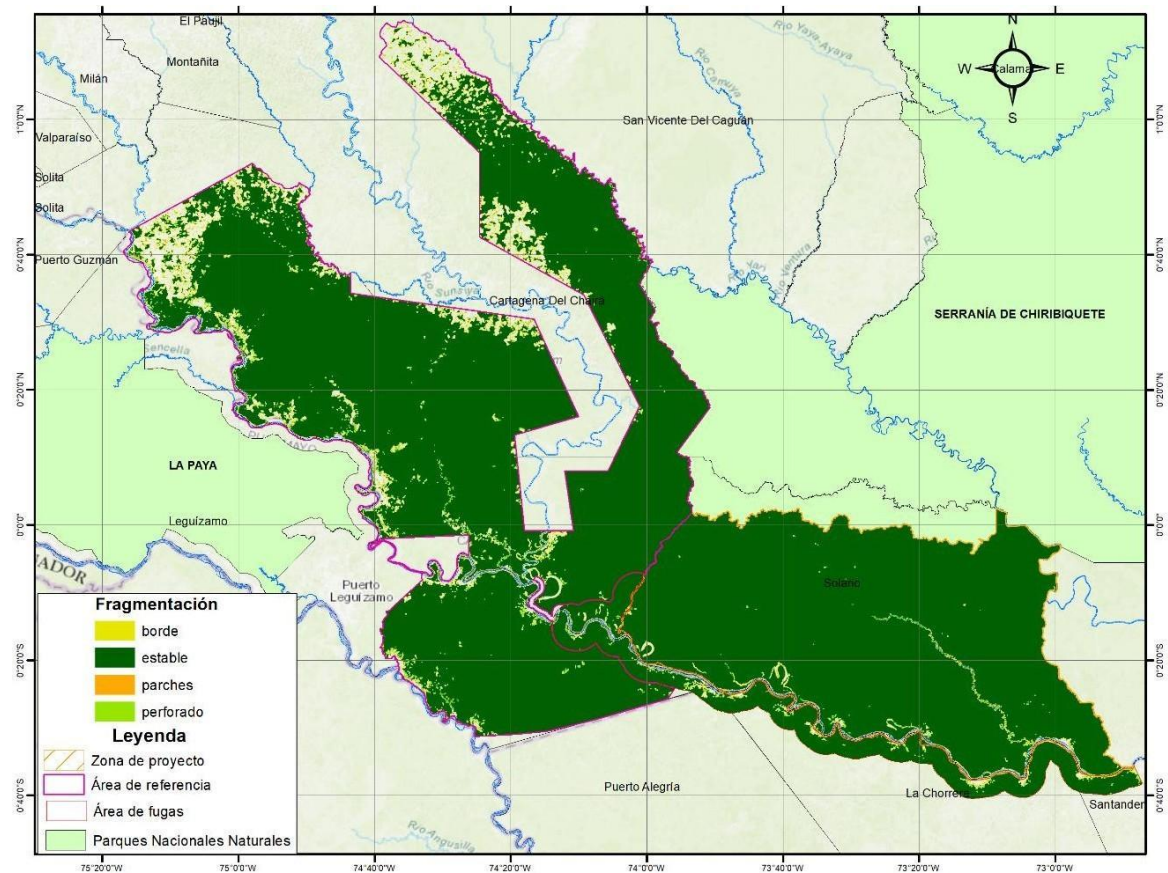


Map 16. Forest loss in the indigenous reservation for the period between 2007 and 2017. Source: Own elaboration.





Map 17. Degradation in the project area, reference region and leakage area between 2007-2014. Source: Own elaboration.



Map 18. Degradation in the project area, reference region and leakage area between 2014 and 2017. Source: Own elaboration.

## 7.2. Context

### 7.2.1. Territorial context

The territories in which the communities belonging to the reserve are settled have been occupied in an ancestral manner, so it is owned, appropriated, awarded and granted from the law of origin, natural law and higher law. These ancestral territories are appropriated by knowledge and practices framed within the cosmology and cosmogony of the ethnic community, based on their cultural practices, uses and customs (Agencia Nacional de Tierras, 2017).



For the communities of the reserve Indígena Puerto Zábalo and Los Monos, the territory is the center of life and is conceived as their mother. In it, Moo Buinaima (the creator father) left the Word of Life, the Word of Advice (yetára úai/yedára úai) for good living. The management of the territory is carried out from the maloca, particularly from the mambadero (masculine and nocturnal space), where the present is reflected based on the past, the future is planned and its knowledge is transmitted. The maloca is complemented by the chagra (mainly feminine space), where women transmit the knowledge of territorial management to young women during the day.

The territory of the Puerto Zábalo and Los Monos Indigenous Reserve is characterized by its dense forest cover, which requires clearing for the establishment of houses and farms. In addition to the presence of indigenous communities, there are external actors including settlers, resource extractors (foresters and miners) and illegal actors.

For the communities of the reserve, respect for coca and ambil is sacred and is a legacy that comes from their ancestors. For them, it is necessary to resolve and define the issue of territorial management and the boundaries between the communities, and the limits that correspond to them. It is also necessary to define the issues of timber management, flora and fauna, and fishing for ornamental fish.

The reserve has a territorial vision (supported by the knowledge and vision of the grandfathers and grandmothers) that is segmented into the ancestral, current and future territory, as expressed in the Environmental Management Plan prepared by the Community:

- Ancestral territory: the territory on the banks of the Caquetá River, by experience itself, is considered ancestral territory of this generation (grandparents). From the beginning, in the management of the territory, there have always been limits, landmarks, or symbolic routes of belonging that allowed the identification of a territory for a clan, a village, a family or a macro-territory.
- Current territory: Current territory is the form of the experience that has emerged as the communities of the reserve are located. Thus, each of the



existing communities have their control and surveillance zones.

in mutual agreement and under the respect of the word. It is here where the mandate of grandmothers and grandfathers who have already died and those who are still alive, to have a global thought and territory without limits of departments, municipalities, rivers, mountains, cannot be changed or supplanted. In this sense, this traditional mandate must be respected, remembered and continuously revitalized (reserve Puerto Zábalo and Los Monos, 2016).

- Future territory: refers to the future life of children and grandchildren who will govern the territory with changes in form, but not in substance, and the need to achieve a unified territory or global territory ordered from tradition.

For the communities of the reserve, it is essential to strengthen their culture and make good use of the territory and there is a willingness to work on strengthening governance, control, use and management of natural resources. For this purpose, the following management zones have been defined in the territory of the Indigenous reserve (reserve Puerto Zábalo and Los Monos, 2016).

- Special Management Zones: For the communities there are two forms of special management, spiritual and material. Spiritual management refers to what is done from the point of view of thought, thus this management is done by the wise people from the mambeadero space. The material is seen from the respect for sacred sites, intangible zones and conservation zones for the management of the entire territory.
- Gathering areas: Corresponds to places used by members of the reserve for self-consumption and income generation activities. It includes the chagras, fishing, hunting, fruit gathering, and gathering of materials for handicrafts and wood. These gathering sites correspond to rivers, streams, lagoons, lakes, beaches, hills, meadows, rasatrojo and the chagra.
- Intangible or Shield Zone: Places of spiritual contact, where any type of exploration and exploitation is prohibited.
- Conservation Zone: Corresponds to the territory that is conserved for the use of future generations. These areas protect species of flora, fauna and other ecosystem services.
- Vega zones: These zones depend on the level of fertility perceived by the



community. Based on this, a distinction is made between the river vega (semi-fertile) and the river vega (fertile). Short-term crops are grown in the





river floodplain zones (corn, rice, peanuts, tobacco, cassava, watermelon), medium-term (banana, corn, papaya, sugarcane) and long-term (cocoa, chontaduro, canangucho, orange).

The presence and establishment of settlers in the territory began in the 1970s with the economic opportunities associated with the boom in illicit crops (bonanza coquera). In the 1990s, a U.S. military base was installed and was erected towards the end of the decade. Later, in the 2000s, the coca boom began in the indigenous communities and the area was taken over and controlled by illegal armed groups, which have been present in the territory ever since. The interaction between the indigenous people, the colonists and these groups has been mediated mainly by the fear and limitations of the indigenous people to defend their culture and territory. As of 2003, there is a presence of the Colombian military base Araracuara.

The reserve has undergone the process of expanding its territory as a strategy for conservation and ecological connectivity with the increased area of the Chiribiquete National Natural Park.

### 7.2.2. Socio-cultural context

The communities of the Puerto Zábalo and Los Monos Indigenous Reservation belong to the Uitoto ethnic group. The middle Caquetá region has a high mobilization of people associated with economic dynamics, mobilization of armed groups, health and education. Prior to the signing of the Peace Accord, there was a period where the population fluctuated significantly in the territory. In 2012 the population was close to 111 families (CRIMA, 2012), in 2016 it was around 244 families, and after 2018 it decreases again to approximately 110 families. With the implementation of the REDD+ project, it is expected that part of the population will be able to return to the territory as they generate new opportunities.

According to the information gathered in the workshops conducted with the communities, the number of individuals and families recorded are approximately as follows:

| Community of the RI Puerto Zábalo and Los Monos - Department of Caquetá | # families | # people |
|-------------------------------------------------------------------------|------------|----------|
| Coemaní                                                                 | 77         | 292      |
| Jerusalem                                                               | 14         | 59       |
| Quinche                                                                 | 5          | 30       |
| Narrow                                                                  | 15         | 145      |

\*Approximate values. Source: Own elaboration based on (Ministerio del Interior & Consejo Regional Indígena del Medio Amazonas (CRIMA), 2012) and (DANE, 2018).

Historically, there have been interethnic unions in the region and there is a preeminence of *Minika* dialectal variation of the Uitoto language, and dialectal variations are a differentiating factor within the ethnic group, although Spanish has been used as the lingua franca. In general, 40% of the population reports that they understand the language. Thirty percent report speaking the language and 30% report reading and writing it.

For the communities of the Puerto Zábalo and Los Monos Indigenous Reservation, grandfathers and grandmothers are the central axis of the culture. They are the basis for the strengthening of the culture for the good management of tradition. Courage and tolerance also depend on them.

The oral tradition is fundamental for the community, where the voice of the grandfathers and grandmothers (the voice of the yucca) is primordial since they have the greatest knowledge about the management of the territory and are the ones who transmit the word of advice as fathers and mothers do to their daughters and sons. Their advice should be followed and taken care of. Based on the knowledge acquired through experience, myths, stories of origin and by observing changes in the environment, trees, animals and their behavior, water levels, clouds, the wise men and women recognize the appropriate way to manage the territory and its resources.

As for the social structure and its limits of government, they go according to the occupation of space, which are indicated by the thought of the indigenous mythologies. The communities of the reserve are structured through clans, which have a cultural meaning of origin. Likewise, these clans define hierarchies and social





relations marked in the daily life of the communities and are the

cohesive element of the indigenous peoples. For the internal organizational level, the cabildo structure has been adopted, which is as follows structure: Traditional Authority, Governor/Captain, Secretary, Treasurer and Fiscal. The principal chief or traditional authority is the visible head to coordinate work and relations with other peoples; normally the maloqueros and dance owners. The functions of the principal chief were and are the management and control of the sacred sites so that there is peace and tranquility in their territory. The clan chiefs were and are in charge of maintaining harmony between man and nature through the management of the ecological calendar, rituals and dances. Each chief has his secretary-counselor and work coordinators; these are appointed in public ceremonies and the positions are inherited from fathers to sons. The governors are the spokespersons to the outside world, appointed in assemblies by the communities.

*Figure 1 Social organization. Source: (reserve Puerto Zábalo and Los Monos, 2016).*



Decision-making in the territory in question is based on the triangulation consisting

of Governors, Caciques and the Association. Under the mythical and material form of the maloca, the different issues concerning the community are dealt with.

In this place, humans enter into communion with their spiritual guides (through the ambil, the mambe and the manicuera) and with other men. Specifically in the dance, agreements are made regarding the use of the territory. Such arrangements follow two fundamental instances: first, the principles of the word that contain the word coca, tobacco and sweet yucca. Second, the principles of management that are represented in the four main dances that serve as symbolic pillars supporting the maloca.

They have two kinds of cultural principles of management, those of speech and those of management itself, as illustrated below:

Figure 2 Cultural management principles. Source: (reserve Puerto Zábalo and Los Monos, 2016).



The dances are given when a disease (physical, emotional, social, spiritual or product of desecrating the sacred) is resistant and its origin is identified, so the owner

dance organizes one to prevent it. According to the time of the year and the origin of the disease, four main dances are performed: Yadiko dance (protection against diseases produced by aquatic animals such as boa or fish and land animals); Fruit dance (to ward off epidemics, prevent diseases and to collect seeds, purification of nature); Charapa dance (to prevent water and air diseases such as scabies and smallpox. Also to protect people's life and life in society, to harmonize women.

-woman reproduction and life/territory reproduction and life); and, Hunting dance (strengthening health, education and transmitting traditional knowledge). According to their vision, by performing the dances, the harmful substances become good, suitable for the consumption of the people and the purification of the being. Although part of this traditional knowledge and identity still survives, much has been lost with the death of many knowledgeable people during the cauchería era (reserve Puerto Zábalo and Los Monos, 2016).

The dance rituals are performed to enter into harmony with nature. They intervene on the spiritual (the cosmovision) and material (the people, the village) levels. Territorial management is articulated through the dialogue of those who organize the dances, when they take turns performing them. The dance rituals are the good word left by the father creator for the good of humanity. In addition, they are a way of bringing together families scattered throughout the territory, thus strengthening the unity and coexistence of the communities.

### *Indigenous associations*

They also have an association, Asociación de Cabildos Indígenas Del Bajo Caquetá - ACIBAC, which represents all the communities, coordinating the cacique with the governor and the governor with the association. In this way, everything that is done, raised and reviewed, is coordinated between the parties so that it is done in front of everyone. ACIBAC is defined in its statutes as a special public law association with legal status, its own assets and administrative autonomy, in accordance with the provisions of Article 2 of Decree 1088 of 1993 and has its territorial scope in the Department of Caquetá, especially in the reserves of Monochoa and Puerto Zábalo and Los Monos.



The members of the ACIBAC, headed by its president, from the human and cultural condition, seek ways for the economic support of the indigenous community to live in the context of current development, preserving the culture and an integrated society according to the mandate of the grandparents. Likewise, they watch over the preservation, conservation and education on how to have a firm nature, water and pure air. Their role is based on the pillars of culture, justice, life and indigenous government.

Likewise, its purpose is to strengthen the organization and representativeness of the indigenous government of the indigenous communities of the region and the development of social works to be carried out in these communities. In function of this, they develop activities related to:

- To advance projects of social, economic, self-government and collective environmental interest.
- Ensure the preservation of the environment and natural resources, taking into account and through life plans, municipal, departmental and national development plans and the Conpes de la Amazonia.
- To promote adequate control and surveillance of the territory under its jurisdiction, as well as the use of soil and subsoil.
- Promote public investments and ensure their proper execution, guaranteeing social and cultural economic development, as well as direct and indirect commercial and industrial activities.
- To defend the constitutional and legal rights in favor of the indigenous communities and the procedures for citizen participation.
- Enter into inter-administrative agreements or contracts with public and private entities to develop projects for the benefit of the communities within the framework of competencies and suitability.
- Incorporate Health Promoting Entities and/or Health Providing Institutions.
- Enter into public and/or private contracts to administer education, health, safeguarding plans and guarantee programs, within and for the communities.
- Enter into agreements for the logistical development of public and/or private activities.



- To legally represent the communities affiliated to the association before the Colombian state, public and private entities at local, national and international levels.

The Asociación de Cabildos Indígenas del Bajo Caquetá has the following governing, administrative and supervisory bodies:

- Congress
- Council of Authorities
- Executive Committee
- Prosecutor

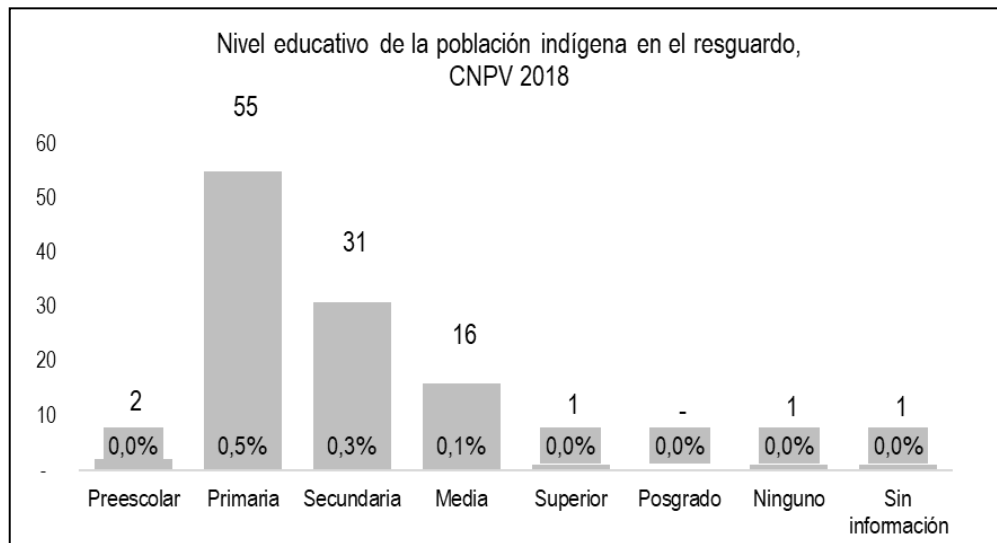
The congress is the highest authority of the association and is made up of 10 delegates from each affiliated community designated by the general assembly of the cabildos or by the governor of each community, who shall have voice and vote. In addition, other members of the communities that consider pertinent may attend, who will have voice, but no vote.

The council of authorities is made up of 5 delegates from each affiliated community, and are those people who have the connotation of Caciques who manage the spiritual part, the Governor and the leader who are the basis of political authority of the indigenous peoples, the representation of the youth and the representation of women, as a symbol of the sweet word.

Finally, it should be noted that the executive committee will be elected by the congress for a period of three years and will be composed of a president, a treasurer, a secretary and a member. It will also be supported by coordinators representing the areas of coordination: Culture, Territory and Environment, Education, Health, Women, and Recreation and Sports.

Indigenous leaders, associations and national organizations are delegates of the authority of governors and grandfathers or caciques and captains, as representatives and managers or favors for the communities, they are not authorities.

*Education, health and public services*



Source: taken from (DANE, 2018).

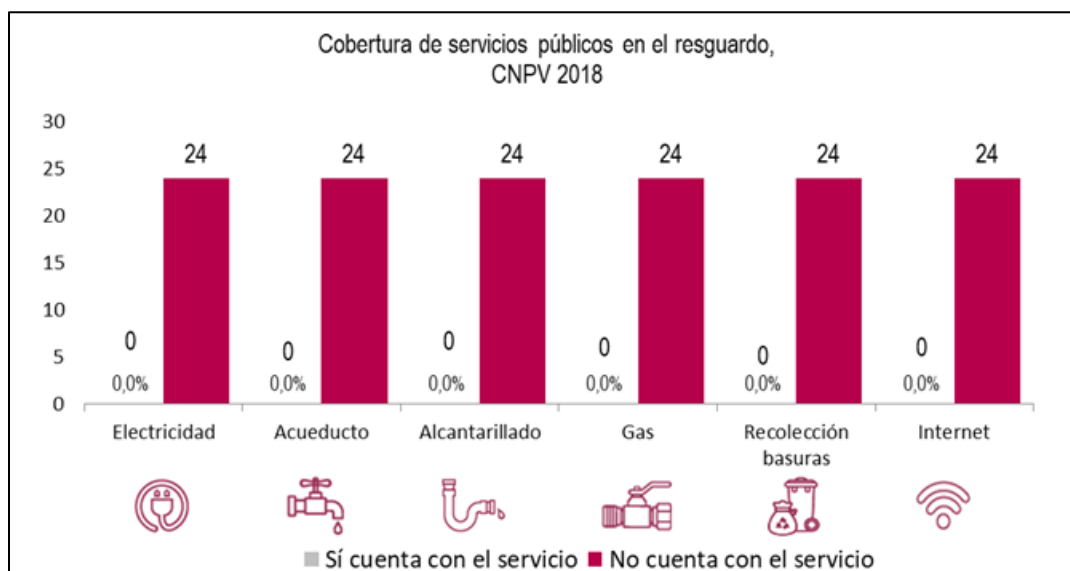
In terms of education, there are some institutions such as the Fortunato Really school and some schools affiliated with and belonging to the communities of the Puerto Zábalo and Los Monos reserve. However, the infrastructure has deteriorated and communication has been established with the Ministry of Education requesting immediate attention supported by the summit of grandmothers and grandfathers of the reserve.

In terms of health issues, there are deaths of children and grandparents due to malnutrition, anemia, gastrointestinal diseases and lung diseases. Also, among the ailments that affect community members are headaches, body aches, earaches, high blood pressure, rheumatism, arthritis, cholesterol, and diabetes. The health infrastructure is almost nonexistent and the communities rely on traditional medicine; however, this has been weakening over the years and the lack of knowledge of the new generations (reserve Puerto Zábalo and Los Monos, 2016).

In recent years, there has been growing concern about the need to combat the problem of psychoactive substance use by part of the young population of the reserve. The use of these harmful elements is generating disorder in the new generation. They emphasize the importance of appropriating the traditional knowledge transmitted through the word of the leaders.

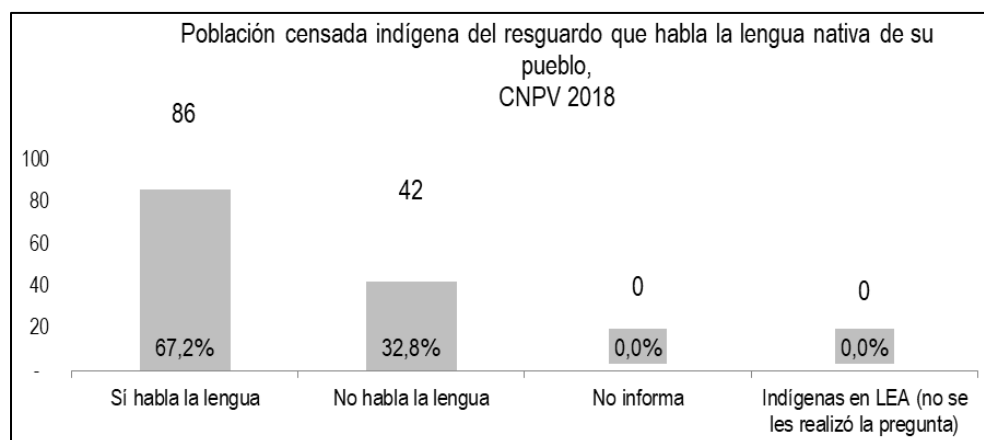


Regarding public services, there is no access to electricity, drinking water or basic sanitation. They present high discomfort in rest areas and manifest the poor condition of the houses (reserve Puerto Zábalo and Los Monos, 2016).



Source: taken from (DANE, 2018).

Currently, communities are dealing with the appropriation of other cultural practices, both forced and voluntary, which has resulted in the weakening of language and traditional seeds.



Source: taken from (DANE, 2018).



Similarly, given the dynamics of the economic market, new needs have arisen for the members of the reserve in terms of education and professional training to increase their competitiveness and job opportunities, access to communication networks and access to non-traditional health services.

This situation is aggravated by the location and difficult access to the Indigenous reserve area and the scarce presence of the State. For this reason, they have resorted to the commercialization of the territory's resources to meet their needs (reserve Puerto Zábalo and Los Monos, 2016).

### 7.2.3. Economic context

In the municipality of Solano, economic activity is centered on the agricultural exploitation of products such as plantains, cassava, sugarcane and corn. Cattle ranching is also being developed and there is fish production in Bocachico and Cachama. Access to the municipality is via the Ortegua and Caquetá rivers.

In the case of the Puerto Zábalo and Los Monos Indigenous Reservation, subsistence agriculture (chagras) is developed, which mainly produces yuca, plantains, sugarcane, corn, peanuts, and chontaduro. These products are complemented by chicken farming and fishing, as well as fruit gathering. As these are subsistence activities, none of them are a representative source of income; when there are surpluses in agricultural production volumes, they are exchanged and traded.

There are also timber extraction and mining activities for commercial purposes in unregulated markets, as well as illicit crops due to the lack of income-generating opportunities; these activities become sources of economic resources for some members of the communities.

Despite the national government's interest in promoting the strengthening of viable economic alternatives for these territories, limited resources and capacity have not allowed them to successfully reach these geographic zones. It is also identified that the cost of goods and services is high due to the spatial location of the reserve, since



that the logistics required for the transportation of these elements involve the use of expensive fuels or transportation.

#### 7.2.4. Historical context

The first contact between the indigenous inhabitants and "non-indigenous" people in the Caquetá-Putumayo river basins dates back to the 17th and 18th centuries, when the slave trade burst into the northwestern Amazon region, mainly from groups of slave traders coming from Brazil during the expansion of the Portuguese-American empire. During this period, inter-ethnic wars took place in the region, where elements such as steel axes were introduced. This introduced changes in the socioeconomic organization of the indigenous groups that inhabited the Caquetá and Putumayo river basin region (Ministerio del Interior & Consejo Regional Indígena del Medio Amazonas (CRIMA), 2012).

One of the most significant changes was the reduction of work time in the process of clearing the forest for the cultivation of food and the production of surplus agricultural products, which became a sign of power for the owners of the steel mills. Then from the end of the 19th century, the presence of "whites" or other actors external to the indigenous communities, who continue to inhabit the territory today, intensified.

Subsequently, the territory and the indigenous communities were submerged in the rise and prosperity of the rubber industry, mainly at the hands of the Arana Hermanos Company (later Peruvian Amazon Rubber Company), which imposed competition for resources in the territory and subdued the indigenous communities by force. This system of rubber boom was based on the exploitation of indigenous labor, who were given goods, merchandise and food in exchange for rubber, under a system of indebtedness. (Ministry of the Interior & Regional Indigenous Council of the Middle Amazon (CRIMA), 2012). This period of rubber exploitation was considered genocide and ethnocide, as it led to the extermination of entire clans and ethnic groups. Authors such as Pineda (1989) estimated that the indigenous communities in the region reached a population of between 50,000 and 100,000 inhabitants, while by 1980 the indigenous population of the region had reached 100,000.



Caquetá - Putumayo amounted to only 8,650 people (Ministry of the Interior & Consejo Regional Indígena del Medio Amazonas (CRIMA), 2012).

Different ethnic groups converge in the Caquetá-Putumayo river basins, including the Uitoto, Muinane, Andoque, Nonuya, Bora, Ocaina, Resígaro and Miraña. These groups occupied their ancestral territories, differentiating themselves as peoples and according to existing clans within multi-family malocas, under the leadership of a clan chief and their authority was based on the management of rituals and mythology. In these territories they cultivated chagras under the modality of "slash and burn" due to the fertility characteristics of the soils of the Amazon region. They were also dedicated to fruit gathering, hunting and fishing.

The territories in this region were long considered wastelands, denying the historical presence of indigenous peoples where the Colombian government did not exercise its "sovereignty" before Peru and had no presence in such territories far from the centers of power, which since then demonstrates the abandonment and absence of the Colombian State in this region.

Subsequently, there was a conflict over the Capuchin religious missions, which extended their presence in the region of the Indigenous Reservation. In 1933 an orphanage was founded where orphans of the rubber holocaust were taken in and was later converted into a boarding school. Later, other boarding schools were opened in Araracuara where the indigenous people received Christian education. As a result, many clans changed their structure and place of settlement. Several of these groups resettled around the Capuchin schools, the settlements created by the civil authorities and others created multi-ethnic or multi-ethnic communities on the large rivers such as the Caquetá and Putumayo. *"These communities were formed as a consequence of the cauchero hecatomb and as a strategy to be able to survive and increase the population within their ancestral territories, assuming a public discourse that recognizes their common origin as children of tobacco, coca and sweet yucca, calling themselves Gente de Centro"* (Ministry of the Interior & Regional Indigenous Council of the Middle Amazon (CRIMA), 2012).



According to Echeverri (1997), the system of indebtedness was later replicated during the fur bonanza (1950) and the coca leaf bonanza (1970-1980) and is now said to be replicated by traders along the Caquetá River.

In the region after 1939 there was the presence of the Penal and Agricultural Colony that brought changes in the socio-cultural organization of indigenous peoples and introduced forms of wage labor, schedules and the management of money, as well as the concept of private land ownership, monoculture and venereal diseases (Ministry of the Interior & Regional Indigenous Council of the Middle Amazon (CRIMA), 2012).

In the 1970s, 1980s and 1990s, the middle Caquetá River region experienced a coca bonanza. Territories in departments such as Putumayo, Amazonas and Caquetá were used by drug traffickers to grow coca leaf for illicit purposes. Some indigenous people were linked to the cultivation and collection of coca leaf for illicit purposes, seeking economic alternatives among the few that the region offers (Ministerio del Interior & Consejo Regional Indígena del Medio Amazonas (CRIMA), 2012).

In the 1980s, the indigenous organizations formed in the Caquetá axis, after various struggles for legal recognition of the territories of indigenous peoples at the regional and national level, achieved the constitution of the reserves located in the area of influence of the middle Caquetá River. Thus, the first malocas were established in Los Monos and Jerusalén and the indigenous reserves of Puerto Zábalo, Monochoa, Aduche Predio Putumayo were created and titled, and schools were founded in some of the reserves (reserve Puerto Zábalo and Los Monos, 2016).

During this same period, the army was present when the Araracuara military base was installed. Between 1993 and 1996, the U.S. Army was present in the Araracuara area (military base). By 1998, there was a clearance zone and the arrival of illegal armed groups with a high incidence in the territory, with young people from the indigenous communities joining the insurgent ranks (reserve Puerto Zábalo and Los Monos, 2016). By 2003, the Colombian army retook control of the area, bombing the Araracuara airstrip, ending the presence of "anti-personnel mines". With the arrival of the President Uribe, Plan Colombia and Plan Patriota military operations were intensified in the area. The influence of the guerrilla group diminished in the region.



Parallel to this, the mining bonanza experienced a significant decline (Ministerio del Interior & Consejo Regional Indígena del Medio Amazonas (CRIMA), 2012). Towards the end of the 1990s, mining arrived in the region.



The inconvenience of dependence on economic activities resulting from illicit crops and unregulated mining has brought economic hardship to the region's indigenous communities. *"The peoples of the Middle Caquetá River region -the people of the center- remain in a dilemma between remaining in their territories strengthening and consolidating their ancestral traditions, assuming interaction with the dominant society, and resisting or perishing in the face of the onslaught of the new extractivist booms that seek to incursion into their ancestral territories and plunder what belongs to them but is not recognized"* (Ministry of the Interior & Regional Indigenous Council of the Middle Amazon (CRIMA), 2012).

### 7.3. Key players, interests and motivations

The main deforestation agents identified in the reference region and in the project area are similar, among which are:

- Indigenous.
- Settlers.
- Armed actors outside the law.

Indigenous people clear forest areas for the establishment of chagras. Settlers are also actors that clear forest areas for the establishment of subsistence farming systems.

The establishment of small crops for surplus generation also causes forest loss. Both indigenous people and settlers participate in this activity, encouraged mainly by the opportunity to market the product and obtain income for their livelihoods.

### **Puerto Zábalo and Los Monos Indigenous Reservation Community**





- Agricultural producer with traditional crops for self-consumption.
  - Interest: economic - self-consumption.
- Mining activities
  - Interest: economic
- Timber extraction for self-consumption.
  - Interest: economic - self-consumption.

#### **Settlers:**

- Agricultural producer with crops (licit and illicit).
  - Interest: self-consumption and economic - accumulation of wealth in unregulated markets.
- Mining activities
  - Interest: economic - accumulation of wealth in regulated and unregulated markets.

#### **Armed agents:**

- Agricultural producer with coca crops (grows coca crops as his main source of income).
  - Interest: economic - accumulation of wealth in unregulated markets.
- Exploration and extraction of resources in the territory (mining).
  - Interest: economic - accumulation of wealth in regulated and unregulated markets.

With respect to the direct causes of deforestation, the following are identified:

- Expansion of the agricultural frontier - Establishment of agricultural crops.
- Mining activities
- Timber extraction for self-consumption and commercialization.
- Settlements

The geographic location of the communities and the characteristics of the access roads represent a limitation to connect the territory with secondary cities and other points of commercialization of goods and services. The distances between these points are long and the main means of transportation require fuel, which implies a high cost for the mobilization of goods. The high cost of fuel affects productive development and makes most of the region's agricultural initiatives unviable. The supply of electricity in the territory is limited and in some areas nonexistent, which means that there are no refrigeration systems and products that require low temperatures to maintain their quality cannot be produced and distributed. In addition, the low availability of agricultural incentives (access to loans, low market prices, high input costs, difficulty accessing technical assistance programs, among others) and the absence of productive linkages limit the opportunity to generate income and promote sustainable development for the reserve's communities.

Table 11. Key actors, motivations and interests.

| Actor                                         | Scope               | Motivations and interest                                                                               | Location of the deforestation                                                               |
|-----------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Agricultural producers                        | Direct and indirect | Economic interest for wealth accumulation in unregulated markets<br><br>Subsistence economic interests | Expansion of the productive area<br><br>Near the canyons and rivers Rebusque and Vega areas |
| Miners                                        | Direct and indirect | Economic interest for wealth accumulation unregulated markets                                          | Near the canals and rivers                                                                  |
| Wood extractors for self-consumption          | Direct              | Subsistence economic interests                                                                         | Near the canals and rivers<br><br>Rebusque and Vega areas                                   |
| Wood extractors for the generation of surplus | Direct              | Economic interest in unregulated markets                                                               | Near the canals and rivers<br><br>Rebusque and Vega areas                                   |



|                          |        |                           |                    |
|--------------------------|--------|---------------------------|--------------------|
| Members of the community | Direct | New homes and settlements | Near housing areas |
|--------------------------|--------|---------------------------|--------------------|

#### 7.4. Economic activities and their importance

Table 12. Economic activities and their importance.

| Activity                                                      | Importance economic | Importance sociocultural | Description                                                                                                               |
|---------------------------------------------------------------|---------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Production subsistence farming                                | Download            | High                     | These systems incorporate products from nutritional and food security relevance to the community.                         |
| Agricultural production for power generation surplus          | Media               | High                     | The possibility of commercializing surpluses is low, but represents a source of income for the members of the community.  |
| Wood extractors for self-consumption                          | Download            | Media                    | This activity is developed for self-consumption y subsistence from The members of the community.                          |
| Wood extractors for the generation of surplus                 | Media               | Media                    | The possibility of commercialization of surpluses is low, but represents a source of income for members of the community. |
| Mining for surplus generation in markets other than regulated | Media               | Download                 | The possibility of commercializing surpluses is low, but represents a source of income for community members.             |

#### 7.5. Direct and indirect impact

Table 13. Causes of deforestation and its impact.

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

| Agricultural production to generate surpluses                 | Intermittent agricultural producers           | Direct and indirect | Medium. The establishment of these crops involves the occupation of areas of <1 to 5 hectares, approximately.           |
|---------------------------------------------------------------|-----------------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------|
| Cause                                                         | Agent                                         | Type of impact      | Impact                                                                                                                  |
|                                                               |                                               |                     | The increase in the area occupied by these crops is associated with the search for income on the part of the community. |
| Extraction of wood for self-consumption                       | Extractors of wood for self-consumption       | Direct              | Low. The practice of extracting wood is not carried out on a permanent basis.                                           |
| Timber extraction for the generation of surplus               | Wood extractors for the generation of surplus | Direct              | Medium. Timber extraction is not a permanent practice.                                                                  |
| Mining for surplus generation in markets other than regulated | External Actors                               | Direct and indirect | Environment. The development of this activity has a negative impact on ecosystems and involves the occupation of areas  |
| Settlements                                                   | Community members                             | Direct              | Forest area clearing is required for the installation of new settlements and members of the community                   |

## 7.6. Relationships and synergies

To analyze the deforestation processes in the project area, surveys and workshops were conducted with the communities to identify the problems, causes of the problems and solutions regarding forest loss (See Annex 2). Based on satellite images and cover changes during the reference period, it was possible to corroborate the information obtained directly with the community.

As can be seen in the file *Matriz cambio de coberturas\_Pto. Zabalo.xlsx* and Table 17, the historical trend of change from forest to other land use is mainly to secondary vegetation in transition, crop mosaic, pastures and natural spaces (deforested and

abandoned areas). This is congruent with the drivers of forest change identified with the community, which correspond to the expansion of the agricultural and livestock frontier, subsistence production systems, illicit crops and timber extraction. With this analysis of land uses after deforestation, it is possible to validate the reasons associated with forest loss.

during the reference period, which is also recorded in the records of the workshops conducted with the communities (see the files of the subfolders *Workshop 1*, *Workshop 2* and *Surveys*, located in the folder *Workshops - Annex 2*).

Table 14. Land use change matrix.

|                                             | Clean pastures | Mosaic of crops, pastures and | Mosaic of pastures with natural spaces | Secondary or transitional | Natural sandy areas | Swampy areas | Rivers (50 m) | Natural ponds, lakes and marshes | Fragmented forest with pastures and crops | Fragmented forest with secondary vegetation | Dense shrubland | High dense upland forest | Lowland lowland dense forest | High dense heterogeneous flooded | Palmares |
|---------------------------------------------|----------------|-------------------------------|----------------------------------------|---------------------------|---------------------|--------------|---------------|----------------------------------|-------------------------------------------|---------------------------------------------|-----------------|--------------------------|------------------------------|----------------------------------|----------|
| Grass mosaic with spaces natural            |                | 18,6%                         |                                        | 62,3%                     |                     |              | 8%            |                                  |                                           |                                             |                 | 6,31%                    |                              | 4,1%                             |          |
| Secondary vegetation or in transition       | 1,5%           | 5,68%                         |                                        | 55,6%                     |                     |              | 3%            |                                  |                                           | 7,72%                                       |                 | 24,8%                    |                              | 1,5%                             |          |
| Sandy areas natural                         |                | 0,02%                         |                                        | 2,76%                     | 50 %                |              | 42%           |                                  |                                           |                                             |                 |                          |                              | 4,3%                             |          |
| Swampy areas                                |                |                               |                                        |                           |                     | 100 %        |               |                                  |                                           |                                             |                 |                          |                              |                                  |          |
| Rivers (50 m)                               |                | 0,05%                         |                                        | 0,92%                     |                     | 5%           | 93%           |                                  |                                           |                                             |                 |                          |                              | 0,4%                             |          |
| Lagoons, lakes and swamps natural           |                |                               |                                        |                           | 8%                  | 6%           | 1,9%          | 78,2%                            |                                           |                                             |                 | 5,13%                    |                              |                                  |          |
| Fragmented forest with grasslands and crops |                | 1,38%                         |                                        | 12,4%                     |                     |              | 17,1%         |                                  |                                           | 54,9%                                       |                 | 4,59%                    |                              | 9,5%                             |          |

|                                                               |            |       |  |           |           |  |       |  |       |           |     |           |      |           |      |
|---------------------------------------------------------------|------------|-------|--|-----------|-----------|--|-------|--|-------|-----------|-----|-----------|------|-----------|------|
| Fragmente<br>d forest<br>with<br>vegetation<br>secondary      |            |       |  | 7,01%     |           |  |       |  |       | 57,7%     |     | 35,2%     |      |           |      |
| Dense<br>shrublan<br>d                                        |            |       |  | 7,61%     |           |  |       |  |       |           | 91% | 0,98<br>% |      |           |      |
| High<br>dense<br>groun<br>d<br>Forest<br>firm                 | 0,001<br>% | 0,01% |  | 0,08<br>% |           |  |       |  |       | 0,06<br>% |     | 99,8<br>% |      | 0,01<br>% |      |
| Dense<br>lowlan<br>d forest<br>firm                           |            |       |  |           |           |  |       |  |       |           |     |           | 100% |           |      |
| High<br>dense<br>heterogen<br>e ous<br>flooded<br>forest<br>o |            |       |  | 0,5%      | 0,01<br>% |  | 0,10% |  | 0,02% |           |     |           |      | 99%       |      |
| Palmares                                                      |            |       |  |           |           |  |       |  |       |           |     |           |      |           | 100% |

## 7.7. Deforestation and degradation chain of events

Table 15. Chain of deforestation and degradation events.

| Underlying cause                                                                                                                                                                                                                                                                                                                                                                                          | Agent involved                               | Direct cause                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------------|
| Communities have historically used subsistence production systems to meet food security requirements. They employ techniques of removal and burning of cover.                                                                                                                                                                                                                                             | Agricultural producers for self-consumption. | Agricultural production for self-consumption    |
| The low state presence in the territory facilitates the development of irregular activities. There is a market and the possibility of commercializing the products and therefore it is attractive for the population in these areas.<br><br>The low availability of productive alternatives The economic potential for profitable economic activities limits the income opportunities in the communities. | Intermittent agricultural producers.         | Agricultural production for surplus generation. |



|                                                                                                                                                                                                         |           |                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------|
| Lack of education and policies for the conservation and adequate management of resources, as well as the lack of sanitation and decontamination systems for soil and water generate forest degradation. | Community | Lack of education and lack of conservation and management policies |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------|

| Underlying cause                                                                                                                                                                                                                                                                                                                                                                                                          | Agent involved                     | Direct cause                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|------------------------------------------|
| The low presence of the State in the territory has historically facilitated the presence of external actors that develop irregular activities such as the extraction of mineral resources. There is a market and the possibility of commercializing these products, which is attractive for external actors and for some members of the indigenous communities due to the lack of other profitable economic alternatives. | External Stakeholders<br>Community | Mining                                   |
| The population of the indigenous communities is increasing and thus the need for settlements. For this purpose, they must clear forest areas to establish their houses and their livelihoods.                                                                                                                                                                                                                             | Community                          | Settlements                              |
| The communities have historically used timber resources to build houses and canoes, as well as for firewood. For this the forest resource of the territory is used.                                                                                                                                                                                                                                                       | Community                          | Timber extraction for self-consumption   |
| Indigenous communities and settlers have historically used timber resources to generate surpluses in unregulated markets, given the limited profitable productive economic activities that limit the income potential.                                                                                                                                                                                                    | Community<br>External stakeholders | Timber extraction for surplus generation |

## 8. REDD+ Activities

### 8.1. General intervention strategy



The territorial dynamics that cause deforestation and forest degradation in the territory are diverse and have effects that are difficult to foresee or counteract directly. The REDD+ strategy incorporates territorial management (governance), which is combined with activities that discourage deforestation activities and promote conservation. The project activities have been agreed with the community and are in accordance with the objectives and components of the Environmental Management Plan (see *Annex 3.1*) established by the community, the guidelines of the Safeguards Plan (See *Annex 3.4*) and the Action Plan against Deforestation in the Municipality of Solano (See *Annex 3.2*).

These activities are formulated in order to provide the community with development alternatives to overcome the territorial, economic and food sovereignty problems faced in the Indigenous Reserve, in accordance with the municipal and departmental development plans.

To address the dynamics of deforestation and develop effective solutions, participatory workshops were held with the communities to identify activities or investments that are being carried out within the framework of local and regional development plans and programs that are planned for the future, and that can generate a change in the current dynamics of forest use and contribute to its protection in the long term (see *Annex 2*).

## 8.2. Prioritization of areas for interventions

According to the community REDD+ project structuring exercises, through social mapping and project beneficiaries, potential intervention areas for productive activities and forest recovery are identified. In addition, activities that the community has been developing with its own resources, of national or departmental origin, are located.

In the participatory workshops, priorities are ratified (see *Annex 2*), and sustainable profitable alternatives are identified and reaffirmed (productive system); social investment (health, education and housing); strengthening governance and monitoring of the forest; in addition, each activity is prioritized. The location of the



interventions will be carried out according to the management zones established in the Indigenous Reserve's Environmental Management Plan (see Annex 3.1), the spatial location of the community members and the areas that have been recently deforested. The project's interventions aimed at establishing productive systems are concentrated in areas that present a change from forest to other land uses (pastures, crops and fragmented forests). This work scheme is aimed at containing the agricultural frontier or active deforestation fronts and recovering recently lost forest, which is congruent with the project's determinants.



environmental planning for land use planning in the Municipality of Solano (see Annex 3.3).

The deforestation maps show the sites that have been intervened in the reference period (2007-2017) and that are prioritized within the framework of the project for the process of establishing environmentally friendly production systems and restoration processes.

### 8.3. Participation of all stakeholders in the territory

As part of the project's strategy, it is essential to recognize the importance of involving those directly and indirectly responsible for deforestation in the reserves area, strengthening cultural identity and fostering community unity.

The REDD+ Project communities, within their historical context of natural resource management, have foraging and grazing areas where they have been making rational use of forest resources according to their uses and traditions (chagras, hunting, agroforestry, fruits, seeds) and maintain a division of conservation zones where they protect species of fauna and flora.

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

In terms of land use planning, the Amazon Regional Land Use Planning Model - MOTRA (MADS and DNP, 2019) guides the implementation of concrete actions that lead to the solution of existing conflicts in this area of the country. The actions prioritized for historical conflicts in the Amazon region correspond to the following: effective articulation of territorial planning instruments, recognition of the economic and social dynamics that affect the use and occupation of the territory, the importance of protecting the main ecological structure and reducing vulnerability to climate change, strengthening territorial governance and the articulation of urban and rural areas. The Puerto Zábalo and Los Monos REDD+ Project bases its intervention strategy and the prioritization of activities on these guidelines



regional land-use planning. Recognizing that by the year 2030 the country expects to be recognized internationally for solving conflicts related to land use planning, the project contributes directly to the following achievements:

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

In addition, it should be considered that the country has set ambitious targets for the reduction of national GHG emissions. Colombia updated its Nationally Determined Contribution (NDC) at the end of 2020, setting a target of reducing projected emissions by 51% by 2030. Much of Colombia's forests, particularly in the Amazon and the Pacific, are located in indigenous reserves and Afro-Colombian collective territories and their preservation depends on the defense of ways of life appropriate to the territory. The participation of indigenous peoples is essential to protect the forests, and the participation of peasant communities is essential to transform agricultural production practices and rural development in the country, to prevent the expansion of the agricultural frontier and to safeguard food security. The Puerto Zábalo and Los Monos REDD+ Project promotes the active participation of these focal groups, contributing directly to the country's goal of reducing the annual deforestation rate to 50,000 ha/year by 2030, with a trajectory of 155,000 ha/year by 2022 and 100,000 ha/year by 2025. The historical reference rate of deforestation in the project area is equivalent to an average of 6377 ha/year, and it is expected that by 2030 the project actions will maintain it at a maximum of 637 ha/year. This represents a reduction of 5739 ha/year, equivalent to 5.7% of the national target for 2025 and 11.4% of the annual deforestation reduction target for 2030.

## 8.5. REDD+ strategy design

The REDD+ strategy consists of the development of a series of activities under four main components. Coordination of REDD+ activities



was carried out and adjusted during the development of participatory workshops 1, 2, 3 and 4 (see *Workshops* folder). The workshops were attended by almost all community members, as evidenced in the attendance lists of each workshop (see attendance lists in each sub-folder of Workshop 1, 2, 3 and 4). The following aspects were used as basic community inputs: identification of livelihoods, problem tree, solution tree and community surveys. The problem and solution trees (see files with this name in *Workshop 1*), as well as the community surveys (see file *Systematization of REDD+ Surveys.xlsx*, located in *Annex 2.4 Surveys*), made it possible to characterize the needs, opportunities and potential interventions to address the causes of deforestation and improve the quality of life of the communities. The livelihoods and livelihoods identification exercise allowed to illustrate the relationship and interactions of the communities with the environment (see file *Workshop 1 Coemani\_Modes and livelihoods.pdf*, *Workshop 1 Estrecho\_modes and livelihoods 1, 2 and 3.pdf*, *Workshop*

*1 Jerusalén\_Modes and livelihoods.pdf*, *Workshop 1 Quinche\_Modes and livelihoods.pdf*). With these inputs, in each community of the reserve, the grouping of possible activities and interventions mentioned in common thematic components such as governance, productive systems and monitoring was carried out (see files *Workshop 1 Coemani\_Project Matrix.pdf*, *Workshop 1 Estrecho\_Project Matrix.pdf*, *Workshop 1 Jerusalén\_Project Matrix.pdf*, *Workshop 1 Quinche\_Project Matrix.pdf*). Workshop 2 included a fourth thematic component corresponding to social investment (see files folder *Annex 2.2\_Workshop\_2\_Puerto Zábalo*). Once the activities and community intervention proposals were grouped into the four components, the budget allocation was worked on. The distribution of the investment resources was carried out with the community and was reflected in posters that include the memory of the conclusions (see files *Taller\_2\_Puerto\_Sabalo\_Distribucion Presupuesto.pdf* and *Taller\_2\_Puerto\_Sabalo\_Presupuesto-Final.pdf*). The distribution of benefits was again validated in Workshop 3, as can be seen in the file *Workshop\_3\_Act\_Puerto\_Sabalo\_Los\_Monos.pdf* (located in subfolder *2.3 Workshop\_3 Puerto Sabalo*).

The financial model (see file *Financial Analysis Pto Zabalo Monos REDD+ Monos v1.xlsx* located in the folder *Annex 12*) and the management model for project implementation (*Esquema Administración Proyecto REDD+ Pto Zábalo\_v1.pdf* located in *Annex 9*) are the documents that summarize the execution model of the REDD+





## 8.6. Description of REDD+ activities

REDD+ activities were agreed upon and adjusted during the development of participatory workshops 1, 2, 3 and 4 (see *Workshops* folder). The workshops were attended by almost all community members, as evidenced in the attendance lists for each workshop (see attendance lists in each sub-folder of Workshop 1, 2, 3 and 4). The following aspects were used as basic community inputs: identification of livelihoods, problem tree, solution tree and community surveys. The problem and solution trees (see files with this name in *Workshop 1*), as well as the community surveys (see file *Systematization of REDD+ Surveys.xlsx*, located in *Annex 2.4 Surveys*), made it possible to characterize the needs, opportunities and potential interventions to address the causes of deforestation and improve the quality of life of the communities. The livelihoods and livelihoods identification exercise allowed to illustrate the relationship and interactions of the communities with the environment (see file *Workshop 1 Coemani\_Modes and livelihoods.pdf*, *Workshop 1 Estrecho\_Modes and livelihoods 1, 2 and 3.pdf*, *Workshop 1 Jerusalén\_Modes and livelihoods.pdf*, *Workshop 1 Quinche\_Modes and livelihoods.pdf*). With these inputs, in each community of the reserve, the grouping of possible activities and interventions mentioned in common thematic components such as governance, productive systems and monitoring was carried out (see files *Workshop 1 Coemani\_Project Matrix.pdf*, *Workshop 1 Estrecho\_Project Matrix.pdf*, *Workshop 1 Jerusalén\_Project Matrix.pdf*, *Workshop 1 Quinche\_Project Matrix.pdf*). Workshop 2 included a fourth thematic component corresponding to social investment (see files folder *Annex 2.2\_Workshop\_2\_Puerto Zábalo*). Once the activities and community intervention proposals were grouped within the four components, the budget allocation was worked on. The distribution of the investment resources was carried out with the community and was reflected in posters that include the memory of the conclusions (see files

*Taller\_2\_Puerto\_Sabalo\_Distribucion Presupuesto.pdf* and *Taller\_2\_Puerto\_Sabalo\_Presupuesto-Final.pdf*). The distribution of benefits was again validated in Workshop 3, as can be seen in the file *Taller\_3\_Acta\_Puerto\_Sabalo\_Los\_Monos.pdf*, located in subfolder 2.3 *Taller\_3 Puerto Sabalo*.



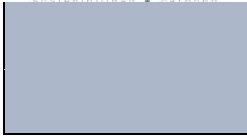
The financial model was developed (see file *Financial Analysis Pto Zabalo Monos REDD+ Monos v1.xlsx* located in the folder *Annex 12*) and the management model for project implementation (*Esquema Administración Proyecto REDD+ Pto Zábalo\_v1.pdf* located in *Annex 9*).

The following boxes describe each of the project activities, the schedule, indicators and other relevant information in accordance with the guidance of the reference methodology:

| ID Activity                                                  | A-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |                 |                         |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|-----------------|-------------------------|
| Description of the REDD+ activity                            | Development of Project Design Document (PDD) for accessing carbon markets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |                 |                         |
| Relationship activity with direct or underlying cause        | Certification is required for activities carried out by the community to reduce land use change through the conversion or degradation of forest cover. Documentary management of GHG emission reductions will allow the generation of income to generate a virtuous circle in land management, so that forest conservation can be sustained in the long term, while at the same time achieving a sustainable forest management system. community development and biodiversity protection.                                                                                                 |      |      |                 |                         |
| Compliance with life plans or ethnodevelopment plans         | This activity is aligned with the programs against deforestation that are part of <i>the Action Plan against Deforestation of the Municipality of Solano</i> and is aligned with the land management agreements established in the <i>Environmental Management Plan</i> of the reserve, considering that it is oriented to the development of social and cultural economic activities suitable for the generation of sustainable income. It also promotes the conservation of the biological and intellectual heritage associated with the resources. natural resources of the territory. |      |      |                 |                         |
| Consultation mechanism to define the REDD+ activity          | Participatory workshops with the members of the reserve<br>Approval at the general assembly.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |      |                 |                         |
| Responsibility and role of actors involved in implementation | <ul style="list-style-type: none"><li>Local communities: implementers</li><li>Project Manager (Yauto)</li><li>Carbo-Terra: developers and implementers</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                          |      |      |                 |                         |
| Schedule of Implementation                                   | From the second year of the project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |      |                 |                         |
| Indicators for reporting progress                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |      |      |                 |                         |
| Name                                                         | ID Indicator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Type | Goal | Unit of Measure | Responsible Measurement |

|                                                                                                                                                                                   |              |        |                                                                                                      |                   |                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------|------------------------------------------------------------------------------------------------------|-------------------|-------------------|
| # of people participating in meetings, surveys or workshops on tree of and the identification of drivers of deforestation and production systems and the management of governance | <b>A-1.1</b> | Result | The processes of identification and prioritization of activities are carried out in a participatory. | Number of persons | Carbo-Terra Yauto |
| # of legal agreements to support the development and implementation of the project including commercialization of carbon credits                                                  | <b>A-1.2</b> | Result | Development and commercialization agreements                                                         | Agreements        | Carbo-Terra Yauto |
| Registration of projects in the waste reduction certification program. emissions                                                                                                  | <b>A-1.3</b> | Result | Project registration                                                                                 | Registration      | Carbo-Terra       |

| ID Activity                                                  | <b>A-2</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REDD+ Activity Description</b>                            | Develop productive systems that contribute to the wellbeing of the community and the environment.<br>natural environment (e.g. tobacco, mambe, fishing, rice, corn, cassava, animal husbandry, handicrafts, others).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Relationship activity with direct or underlying cause</b> | Defining and prioritizing traditional and viable productive systems for the community is a basis for achieving adequate nutrition, economic sustainability of the communities and offering income and maintenance alternatives to offset the opportunity cost of displacing activities that involve deforestation. Involving the Community in this exercise allows setting expectations and increasing the commitment of its members to control the activities that threaten the forest, since the availability of resources for the development of these activities depends on the care of the forest. To the extent that the technical and operational capacities of the community are strengthened for the management of the prioritized productive systems, the |



probability of success and permanence of forest protection actions increases. This strengthens the confidence and capacity of the members to fight against the threats to the forest.

opportunities associated with activities involving deforestation.



|                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |                                                                                                |                 |                                             |
|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------------------------------------------------------------------------------------------|-----------------|---------------------------------------------|
| Compliance with life plans or ethno-development plans                                                                    | This activity is aligned with <i>Lines of Action 1 and 2 of the Plan for the control of the deforestation in the Municipality of Solano</i> and will be carried out in accordance with the <i>Management Agreements</i> , respecting the areas for gathering and grazing (hunting and fishing), and the activities management plan established in the reserve's <i>Environmental Management Plan</i> . It is also in line with the possible lines of action of the <i>Araracuara chapter of the Uitoto safeguard plan</i> , considering that it is oriented towards access to technical assistance and the development of appropriate social and cultural economic activities for the generation of sustainable income, and that it generates production alternatives that strengthen the food sovereignty of the reserve Indigena community. |        |                                                                                                |                 |                                             |
| Consultation mechanism to define the activity REDD+                                                                      | Participatory workshops with the members of the reserve and approval at the general assembly.<br>Meetings with entities and programs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                                                                                                |                 |                                             |
| Responsibility and role of actors involved in implementation                                                             | <ul style="list-style-type: none"><li>Local communities: implementers</li><li>Yauto: project manager</li><li>Carbo-Terra: implementers</li><li>Entities and programs</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |                                                                                                |                 |                                             |
| Schedule of Implementation                                                                                               | From the second year of the project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |        |                                                                                                |                 |                                             |
| Indicators for reporting progress                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |                                                                                                |                 |                                             |
| Name                                                                                                                     | ID Indicator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Type   | Goal                                                                                           | Unit of Measure | Responsible Measurement                     |
| # of people involved in the development of production systems who participate in training or training sessions training. | A-2.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Result | All people involved in the development of productive systems participate in training sessions. | # of persons    | Carbo-Terra<br>Yauto<br>Third Party Reports |
| # of women involved in the development of productive systems who participate in training or training workshops training  | A-2.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Result | All women involved in the development of productive systems participate in training sessions.  | # of women      | Carbo-Terra<br>Yauto                        |



|                                    |       |        |                                                                                                           |                      |                   |
|------------------------------------|-------|--------|-----------------------------------------------------------------------------------------------------------|----------------------|-------------------|
| # Productive activities identified | A-2.3 | Impact | Sustainable productive activities are identified for the investment of resources generated by the project | Number of activities | Carbo-Terra Yauto |
|------------------------------------|-------|--------|-----------------------------------------------------------------------------------------------------------|----------------------|-------------------|

|                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                |        |                                                                          |                   |                                                         |
|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------|-------------------|---------------------------------------------------------|
| ID Activity                                                            | A-3                                                                                                                                                                                                                                                                                                                                                                                            |        |                                                                          |                   |                                                         |
| Description of the REDD+ activity                                      | Implement or improve prioritized production systems (e.g. tobacco, mambe, fishing), rice, corn, cassava, animal husbandry, handicrafts, etc.).                                                                                                                                                                                                                                                 |        |                                                                          |                   |                                                         |
| Relationship activity with direct or indirect cause underlying         | The establishment and improvement of prioritized production systems reduces the community's dependence on other activities that can be associated with deforestation and unsustainable forest use.                                                                                                                                                                                             |        |                                                                          |                   |                                                         |
| Compliance with life plans or ethnodevelopment plans                   | This activity is aligned with the <i>Management Agreements</i> , respecting the gathering and grazing areas (hunting and fishing) and the land management activities established in the <i>Environmental Management Plan</i> of the reserve, considering that it is oriented to the development of social and cultural economic activities suitable for the generation of income. sustainable. |        |                                                                          |                   |                                                         |
| Consultation mechanism to define the REDD+ activity                    | Participatory workshops with the members of the reserve and approval at the general assembly.                                                                                                                                                                                                                                                                                                  |        |                                                                          |                   |                                                         |
| Responsibility and role of actors involved in implementation           | <ul style="list-style-type: none"><li>• Carbo-Terra: implementers.</li><li>• Yauto: project manager</li><li>• Local communities: implementers</li><li>• Technical and research entities offer technical support: SENA, SINCHI, NGOs, Private Sector.</li></ul>                                                                                                                                 |        |                                                                          |                   |                                                         |
| Schedule of Implementation                                             | Starting in the fourth year of the project.                                                                                                                                                                                                                                                                                                                                                    |        |                                                                          |                   |                                                         |
| Indicators for reporting progress                                      |                                                                                                                                                                                                                                                                                                                                                                                                |        |                                                                          |                   |                                                         |
| Name                                                                   | ID Indicator                                                                                                                                                                                                                                                                                                                                                                                   | Type   | Goal                                                                     | Unit of Measure   | Responsible Measurement                                 |
| # of people from the reserve involved in the activities of the project | A-3.1                                                                                                                                                                                                                                                                                                                                                                                          | Impact | Project activities provide jobs for the community                        | Number of persons | Carbo-Terra<br>Yauto<br>Representative of the community |
| # of women from the reserve involved in the activities of the project  | A-3.2                                                                                                                                                                                                                                                                                                                                                                                          | Impact | The project activities provide jobs for women in the community.          | Number of women   | Carbo-Terra<br>Yauto<br>Representative of the community |
| # of people who improve their income with the systems productive       | A-3.3                                                                                                                                                                                                                                                                                                                                                                                          | Impact | The project activities enable community members to improve their income. | Number of persons | Carbo-Terra<br>Yauto<br>Representative of the community |



|                                              |       |        |                                                            |                   |                   |
|----------------------------------------------|-------|--------|------------------------------------------------------------|-------------------|-------------------|
| # of women who improve their income with the | A-3-4 | Impact | The project activities enable them to women members of the | Number of persons | Carbo-Terra Yauto |
|----------------------------------------------|-------|--------|------------------------------------------------------------|-------------------|-------------------|

| ID Activity                                                                                         | A-3   |         |                                                                                    |           |                                                   |
|-----------------------------------------------------------------------------------------------------|-------|---------|------------------------------------------------------------------------------------|-----------|---------------------------------------------------|
| production systems                                                                                  |       |         | community to improve their income.                                                 |           | Representative of the community                   |
| # of hectares of production systems that have special management measures to favor the biodiversity | A-3.5 | Result  | Management measures are implemented in production systems that favor biodiversity. | Area (ha) | Carbo-Terra Yauto Community representative        |
| # of hectares of productive systems that are improved or improved establish                         | A-3.6 | Result  | Production systems are implemented or existing production systems are improved.    | Area (ha) | Carbo-Terra Yauto Representative of the community |
| # Surplus-generating activities implemented                                                         | A-3.7 | Product | At least one surplus-generating activity is implemented.                           | Number    | Carbo-Terra Yauto                                 |

| ID Activity                                                  | A-4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description of the REDD+ activity</b>                     | Maintain and follow up on the production systems implemented.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Relationship activity with direct or underlying cause</b> | By carrying out maintenance and follow-up activities, positive results and continuous improvement of the productive activity are promoted. Successful productive activities help to halt the advance of activities that threaten the forests and to displace the economic dependence of members of the forest community. the community towards them.                                                                                                                                                                                                                                                                       |
| <b>Compliance with life plans or ethnodevelopment plans</b>  | This activity is aligned with <i>Lines of Action 1, 2 and 4 of the Plan for the control of deforestation in the Municipality of Solano</i> and will be carried out in accordance with the <i>Management Agreements</i> , respecting the areas for gathering and grazing (hunting and fishing) and the surveillance activities established in the <i>Environmental Management Plan</i> of the reserve, considering that it is oriented towards access to technical assistance, the development of appropriate social and cultural economic activities for the generation of sustainable income, and access to fair markets. |
| <b>Consultation mechanism to define the REDD+ activity</b>   | Participatory workshops with the members of the reserve and approval at the general assembly.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |



CONSULTORIA SOCIAL

|                                                                                                |                                                                                                                                                                                                                                                       |         |                                                                                                  |                 |                                                         |
|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------------------------|-----------------|---------------------------------------------------------|
| Responsibility and role of actors who participate in implementation                            | <ul style="list-style-type: none"><li>Carbo-Terra: implementers</li><li>Yauto: project manager</li><li>Local communities: implementers</li><li>Technical and research entities offer technical support: SENA, SINCHI, NGOs, Private Sector.</li></ul> |         |                                                                                                  |                 |                                                         |
| Schedule of Implementation                                                                     | From the fifth year of the project.                                                                                                                                                                                                                   |         |                                                                                                  |                 |                                                         |
| Indicators for reporting progress                                                              |                                                                                                                                                                                                                                                       |         |                                                                                                  |                 |                                                         |
| Name                                                                                           | ID Indicator                                                                                                                                                                                                                                          | Type    | Goal                                                                                             | Unit of Measure | Responsible Measurement                                 |
| # records of checks or maintenance carried out/# of checks or maintenance carried out expected | A-4.1                                                                                                                                                                                                                                                 | Result  | The productive systems receive the required controls or maintenance.                             | Percentage (%)  | Carbo-Terra<br>Yauto<br>Community Representative        |
| Total quantity of goods or services produced in the production systems                         | A-4.2                                                                                                                                                                                                                                                 | Product | Productive systems are implemented that provide quantifiable goods or services for the community | Units           | Carbo-Terra<br>Yauto<br>Community Representative        |
| Balance of income and expenses generated in the production systems.                            | A-4.3                                                                                                                                                                                                                                                 | Product | At least one production system with a positive balance sheet is implemented.                     | Currency        | Carbo-Terra<br>Yauto<br>Representative of the community |

|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ID Activity</b>                                           | <b>A-5</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Description of the REDD+ activity</b>                     | Identify and prioritize the community's social investment needs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Relationship activity with direct or underlying cause</b> | Identifying social investment needs and planning how they will be addressed by the project increases the degree of community ownership and commitment to the project. Planning clearly defines the expected results and expectations of the population. This helps mitigate the risk of the community seeking additional resources from activities that may involve deforestation, as this would compromise access to the elements that are prioritized by all members. Resources are allocated to social investment activities that seek to improve the living conditions of the communities. Increased well-being of the communities, which is the reason for the reduces pressure on natural resources. |
| <b>Compliance with life plans</b>                            | This activity is aligned with the needs of the communities established in the <i>Plan for the Safeguarding of the Uitoto people, Araracuara chapter</i> , and the possible lines of action, as well as with the management proposed to address the issues related                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| ID Activity                                                                              | A-5                                                                                                                                                                                                                                                                                                                          |        |                                                                                                  |                   |                                          |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------------------------|-------------------|------------------------------------------|
| o<br>ethnodevelopm<br>e nt plans                                                         | with health and traditional medicine, food sovereignty, tradition and education proposed in the <i>Environmental Management Plan</i> of the reserve, considering that these strategies are oriented towards the rights over the territory and the conditions of access to education and comprehensive access to health care. |        |                                                                                                  |                   |                                          |
| Consultation<br>mechanism<br>to define the<br>REDD+ activity                             | Participatory workshops with the members of the reserve and approval at the general assembly.<br>Participatory events with institutions and programs                                                                                                                                                                         |        |                                                                                                  |                   |                                          |
| Responsibility<br>and role of actors<br>involved in<br>implementation                    | <ul style="list-style-type: none"><li>• Carbo-Terra: implementers</li><li>• Yauto: project manager</li><li>• Local communities: implementers</li><li>• Institutions and programs</li></ul>                                                                                                                                   |        |                                                                                                  |                   |                                          |
| Schedule of<br>Implementation                                                            | From the first year of the project.                                                                                                                                                                                                                                                                                          |        |                                                                                                  |                   |                                          |
| Indicators for reporting progress                                                        |                                                                                                                                                                                                                                                                                                                              |        |                                                                                                  |                   |                                          |
| Name                                                                                     | ID Indicator                                                                                                                                                                                                                                                                                                                 | Type   | Goal                                                                                             | Unit of Measure   | Responsible Measurement                  |
| # of persons participating in meetings or workshops on topics of social investment       | A-5.1                                                                                                                                                                                                                                                                                                                        | Result | The process of identifying and prioritizing social investment is carried out in a participatory. | Number of persons | Carbo-Terra<br>Yauto Third Party Reports |
| # of women who participate in meetings or workshops on women's issues social investment. | A-5.2                                                                                                                                                                                                                                                                                                                        | Result | The process of identifying and prioritizing social investment is carried out in a participatory. | Number of women   | Carbo-Terra<br>Yauto Third Party Reports |

| ID Activity                                                    | A-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REDD+ Activity<br>Description                                  | Improve transportation conditions to facilitate the movement of people and goods elements in the safeguard (e.g., vehicles for transporting people and cargo, community vehicles, ports).                                                                                                                                                                                                                                                                                                                                                                                                       |
| Relationship<br>activity with direct<br>or underlying<br>cause | Improving transportation conditions strengthens connectivity between communities, markets, and population centers, among others. This contributes to reducing the cost of transporting goods, improving access to markets and, consequently, can boost the local and regional economy. In this way, the prices of goods and services entering and leaving the communities become more competitive, increasing the options for economically viable activities, which allows displacing to some extent the dependence on activities that historically have been the main source of income for the |

|  |                                |
|--|--------------------------------|
|  | communities.<br>deforestation. |
|--|--------------------------------|



|                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                                                                                                              |                        |                                                  |
|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------|
| <b>Compliance with life plans or ethno-development plans</b>                    | This activity is aligned with lines of action 1, 2 and 3 of the <i>Plan for the control of the deforestation in the Municipality of Solano</i> and will be carried out in accordance with the management of the connectivity of the territory and access to markets. The plan is in line with the possible lines of action of the <i>Uitoto people safeguard plan, chapter Araracuara</i> , considering that they are oriented towards social and cultural stability and integrity, to the extent that it strengthens the control of food sovereignty established in the <i>Environmental Management Plan</i> of the reserve, and is in line with the possible lines of action of the <i>Uitoto people safeguard plan, chapter Araracuara</i> , considering that they are oriented towards social and cultural stability and integrity, to the extent that it strengthens the control of food sovereignty. |             |                                                                                                              |                        |                                                  |
| <b>Consultation mechanism to define the activity REDD+</b>                      | Participatory workshops with the members of the reserve and approval at the general assembly.<br>Meetings with financing entities and programs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |                                                                                                              |                        |                                                  |
| <b>Responsibility and role of actors involved in implementation</b>             | <ul style="list-style-type: none"><li>• Carbo-Terra: implementers</li><li>• Yauto: project manager</li><li>• Local communities: implementers</li><li>• Entities and programs</li><li>• Suppliers of services and goods: technical and commercial support.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                                                                              |                        |                                                  |
| <b>Schedule of Implementation</b>                                               | From the third year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                                                                              |                        |                                                  |
| Indicators for reporting progress                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                                                                                                              |                        |                                                  |
| <b>Name</b>                                                                     | <b>ID Indicator</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Type</b> | <b>Goal</b>                                                                                                  | <b>Unit of Measure</b> | <b>Responsible Measurement</b>                   |
| # of persons participating in meetings or workshops on topics of transportation | A-6.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Result      | The social investment identification and prioritization processes are carried out in a participatory manner. | Number of persons      | Carbo-Terra<br>Yauto Third Party Reports         |
| # of activities/elements that facilitate the mobilization of the people         | A-6.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Product     | Improved mobilization of community members                                                                   | Number                 | Carbo-Terra<br>Yauto<br>Community representative |

|                                          |                                                               |
|------------------------------------------|---------------------------------------------------------------|
| <b>ID Activity</b>                       | A-7                                                           |
| <b>Description of the REDD+ activity</b> | Improve infrastructure and education services in the reserve. |

|                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |                                                                                                                              |                        |                                                                    |
|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------|
| <b>Relationship activity with direct or underlying cause</b>           | The education of community members is essential to raise awareness and build criteria and knowledge that allow for the continuity of the protection of the territory and indigenous culture, which strengthens the social fabric and serves as a barrier against possible extractive and unsustainable activities that may compromise the natural resources of the territory. This also respects and promotes traditional knowledge. Resources are allocated to investment activities social programs that seek to improve the living conditions of the communities. |             |                                                                                                                              |                        |                                                                    |
| <b>Compliance with life plans or plans for ethnodevelopment</b>        | This activity is aligned with the possible lines of action of the <i>Plan. the Uitoto people of the Araracuara chapter</i> and the proposed management for the tradition and education according to the reserve's <i>Environmental Management Plan</i> , considering that it is oriented towards integral access to education.                                                                                                                                                                                                                                       |             |                                                                                                                              |                        |                                                                    |
| <b>Mechanism of consultation to define REDD+ activity</b>              | Participatory workshops with the members of the reserve and approval at the general assembly.<br>Meetings with institutions and programs                                                                                                                                                                                                                                                                                                                                                                                                                             |             |                                                                                                                              |                        |                                                                    |
| <b>Responsibility and role of actors involved in implementation</b>    | <ul style="list-style-type: none"><li>• Carbo-Terra: implementers</li><li>• Yauto: social manager of the project</li><li>• Local communities: implementers</li><li>• Institutions and programs</li><li>• Suppliers of services and goods: technical and commercial support.</li></ul>                                                                                                                                                                                                                                                                                |             |                                                                                                                              |                        |                                                                    |
| <b>Schedule of Implementation</b>                                      | From the third year of the project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |                                                                                                                              |                        |                                                                    |
| Indicators for reporting progress                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |                                                                                                                              |                        |                                                                    |
| <b>Name</b>                                                            | <b>ID Indicator</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Type</b> | <b>Goal</b>                                                                                                                  | <b>Unit of Measure</b> | <b>Responsible Measurement</b>                                     |
| # of people participating in meetings or workshops on education issues | A-7.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Result      | The processes of identification and prioritization of social investment are carried out in the following ways participatory. | Number of persons      | Carbo-Terra<br>Yauto Third Party Reports                           |
| # of educational facilities improved/constructed.                      | A-7.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Product     | Improving or constructing educational facilities located in the reserves                                                     | Number                 | Carbo-Terra<br>Yauto Community Representative Entities or programs |
| # of instructors funded                                                | A-7.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Product     | Improving the provision of educational services                                                                              | Number                 | Carbo-Terra<br>Yauto Community Representative Entities or programs |

|                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                               |        |                                                                                                                               |                   |                                            |
|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------|
| CONSULTORIA SOCIAL                                                                              |                                                                                                                                                                                                                                                                                                                                                                                               | A-8    |                                                                                                                               |                   |                                            |
| ID Activity                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                               |        |                                                                                                                               |                   |                                            |
| REDD+ Activity Description                                                                      | Provide facilities for community members to access formal education. o to a better quality of education (literacy, high school, scholarships for higher education, strengthening of ancestral languages).                                                                                                                                                                                     |        |                                                                                                                               |                   |                                            |
| Activity ratio with direct or underlying cause                                                  | The education of community members is fundamental to raise awareness and building criteria and knowledge that allow continuity in the protection of the territory and indigenous culture, which strengthens the social fabric and fulfills the function of compromise the natural resources of the territory to be a barrier to possible extractivist and unsustainable activities that might |        |                                                                                                                               |                   |                                            |
| Compliance with life plans or life insurance plans ethnodevelopment                             | This activity is aligned with the actions of the <i>Araracuara chapter of the Uitoto People's Safeguard Plan</i> and the management proposed for tradition and education according to the <i>Environmental Management Plan</i> of the reserve, considering that it is oriented towards integral access to the education.                                                                      |        |                                                                                                                               |                   |                                            |
| Consultation mechanism to define the REDD+ activity                                             | Participatory workshops with the members of the reserve and approval at the general assembly.<br>Meetings with entities and programs                                                                                                                                                                                                                                                          |        |                                                                                                                               |                   |                                            |
| Responsibility and role of actors involved in implementation                                    | <ul style="list-style-type: none"><li>• Carbo-Terra: implementers</li><li>• Yauto: project manager</li><li>• Local communities: implementers</li><li>• Entities and programs</li><li>• Companies, NGOs and educational entities: technical and professional support.</li></ul>                                                                                                                |        |                                                                                                                               |                   |                                            |
| Schedule of Implementation                                                                      | Starting in the fourth year of the project.                                                                                                                                                                                                                                                                                                                                                   |        |                                                                                                                               |                   |                                            |
| Indicators for reporting progress                                                               |                                                                                                                                                                                                                                                                                                                                                                                               |        |                                                                                                                               |                   |                                            |
| Name                                                                                            | ID Indicator                                                                                                                                                                                                                                                                                                                                                                                  | Type   | Goal                                                                                                                          | Unit of Measure   | Responsible Measurement                    |
| # people with access to formal education programs or improved quality of education. education   | A-8.1                                                                                                                                                                                                                                                                                                                                                                                         | Result | Improving the quality of education or access to formal education programs for members of the poorest households. communities. | Number of persons | Carbo-Terra Yauto Community representative |
| # of women with access to formal education programs or improved quality of education. education | A-8.2                                                                                                                                                                                                                                                                                                                                                                                         | Result | Improving the quality of education or access to formal education programs for women in rural areas. communities.              | Number of women   | Carbo-Terra Yauto Community representative |

|                    |            |
|--------------------|------------|
| <b>ID Activity</b> | <b>A-9</b> |
|--------------------|------------|



|                                   |                                                                                                                                                                                                                                                                                                       |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REDD+ Activity Description</b> | Improve health care mechanisms for the inhabitants of the indigenous reservation (e.g., ambulance boat, health post, availability of medical supplies and health promoter, strengthening of traditional and ancestral medicine, economic incentives, etc.).<br>for doctors and traditional midwives). |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



|                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                                                                                                              |                        |                                                                          |
|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------|
| <b>Relationship activity with direct or underlying cause</b>               | Facilitating access to medical care and health services is essential to protect members of communities, promote healthy practices, and improve care for people who are in life stages that are more vulnerable than others, such as the elderly. children and the elderly. Having basic health care services contributes to protection of the population, which increases awareness of the importance of the REDD+ project, which fights against the deterioration of the territory through an integrated approach and respecting the knowledge of traditional medicine. Resources are allocated to social investment activities that seek to improve the living conditions of the communities. communities and strengthen their ancestral practices. |             |                                                                                                              |                        |                                                                          |
| <b>Compliance with life plans or life insurance plans ethnodevelopment</b> | This activity is aligned with the possible actions of the <i>Plan for the safeguarding of the Uitoto people, Araracuara chapter</i> , and the proposed management of health and traditional medicine according to the <i>Environmental Management Plan</i> of the reserve, considering that it is oriented to the integral access to health care.                                                                                                                                                                                                                                                                                                                                                                                                     |             |                                                                                                              |                        |                                                                          |
| <b>Consultation mechanism for defining REDD+ activity</b>                  | Participatory workshops with the members of the reserve and approval at the general assembly.<br>Meetings with institutions and programs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                                              |                        |                                                                          |
| <b>Responsibility and role of actors involved in implementation</b>        | <ul style="list-style-type: none"><li>• Carbo-Terra: implementers</li><li>• Yauto: project manager</li><li>• Local communities: implementers</li><li>• Institutions and programs</li><li>• Health care providers, Mayor's Office, Governor's Office, NGOs: technical and professional support.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                                              |                        |                                                                          |
| <b>Schedule of Implementation</b>                                          | From the third year of the project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                                                                              |                        |                                                                          |
| Indicators for reporting progress                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                                                                                                              |                        |                                                                          |
| <b>Name</b>                                                                | <b>ID Indicator</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Type</b> | <b>Goal</b>                                                                                                  | <b>Unit of Measure</b> | <b>Responsible Measurement</b>                                           |
| # of people who participate in meetings or workshops on health issues      | A-9.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Result      | The social investment identification and prioritization processes are carried out in a participatory manner. | Number of persons      | Carbo-Terra<br>Yauto<br>Third party reports                              |
| # of people with access to health services                                 | A-9.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Result      | Improved access to health services for community members.                                                    | Number of persons      | Carbo-Terra<br>Yauto<br>Community representative<br>Entities or programs |



|                                                                    |       |        |                                                                                    |                                                     |                                                                 |
|--------------------------------------------------------------------|-------|--------|------------------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------|
| # of health posts constructed/improved                             | A-9.3 | Result | The infrastructure for providing health services to community members is improved. | Number of health posts                              | Carbo-Terra Yauto Community representative Entities or programs |
| # of people who are training in traditional and ancestral medicine | A-9.4 | Result | Strengthening of the knowledge of traditional medicine                             | Number of persons of the members of the communities | Carbo-Terra Yauto Community representative Entities or programs |

| ID Activity                                                         | A-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REDD+ Activity Description</b>                                   | Improve the basic sanitation and housing conditions of the members of the communities that are part of the indigenous reservation (e.g. sanitary toilets, improvement of deteriorated houses, electrification with solar panels, water purification),<br>integrated waste management, among others).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Relationship activity with direct or underlying cause</b>        | Resources are allocated to social investment activities that seek to improve the living conditions of the communities. By improving housing and basic sanitation conditions, the living conditions of the members are favored. The difficulties faced by the community and the scarcity of resources to meet these basic needs are circumstances that facilitate their participation in activities involving deforestation, as people are willing to do whatever is necessary to improve their living conditions. By addressing these needs with project resources, the risk of adopting practices that result in forest loss is mitigated, and it is also observed that the communities' interest in participating in project activities is increased, which contributes to the permanence of the entire project in the long term. |
| <b>Compliance with life plans or ethnodevelopment plans</b>         | This activity is aligned with <i>Line of Action 3 of the Plan for the control of deforestation in the Municipality of Solano</i> and will be carried out in accordance with the <i>Management Agreements of the Environmental Management Plan</i> of the reserve, as well as with the possible actions of the <i>Plan to safeguard the Uitoto people of the Araracuara chapter</i> , considering that these are oriented to the right to territory (including the sites of the <i>Uitoto people</i> ) and to the right of the <i>Uitoto people of the Araracuara chapter</i> .<br>housing), and to the solution of phytosanitary problems.                                                                                                                                                                                          |
| <b>Mechanism of consultation to define REDD+ activity</b>           | Participatory workshops with the members of the reserve and approval at the general assembly.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Responsibility and role of actors involved in implementation</b> | <ul style="list-style-type: none"> <li>• Carbo-Terra: implementers</li> <li>• Yauto: project manager</li> <li>• Local communities: implementers</li> <li>• Private companies, Mayor's Office, Governor's Office, NGOs: equipment suppliers, technical and professional support.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

CONSULTORIA SOCIAL

|                                                                                             |                                     |         |                                                                                                  |                   |                                                                 |
|---------------------------------------------------------------------------------------------|-------------------------------------|---------|--------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------------|
| Schedule of Implementation                                                                  | From the third year of the project. |         |                                                                                                  |                   |                                                                 |
| Indicators for reporting progress                                                           |                                     |         |                                                                                                  |                   |                                                                 |
| Name                                                                                        | ID Indicator                        | Type    | Goal                                                                                             | Unit of Measure   | Responsible for Measurement                                     |
| ID Activity                                                                                 | A-10                                |         |                                                                                                  |                   |                                                                 |
| # of people participating in meetings or workshops on housing, water, and sanitation issues | A-10.1                              | Result  | The process of identifying and prioritizing social investment is carried out in a participatory. | Number of persons | Carbo-Terra Yauto Third Party Reports                           |
| # of people with access to safe drinking water or improved water quality                    | A-10.2                              | Result  | People in the community have access to safe drinking water or improved water quality.            | Number of persons | Carbo-Terra Yauto Community Representative Entities or programs |
| # of dwellings or infrastructure with solar electric energy systems                         | A-10.3                              | Product | Improved access to electricity from solar panels in the indigenous reservation.                  | Number            | Carbo-Terra Yauto Community Representative Entities or programs |
| # of actions aimed at strengthening integrated waste management                             | A-10.4                              | Result  | Actions are implemented to ensure proper waste management in the reserve.                        | Number            | Carbo-Terra Yauto Community Representative Entities or programs |
| # of houses improved/constructed                                                            | A-10.5                              | Result  | Community members' homes are improved or built.                                                  | Number            | Carbo-Terra Yauto Community Representative Entities or programs |

|                                   |                                                                                                                                                                                                                                                                           |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ID Activity</b>                | <b>A-11</b>                                                                                                                                                                                                                                                               |
| <b>REDD+ Activity Description</b> | Elaborate and support the implementation of the Safeguard Plan and community plans of the communities living in the reserve and socialize the results with all stakeholders (including the definition of the governance and management scheme with other groups). social) |



|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Relationship activity with direct or underlying cause</b> | Strengthening of the indigenous communities own regional, traditional and ancestral government mechanism in the reserve, the cabildos and the community organization so that it is stable, credible and solid based on indigenous traditions and state policy. Strengthen capacities to maintain and improve traditional production systems, rituals, language, ancestral medicine and favor community dynamics. This activity should make a special emphasis on strengthening rituals on which support the management and use of the territory represented in the indigenous reservation. |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| ID Activity                                                         | A-11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                     | <p>The Indigenous Life Plan is an instrument of oral tradition that determines the government and policies of the indigenous communities and represents a navigation chart for the future. This oral tradition instrument includes the characterization of the community, its interests, visions, needs, expected changes, among other aspects. The implementation of the Indigenous Life Plan makes it possible to define the approach and measures that will be implemented to improve territorial governance, protection of their culture, including mechanisms to control activities that result in deforestation and degradation of natural resources in their territories. The life plan can be strengthened if it is articulated with regional territorial initiatives that contribute to achieving its main objectives, including the goals of forest conservation and protection. If necessary, the Life Plan can be translated into a document. However, the communities have stated that it is not their objective to carry out this type of initiative.</p> <p>activity at the present time, unless it is required for a special purpose.</p> |
| <b>Compliance with life plans or ethnodevelopment plans</b>         | <p>The communities already have a defined Life Plan, but it is managed orally. The safeguard plan and community plans of the indigenous communities will be constructed as part of the implementation of the Life Plan.</p> <p>It is important to clarify that in the communities of the reserve, the Indigenous Life Plan is an instrument of oral tradition that determines the government and policies of the indigenous communities and represents a navigation chart towards the future. This oral tradition instrument includes the characterization of the community, its interests, visions, needs, expected changes, among other aspects. The community has stated that they do not have the current need to write their Life Plan in a physical document. However, in case it is necessary in order to carry out some kind of management that</p> <p>If it is in the best interest of the reserve, the Life Plan can be considered in a document.</p>                                                                                                                                                                                           |
| <b>Consultation mechanism to define the REDD+ activity</b>          | Socialization workshops with the members of the reserve and approval in General Assemblies of the indigenous reserve.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Responsibility and role of actors involved in implementation</b> | <ul style="list-style-type: none"> <li>• Carbo-Terra: Project Implementer</li> <li>• Yauto: project manager</li> <li>• Indigenous reservation. Implementer</li> <li>• Ministry of the Interior: technical accompaniment</li> <li>• Solano Municipal Mayor's Office. technical accompaniment.</li> <li>• Corpoamazonía: technical accompaniment.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Schedule of Implementation</b>                                   | From the first year of the project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Indicators for reporting progress</b>                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |



| Name                                                            | ID Indicator | Type   | Goal                                                                          | Unit of Measure   | Responsible Measurement |
|-----------------------------------------------------------------|--------------|--------|-------------------------------------------------------------------------------|-------------------|-------------------------|
| # of people participating in meetings or workshops on issues of | A-11.1       | Result | The construction/upgrading process<br>Safeguards Plan or community plans will | Number of persons | Carbo-Terra Yauto       |

| ID Activity                              | A-11   |         |                                                                                          |                           |                                                                 |
|------------------------------------------|--------|---------|------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------|
| governance and planning                  |        |         | participatory manner.                                                                    |                           | Representative of the community                                 |
| # of community plans prepared or updated | A-11.2 | Product | At least 1 Community Plan is prepared.                                                   | Number of Community Plans | Carbo-Terra Yauto Community Representative Entities or programs |
| # community plans being implemented      | A-11.3 | Result  | Actions are implemented to contribute to the fulfillment of community development plans. | Number of Community Plans | Carbo-Terra Yauto Community Representative Entities or Programs |

| ID Activity                                           | A-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REDD+ Activity Description                            | To build and support the implementation of the land management plan of the reserve. indigenous people for the preparation of environmental management plans for non-timber forest resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Relationship activity with direct or underlying cause | The Land Management Plan allows the identification and planning of land uses in the area of the reserve. It defines the areas within the territory that will be used for conservation, production, settlements, among others. This instrument strengthens territorial governance and territorial planning, and helps to control land use in the reserve. forest harvesting and deterioration activities.                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Compliance with life plans or ethnodevelopment plans  | This activity is aligned with the reserve's <i>Environmental Management Plan</i> and action lines 1, 2, 3 and 5 of the <i>Plan for the control of deforestation in the Municipality of Solano</i> , considering that it is oriented towards the conservation and sustainable use of natural resources, including the design and implementation of management plans and conservation and use systems that guarantee the permanence of natural resources. The Serranía de Chiribiquete National Park Management Plan and the proposed zoning will also be taken into account to ensure that the zoning and definition of the areas within the Puerto Zábalo and Los Monos reserve contribute to the protection of the National Park and recognize the buffer function. that the territory of the reserve fulfills for the PNN and vice versa. |
| Consultation mechanism to define the REDD+ activity   | Socialization workshops with the members of the reserve and approval in General Assemblies of the indigenous reserve.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| ID Activity                                                  | A-12                                                                                                                                                                                                                                                                            |         |                                                                                                                                          |                                                               |                                                                 |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------|
| Responsibility and role of actors involved in implementation | <ul style="list-style-type: none"><li>• Carbo-Terra: Project Implementer</li><li>• Yauto: project manager</li><li>• Indigenous reservation.</li><li>• Governmental entities (Mayor's Office, Governor's Office, Corpoamazonía, PNN, among others): technical support.</li></ul> |         |                                                                                                                                          |                                                               |                                                                 |
| Schedule of Implementation                                   | From the second year of the project.                                                                                                                                                                                                                                            |         |                                                                                                                                          |                                                               |                                                                 |
| Indicators for reporting progress                            |                                                                                                                                                                                                                                                                                 |         |                                                                                                                                          |                                                               |                                                                 |
| Name                                                         | ID Indicator                                                                                                                                                                                                                                                                    | Type    | Goal                                                                                                                                     | Unit of Measure                                               | Responsible Measurement                                         |
| # of indigenous land management plans elaborated             | A-12.1                                                                                                                                                                                                                                                                          | Product | The Land Management Plan is in harmony with regional planning instruments, such as the Management Plan for the Serranía de Chiribiquete. | Number of Land Use and Zoning Plans                           | Carbo-Terra Yauto Community Representative Entities or Programs |
| # of land management plans being implemented                 | A-12.2                                                                                                                                                                                                                                                                          | Result  | The implementation of at least 1 Land Management Plan is initiated,                                                                      | Number of Land Management Plans that are under implementation | Carbo-Terra Yauto Community Representative Entities or Programs |

| ID Activity                                                  | A-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description of the REDD+ activity</b>                     | Strengthen the capacity to maintain, recover and improve ancestral medicine, the language and other elements that are part of the cultural identity of the indigenous people.                                                                                                                                                                                                                                                                                                                                                                |
| <b>Relationship activity with direct or underlying cause</b> | Strengthening community capacities in the sustainable management of the territory and its culture reduces unsustainable pressure on forests. To the extent that communities have the capacity to protect their cultural identity, customs and traditions, the risk that community members will participate and have the interest to modify the traditional use of the forest to take advantage of the different productive or extractivist opportunities that have historically come to the territory will be reduced. generate forest loss. |



**Compliance  
with life plans**

This activity is aligned with the reserve's *Environmental Management Plan* and with the lines of action of the Action Plans 1 and 2 of the *Plan for the control of deforestation in the Municipality of Solano*,

|                                                                                                               |                                                                                                                                                                                                                                                                                                        |        |                                                                                                                       |                   |                                                                 |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------------|
| ID Activity                                                                                                   | A-13                                                                                                                                                                                                                                                                                                   |        |                                                                                                                       |                   |                                                                 |
| or plans for ethnodevelopment                                                                                 | considering that it is oriented towards strengthening cultural identity and values. conservation objects such as language, ancestral medicine and rituals.                                                                                                                                             |        |                                                                                                                       |                   |                                                                 |
| Consultation mechanism to define the REDD+ activity                                                           | Participatory workshops with the members of the reserve and approval at the general assembly.                                                                                                                                                                                                          |        |                                                                                                                       |                   |                                                                 |
| Responsibility and role of actors involved in implementation                                                  | <ul style="list-style-type: none"><li>Local communities: implementers</li><li>Carbo-Terra: implementers</li><li>Yauto: project manager</li><li>Other indigenous communities with successful experiences: technical support.</li><li>NGOs, companies and research centers; technical support.</li></ul> |        |                                                                                                                       |                   |                                                                 |
| Schedule of Implementation                                                                                    | Starting in the fourth year of the project.                                                                                                                                                                                                                                                            |        |                                                                                                                       |                   |                                                                 |
| Indicators for reporting progress                                                                             |                                                                                                                                                                                                                                                                                                        |        |                                                                                                                       |                   |                                                                 |
| Name                                                                                                          | ID Indicator                                                                                                                                                                                                                                                                                           | Type   | Goal                                                                                                                  | Unit of Measure   | Responsible Measurement                                         |
| Individuals who participate in training, meetings or training days related to language, medicine and rituals. | A-13.1                                                                                                                                                                                                                                                                                                 | Result | Strengthen the capacities of community members to maintain, recover and improve the elements of their culture.        | Number of persons | Carbo-Terra Yauto Community Representative Entities or Programs |
| Women who participate in training, meetings or training days related to language, medicine and rituals.       | A-13.2                                                                                                                                                                                                                                                                                                 | Result | Strengthen the capacities of women in the communities to maintain, recover and improve the elements of their culture. | Number of women   | Carbo-Terra Yauto Community Representative Entities or Programs |

| ID Activity                | A-14                                                                                                                                                                                                                                                                          |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REDD+ Activity Description | Consolidate the families that will generate the protection and care of the territory and strengthen the capacities of the community members to contribute to the monitoring of the biodiversity and deforestation control and management (including equipment, technologies). |



|                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |        |                                                                                                              |                   |                                                                 |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------------|
| Relationship activity with                                                      | The consolidation of groups of families protecting the forest and the strengthening of the capacities of community members contribute to the control and management of the forest. indigenous territory, it offers the possibility of involving the population in activities of                                                                                                                                                                                                                           |        |                                                                                                              |                   |                                                                 |
| direct cause or underlying                                                      | monitoring and follow-up of biodiversity and leads to greater ownership of the protection of the reserve. All this favors the control and prevention of deforestation.                                                                                                                                                                                                                                                                                                                                    |        |                                                                                                              |                   |                                                                 |
| Compliance with life plans or ethno-development plans                           | This activity is aligned with the territorial management agreements and the surveillance strategy established in the <i>Environmental Management Plan</i> of the reserve and with action lines 3 and 4 of the <i>Plan for the control of deforestation in the Municipality of Solano</i> , considering that they are oriented to the management of territorial matters and its jurisdiction, as well as the legal security of the territory, including signaling and delimitation of the territory. east. |        |                                                                                                              |                   |                                                                 |
| Consultation mechanism to define the REDD+ activity                             | Participatory workshops with the members of the reserve and approval at the general assembly.                                                                                                                                                                                                                                                                                                                                                                                                             |        |                                                                                                              |                   |                                                                 |
| Responsibility and role of actors involved in implementation                    | <ul style="list-style-type: none"><li>Local communities: implementers</li><li>Carbo-Terra: implementers</li><li>Yauto: project manager</li><li>Other indigenous communities with successful experiences: technical support.</li><li>PNN, CORPOAMAZONIA, NGOs, companies and research centers; technical support.</li></ul>                                                                                                                                                                                |        |                                                                                                              |                   |                                                                 |
| Schedule of Implementation                                                      | From the second year of the project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |                                                                                                              |                   |                                                                 |
| Indicators for reporting progress                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |        |                                                                                                              |                   |                                                                 |
| Name                                                                            | Indicator ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Type   | Goal                                                                                                         | Unit of Measure   | Responsible Measurement                                         |
| # of people who participate in awareness-raising, meetings or training sessions | A-14.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Result | Strengthen the capacities of community members for biodiversity monitoring and control. of deforestation     | Number of persons | Carbo-Terra Yauto Community Representative Entities or Programs |
| # of women participating in sensitization, meetings or training sessions        | A-14.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Result | Strengthen the capacities of women in the communities for biodiversity monitoring and deforestation control. | Number of women   | Carbo-Terra Yauto Community Representative Entities or Programs |

|                                                                                          |        |         |                                                                                                                 |                                                |                                                                 |
|------------------------------------------------------------------------------------------|--------|---------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------|
|         | A-14.3 | Product | Formalize the group of families protecting the forest.                                                          | Number of documents                            | Carbo-Terra Yauto Community Representative Entities or Programs |
| # of members who belong to the Group of Forest Protector Families                        | A-14.4 | Product | Linking community members in the forest protection families                                                     | Number of persons                              | Carbo-Terra Yauto Community Representative Entities or Programs |
| Scheduling of the planning of the activities of the Group of Forest Protecting Families. | A-14.5 | Product | Implement the monitoring activities schedule for the group of families protecting the forest.                   | Number of programs being implemented           | Carbo-Terra Yauto Community Representative Entities or Programs |
| Tours or expedition s carried out                                                        | A-14.6 | Product | Conduct tours and/or expeditions to identify and/or monitor the biodiversity and the status of the forest cover | Number of tours and/or expeditions carried out | Carbo-Terra Yauto Community Representative Entities or programs |

|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ID Activity</b>                                           | <b>A-15</b>                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Description of the activity REDD+</b>                     | Follow-up and monitoring of the forest in the indigenous reserve and the leakage area.                                                                                                                                                                                                                                                                                                                                              |
| <b>Relationship activity with direct or underlying cause</b> | Information on forest tracking and monitoring makes it possible to evaluate the impact of REDD+ activities on forest protection and wildlife conservation. This information is the basis for making decisions aimed at controlling deforestation, as well as verifying the results obtained over time.                                                                                                                              |
| <b>Compliance with life plans or ethno-development plans</b> | This activity is aligned with the territorial management agreements and the surveillance strategy established in the <i>Environmental Management Plan of the reserve and with action lines 3 and 4 of the Plan for the control of deforestation in the Municipality of Solano</i> , considering that they are oriented towards territorial rights and access to and control of deforestation in the <i>municipality of Solano</i> . |
| <b>Consultation mechanism to define the REDD+ activity</b>   | Participatory workshops with the members of the reserve and approval at the general assembly.                                                                                                                                                                                                                                                                                                                                       |
| <b>Responsibility and role players</b>                       | <ul style="list-style-type: none"> <li>Local communities: implementers</li> <li>Carbo-Terra: implementers</li> </ul>                                                                                                                                                                                                                                                                                                                |



| ID Activity                                                                                            | A-15                                                                                                                                    |        |                                                                                                                                                                                                    |                             |                                                     |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------------------------------|
| participate in implementation                                                                          | <ul style="list-style-type: none"><li>Yauto: project manager</li><li>NGOs, companies and research centers; technical support.</li></ul> |        |                                                                                                                                                                                                    |                             |                                                     |
| Schedule of Implementation                                                                             | From the first year of the project.                                                                                                     |        |                                                                                                                                                                                                    |                             |                                                     |
| Indicators for reporting progress                                                                      |                                                                                                                                         |        |                                                                                                                                                                                                    |                             |                                                     |
| Name                                                                                                   | Indicator ID                                                                                                                            | Type   | Goal                                                                                                                                                                                               | Unit of Measure             | Responsible Measurement                             |
| # of hectares of standing forest in project area                                                       | A-15.1                                                                                                                                  | Impact | Monitor the progress of deforestation and its changes in coverage.                                                                                                                                 | Area (ha)                   | Carbo-Terra Yauto Representative of the             |
| # tons of CO2 not emitted                                                                              | A-15.2                                                                                                                                  | Impact | Reduce CO2e emissions                                                                                                                                                                              | Emissions reduction (tCO2e) | Carbo-Terra                                         |
| # of people employed for community monitoring                                                          | A-15.3                                                                                                                                  | Impact | Employ community members in the monitoring and follow-up activities for the biodiversity                                                                                                           | Number of persons           | Carbo-Terra Yauto Representative of the reservation |
| # of hectares of standing forest in leakage area                                                       | A-15.4                                                                                                                                  | Impact | Monitor the progress of deforestation and its coverage changes in the leakage area                                                                                                                 | Area (ha)                   | Carbo-Terra Yauto Representative of the             |
| # of meetings with public or private entities to review deforestation trends in the project boundaries | A-15.5                                                                                                                                  | Result | Strengthen the regional articulation processes of the reserve and identify opportunities to improve the exercise of governance based on joint management with private and public entities. public. | Number of meetings          | Carbo-Terra Yauto Representative of the reservation |

| ID Activity                       | A-16                                                                                                                                                                                                           |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REDD+ Activity Description</b> | Strengthen the technical capacities of the communities for the management of the systems. including administrative, legal and financial aspects, as well as the strengthening of forest governance management. |



|                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                            |        |                                                                                                       |                   |                                            |
|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------|
| Relationship activity with direct or indirect cause underlying                                                    | If households strengthen their capacities in terms of administrative, financial and legal management of profitable productive activities and the scaffolding that this represents, together with a strengthening of forest and forest management governance, they will be able to develop the capacity to manage the forest in a sustainable way. social and governance structure of the territory and the communities, the logging of the |        |                                                                                                       |                   |                                            |
|                                                                                                                   | forest. To the extent that the technical and operational capacities of the community are strengthened for the management of productive systems, territory and governance, the probability of success and permanence increases. This strengthens the confidence and capacity of the members to fight against the opportunities associated with the activities that are associated with the forest. involve deforestation.                   |        |                                                                                                       |                   |                                            |
| Compliance with life plans or ethnodevelopment plans                                                              | This will be part of the project activities for the reserve. This activity was defined with the communities. Regional initiatives and experiences that can help meet the objectives of the forest conservation efforts will be taken into account. This activity is aligned with action line 5 of the <i>Deforestation Control Plan of the Municipality of Solano</i>                                                                      |        |                                                                                                       |                   |                                            |
| Consultation mechanism to define the REDD+ activity                                                               | Participatory workshops with the members of the reserve and approval at the general assembly.                                                                                                                                                                                                                                                                                                                                              |        |                                                                                                       |                   |                                            |
| Responsibility and role of actors involved in implementation                                                      | <ul style="list-style-type: none"><li>Local communities: implementers</li><li>Carbo-Terra: implementers</li><li>Yauto: project manager</li><li>Technical and research entities offer technical support: SENA, SINCHI, NGOs, Private Sector.</li></ul>                                                                                                                                                                                      |        |                                                                                                       |                   |                                            |
| Schedule of Implementation                                                                                        | Starting in the fourth year of the project.                                                                                                                                                                                                                                                                                                                                                                                                |        |                                                                                                       |                   |                                            |
| Indicators for reporting progress                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                            |        |                                                                                                       |                   |                                            |
| Name                                                                                                              | Indicator ID                                                                                                                                                                                                                                                                                                                                                                                                                               | Type   | Goal                                                                                                  | Unit of Measure   | Responsible Measurement                    |
| # of people participating in awareness-raising, meetings or training sessions on issues related to administrative | A-16.1                                                                                                                                                                                                                                                                                                                                                                                                                                     | Result | Strengthen the capacities of community members to manage administrative, legal and financial aspects. | Number of persons | Carbo-Terra Yauto Community representative |



|                                                                                                                 |        |        |                                                                                                                      |                   |                                            |
|-----------------------------------------------------------------------------------------------------------------|--------|--------|----------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------|
| # of women who participate in awareness-raising, meetings or training sessions on topics such as administrative | A-16.2 | Result | Strengthen the capacities of women members of the communities to manage administrative, legal and financial aspects. | Number of persons | Carbo-Terra Yauto Community representative |
|-----------------------------------------------------------------------------------------------------------------|--------|--------|----------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------|

| ID Activity                                                          | A-17                                                                                                                                                                                                                                                                                                                        |      |      |                 |                         |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|-----------------|-------------------------|
| Description of the REDD+ activity                                    | Recover vegetation cover through the development of restoration actions with the following actions<br>members of the community.                                                                                                                                                                                             |      |      |                 |                         |
| Relationship activity with direct or indirect cause underlying       | The development of reforestation actions promotes the recovery of forest cover in areas that have been previously intervened, as well as the improvement of connectivity and carbon sequestration conditions. Additionally, it favors the actions conservation and deforestation control and prevention.                    |      |      |                 |                         |
| Compliance with life plans or life insurance plans ethno-development | This activity is aligned with the management actions contained in the reserve's <i>Environmental Management Plan</i> , considering that they are oriented to territorial access in an integral manner, and to the recovery of the territory and the conservation and use of its resources.<br>sustainable use of resources. |      |      |                 |                         |
| Consultation mechanism to define the REDD+ activity                  | Participatory workshops with the members of the reserve and approval at the general assembly.                                                                                                                                                                                                                               |      |      |                 |                         |
| Responsibility and role of actors involved in implementation         | <ul style="list-style-type: none"><li>Local communities: implementers</li><li>Carbo-Terra: implementers</li><li>Yauto: project manager</li><li>Other indigenous communities with successful experiences: technical support.</li><li>NGOs, companies and research centers; technical support.</li></ul>                      |      |      |                 |                         |
| Schedule of Implementation                                           | Starting in the fourth year of the project.                                                                                                                                                                                                                                                                                 |      |      |                 |                         |
| Indicators for reporting progress                                    |                                                                                                                                                                                                                                                                                                                             |      |      |                 |                         |
| Name                                                                 | Indicator ID                                                                                                                                                                                                                                                                                                                | Type | Goal | Unit of Measure | Responsible Measurement |

|                                                                                                |        |         |                                                                                                   |                   |                                                                 |
|------------------------------------------------------------------------------------------------|--------|---------|---------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------------|
| # of people who participate in awareness-raising, meetings or training sessions on restoration | A-17.1 | Result  | Strengthen the capacities of community members for the development of restoration actions.        | Number of persons | Carbo-Terra Yauto Community representative                      |
| # of women who participate in awareness-raising, meetings or training sessions on restoration  | A-17.2 | Result  | Strengthen the capacities of women in the communities for the development of restoration actions. | Number of women   | Carbo-Terra Yauto Community Representative Entities or Programs |
| # of hectares subject to actions of restoration                                                | A-17.3 | Product | Develop restoration actions in areas tapped                                                       | Area (ha)         | Carbo-Terra Yauto Community representative Entities or programs |

| ID Activity                                                  | A-18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description of the REDD+ activity</b>                     | Improve the access, infrastructure and communication services in the reserve (networks, telephone lines, etc.). telecommunications (internet and cellular).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Relationship activity with direct or underlying cause</b> | Resources are allocated to social investment activities aimed at improving access and infrastructure associated with telecommunications services. By improving communication conditions, the living conditions of the members are favored. The difficulties faced by the community and the scarcity of resources to meet needs and communicate communities with the rest of the country are circumstances that facilitate their participation in activities involving deforestation, as people are willing to do whatever is necessary to improve their living conditions. By addressing these needs with project resources, the risk of adopting practices that result in forest loss is mitigated, and the communities' interest in participating in project activities is also observed to be increased, which contributes to the permanence of the entire project in the long term. |

CONSULTORIA SOCIAL

|                                                                                                        |                                                                                                                                                                                                |        |                                                                                                            |                              |                                                                 |
|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------------------------------------|
| Compliance with life plans or life insurance plans ethno-developme nt                                  | This activity is aligned with the possible actions of the <i>safeguard plan</i> for the <i>Uitoto people, Araracuara chapter</i> . This activity is defined with the community                 |        |                                                                                                            |                              |                                                                 |
| Consultation mechanism to define the REDD+ activity                                                    | Participatory workshops with the members of the reserve and approval at the general assembly.                                                                                                  |        |                                                                                                            |                              |                                                                 |
| Responsibility and role of actors involved in implementation                                           | <ul style="list-style-type: none"><li>Local communities: implementers</li><li>Carbo-Terra: implementers</li><li>Yauto: project manager</li><li>Telecommunications services companies</li></ul> |        |                                                                                                            |                              |                                                                 |
| Schedule of Implementation                                                                             | Starting in the fourth year of the project.                                                                                                                                                    |        |                                                                                                            |                              |                                                                 |
| Indicators for reporting progress                                                                      |                                                                                                                                                                                                |        |                                                                                                            |                              |                                                                 |
| Name                                                                                                   | Indicator ID                                                                                                                                                                                   | Type   | Goal                                                                                                       | Unit of Measure              | Responsible Measureme nt                                        |
| # of people participating in meetings or workshops about topics of communications                      | A-18.1                                                                                                                                                                                         | Result | The social investment identification and prioritization processes are carried out by participatory manner. | Number of persons            | Carbo-Terra Yauto Representative of the community               |
| # of people with access to communication s services                                                    | A-18.2                                                                                                                                                                                         | Result | Improved access to communication services for community members.                                           | Number of persons            | Carbo-Terra Yauto Community Representative Entities or programs |
| # of elements/infrast ructure (antennas and communication s services) installed/upgrad ed/on operation | A-18.3                                                                                                                                                                                         | Result | The infrastructure is improved to provide communication services to community members.                     | Number of services available | Carbo-Terra Yauto Community Representative Entities or Programs |



| ID Activity                                                                 | A-19                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REDD+ Activity Description</b>                                           | <p>Strengthening of the indigenous communities' self-government mechanism at the local level.</p> <p>The regional, traditional and ancestral nature of the reserve, the cabildos and the community organization in order to make it stable, credible and solid based on indigenous traditions and state policy.</p>                                                                                                                                                             |
| <b>Relationship activity with direct or underlying cause</b>                | <p>If families strengthen their traditional and ancestral knowledge and provide support to grandfathers, grandmothers and grandfathers as holders of traditional knowledge and wisdom, as well as strengthen the organization and develop community statutes, it will allow to achieve a structure and social cohesion that strengthens and preserves the culture of indigenous communities and the governance of the territory, which helps to curb logging of the forest.</p> |
| <b>Compliance with life plans or life insurance plans ethno-development</b> | <p>This activity is aligned with the management actions contained in the reserve's <i>Environmental Management Plan</i>, considering that they are aimed at respecting the cultural principles and traditions of the inhabitants of the territory.</p>                                                                                                                                                                                                                          |
| <b>Consultation mechanism to define the REDD+ activity</b>                  | <p>Participatory workshops with the members of the reserve and approval at the general assembly.</p>                                                                                                                                                                                                                                                                                                                                                                            |



**Responsibility  
and role of  
actors involved  
in  
implementation**

- Local communities: implementers
- Carbo-Terra: implementers
- Yauto: project manager
- Other indigenous communities with successful experiences: technical support.
- NGOs, companies and research centers; technical support.

| ID Activity                                                                                                                          | A-19                                        |         |                                                                                                                                         |                                                                                                                           |                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Schedule of Implementation                                                                                                           | Starting in the fourth year of the project. |         |                                                                                                                                         |                                                                                                                           |                                                                 |
| Indicators for reporting progress                                                                                                    |                                             |         |                                                                                                                                         |                                                                                                                           |                                                                 |
| Name                                                                                                                                 | Indicator ID                                | Type    | Goal                                                                                                                                    | Unit of Measure                                                                                                           | Responsible Measurement                                         |
| # of people participating in sensitizations, meetings or training sessions on tradition and culture.                                 | A-19.1                                      | Result  | Improve the capacities of community members for traditional and ancestral strengthening of cabildos and organization                    | Number of persons                                                                                                         | Carbo-Terra Yauto Community representative                      |
| # of women who participate in awareness-raising, meetings or training sessions on tradition and culture.                             | A-19.2                                      | Result  | Strengthen the capacities of women in the communities for traditional and ancestral strengthening of the cabildos and the organization. | Number of women                                                                                                           | Carbo-Terra Yauto Community Representative Entities or Programs |
| # of grandfathers and grandmothers and/or grandmothers and/or grandfathers' grandmothers and/or grandfathers' grandfathers supported | A-19.3                                      | Product | Supporting grandfathers and grandmothers and grandmothers in traditional and ancestral empowerment                                      | Number of grandfathers, grandmothers and grandfathers and grandfathers and grandfathers and grandfathers and grandfathers | Carbo-Terra Yauto Community Representative Entities or programs |



|                                    |               |         |                                                                                      |                     |                                                                 |
|------------------------------------|---------------|---------|--------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------|
| Community bylaws document prepared | <b>A-19.4</b> | Result  | At least 1 community bylaws document prepared                                        | Number of documents | Carbo-Terra Yauto Community Representative Entities or programs |
| Malocas built or suitable          | <b>A-19.5</b> | Product | Build malocas or adapt the existing ones for traditional and ancestral fortification | Number of malocas   | Carbo-Terra Yauto Community Representative Entities or programs |

## 9. REDD+ Safeguards

REDD+ safeguards are measures aimed at preventing the affectation of social, economic or environmental rights, as well as the occurrence of negative impacts due to the design and implementation of REDD+ activities. Additionally, they include measures to improve the obtainment and distribution of benefits derived from the implementation of REDD+ activities.

As a first element to address the issue of safeguards, a recognition of the governance structure of the reserve was made. Likewise, it was confirmed that the oral tradition is a characteristic component of the Uitoto people and the internal control mechanisms and impact decisions for the reserve are defined in the autonomous spaces of the community (meetings and assemblies), which are fully functional and operational in daily life. Taking into account that currently the reserve does not have written internal regulations, REDD+ activities include updating the communities' Life Plan, and if the communities consider that it is important to record in this document the specific responsibilities and functions of the roles of self-government that currently govern the reserve, then the respective chapter will be included in the Life Plan.

Table 16. REDD+ safeguards and compliance.

| Thematic             | Safeguard Cancun                                                         | Safeguard National                          | Description                                                                                                                                                                                                                                                                             | Compliance                                                                                                                                                                                                                                                            |
|----------------------|--------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Institutional</b> | A. Program Agreement<br>s national forestry and international agreements | Correspondence with legislation<br>National | The initiative is developed within the framework of the National Forestry Development Plan, international conventions and agreements signed by Colombia in the areas of: Forests, Biodiversity and Climate Change, as well as the national policies corresponding to these. agreements. | Compliant. The initiative complies with the provisions of the National Policy on REDD+ Projects and is part of the climate change management strategies and instruments of forest governance and environmental regulations, as indicated in the Regulatory Framework. |

| Thematic | Safeguard Cancun                                                  | Safeguard National                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Compliance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------|-------------------------------------------------------------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                                                   |                                          | <p>All proposed REDD+ Policies, Actions and Measures must be in correspondence with:</p> <ul style="list-style-type: none"> <li>-International agreements signed by Colombia.</li> <li>-National legislation (the Constitution, laws and decrees).</li> <li>-National policies, programs and projects.</li> </ul>                                                                                                                                                                                                                                                                                                                                              | <p>In terms of territorial planning, by virtue of Article 330 of Colombia's Political Situation and ILO Convention 169, the Indigenous Reservations have autonomy in terms of territorial planning, and constitute a special figure of territorial and environmental planning. However, the project will seek synergies through the articulation with regional initiatives at the territorial level, which contribute to the objectives of the project. conservation of the project</p>                                                                                                                     |
|          | B. Transparency and effectiveness of forest governance structures | Transformation and access to information | <p>Stakeholders have transparent, accessible and timely information related to REDD+ actions in the information platforms or media to be determined.</p> <p>If there are ethnic groups involved that do not speak Spanish well, it should be ensured that in the consultation and information areas there are interpreters for their language, as well as adequate material to facilitate their understanding.</p> <p>Be clear in reporting on:</p> <ul style="list-style-type: none"> <li>• Which entity is in charge of formulating and implementing the measure.</li> <li>• What are the benefits to be delivered? communities in the territory.</li> </ul> | <p>Complies. As part of the project development, participatory workshops have been held with members of the communities. The workshops have been developed in language appropriate for the understanding of the participants. Some of the topics that have been addressed correspond to the project activities and their implications and responsibilities. In addition, the corresponding documents have been submitted.</p> <p>The letter of invitation signed by the authorities of the communities of the Indigenous Reservation to advance with the formulation of the REDD+ project is available.</p> |

| Thematic | Safeguard Cancun | Safeguard National | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Compliance                                                                                                                                                                                                                                   |
|----------|------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                  |                    | <ul style="list-style-type: none"> <li>The commitments made by the parties involved in the implementation of the measures.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                              |
|          |                  | Accountability     | <p>Institutions and stakeholders report on their management of REDD+ to stakeholders, institutions and the general public and include information on the implementation and compliance with safeguards.</p> <p>Those in charge of the implementation of REDD+ activities should convene accountability spaces where their management reports are presented: what has been done, how, how much has been spent and how the resources have been invested, and what are the results.</p> <p>Information on the status of implementation of safeguards for risk mitigation and benefit enhancement should be included.</p> <p>Stakeholders are committed to attend these informative spaces. Accountability reports must be public and accessible to stakeholders. various stakeholders.</p> | Compliant. During project implementation, community representatives and project implementers are expected to submit relevant reports and documents for proper accountability, as required by the implementation plan and project monitoring. |

| Thematic | Safeguard Cancun | Safeguard National                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Compliance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------|------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                  | 4. Recognition of forest governance structures. | <p>REDD+ actions are developed in accordance with the existing forest governance structures established by the regulations and/or by establishing the necessary structures among the actors involved in the process (strengthening or creating new structures can be a governance implementation mechanism).</p> <p>In some cases where various stakeholders are involved, it may be necessary to establish new arrangements or articulation mechanisms for decision making. These may include forestry roundtables, monitoring committees or the creation of spaces for dialogue within the framework of action boards. community.</p> | <p>Compliant. There is an appropriate governance structure that takes into account the ethnic particularities, knowledge and traditions of the communities participating in the project, and that is in accordance with the forms of governance and guidelines related to compliance with safeguard</p> <p>14. Coexistence with the territory and its forests is an intrinsic part of the traditional ethnic forms that characterize the community. Therefore, the forms of administration of the territory apply to the entire reserve, including its forested areas.</p> |
|          |                  | Capacity building                               | <p>The strengthening of the technical, legal and administrative governance capacities of the actors directly involved is guaranteed, so that the parties can make documented, analyzed and informed decisions.</p> <p>It is necessary to have programs that contribute to the capacity building of the stakeholders involved as required in each case:</p> <ul style="list-style-type: none"> <li>• Technical capabilities:</li> </ul>                                                                                                                                                                                                  | <p>Compliant. In the development of the workshops for structuring and defining the components of the REDD+ Project, the topics of climate change, REDD+, sustainable management, monitoring and sustainable production systems, among others, have been addressed. As part of the project planning exercise, after the first sale of carbon certificates, capacity building is planned for each of the components of the project.</p> <p>project, which correspond to</p>                                                                                                  |



| Thematic | Safeguard Cancun                                              | Safeguard National                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Compliance                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------|---------------------------------------------------------------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                                               |                                     | <p>training on REDD+, climate change, forest governance, sustainable forest management, conservation, monitoring, implementation of sustainable production models, among others.</p> <ul style="list-style-type: none"> <li>• Legal skills: training in national legislation and international agreements related to these issues.</li> <li>• Management skills: training in tools for project monitoring, resource management, and accountability.</li> </ul> | <p>sustainable productive systems, social investment, governance and monitoring, which involves administrative and legal issues for the proper implementation of the project. This contributes to the goal of achieving the sustainability of the results over time and once the project ends.</p>                                                                                                                                                                                      |
|          | C. Respect for the traditional knowledge and community rights | 6. Free, Prior and Informed Consent | <p>When a measure or action affects or may directly affect one or several ethnic groups, the national provisions on consultation and free, prior and informed consent established in legislation and jurisprudence must be applied, as well as the guidelines issued by the Ministry of the Interior as the competent entity in this area, with the support of the control agencies.</p>                                                                       | <p>Complies. The project complies with current regulations regarding consultation and relations with indigenous communities. with the communities. The REDD+ activities and the theory of change respond to the prioritization of interventions that the members recognized and confirmed during the structuring sessions that took place in the territory. The project was approved in the framework of a community assembly, which is the highest decision-making body. decision.</p> |



|  |  |                                      |                                                                                                                                                                         |                                                                                                                 |
|--|--|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
|  |  | 7. Respect for knowledge traditional | They are recognized, respected and promoted, in accordance with the provisions of national legislation and compliance with international conventions; knowledge systems | Compliant. The project complies with the regulations on consultation and relations with indigenous communities. |
|--|--|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|

| Thematic | Safeguard Cancun | Safeguard National | Description                                                                                                                                                                                                                                                                                                                                                                                               | Compliance                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------|------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                  |                    | <p>and visions of the territory of ethnic and local peoples and communities.</p> <p>For the development of any initiative to reduce deforestation, the different cultures that inhabit the territories must be taken into account, respecting their ways of understanding and relating to the environment, so that the traditions, uses and customs of the communities are not affected. communities.</p> | <p>During the formulation and implementation of the project, the cosmovision, culture, knowledge and capacities of the communities participating in the project have been taken into account.</p>                                                                                                                                                                                                                                                            |
|          |                  | Profit sharing     | <p>The participation and fair and equitable distribution of the benefits generated by policies, measures and actions to reduce deforestation for ethnic and local peoples and communities, and of all those benefits derived from traditional knowledge, innovations and practices for the conservation and sustainable use of forests, their diversity and Ecosystem Services is guaranteed.</p>         | <p>Compliant. There is a distribution scheme for the distribution of income derived from project activities that ensures that it is done in an equitable manner among project participants, taking into account the project's own levels of risk and profit.</p> <p>This is formalized in the Mandate Agreement and in the Participatory Workshops where the benefit-sharing agreements are clarified and confirmed (See <i>Annexes 1 and 2</i>).<br/>2)</p> |

| Thematic                 | Safeguard Cancun                       | Safeguard National                             | Description                                                                                                                                                                                                                                                                                                                                                                | Compliance                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------|----------------------------------------|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          |                                        | 9.Territorial rights                           | <p>The collective and individual territorial rights of ethnic and local peoples and communities are respected; their cultural, economic and spiritual use and significance.</p> <p>For this, the land tenure forms in the areas where REDD+ measures and actions are expected to be implemented must be known and decisions must be made accordingly.</p>                  | <p>Compliant. The project is aligned with autonomy regulations, consultation and relations with indigenous communities.</p> <p>In the formulation and implementation of project activities, the culture, knowledge and capacities of the communities are taken into account.</p> <p>In addition, it is recognized that the form of land tenure corresponds to collective property and that the area is titled in favor of the project proponents.</p> |
|                          | D.<br>Full and effective participation | 10.Participation                               | <p>The right to full and effective participation of all stakeholders is respected to ensure good governance and adequate decision making on REDD+.</p> <p>The participation structures of each stakeholder group, especially communities, must be recognized and respected, in accordance with national legislation and international conventions. signed by Colombia.</p> | <p>Compliant. All interested community representatives have been involved in the participation process for the formulation of the project, taking into account the applicable regulations and considering the organizational structure of the indigenous reservation.</p>                                                                                                                                                                             |
| Environmental and Social | E.<br>Conservation and benefits        | Conservation of forests and their biodiversity | <p>REDD+ initiatives support forest conservation and the implementation of measures established for this purpose.</p> <p>REDD+ initiatives to be developed in the country do not have to be</p>                                                                                                                                                                            | <p>Complies. The project seeks to conserve the forests, which is expected to conserve the biodiversity harbored therein. Within the project's activities, the development of productive activities</p>                                                                                                                                                                                                                                                |

| Thematic | Safeguard Cancun | Safeguard National                            | Description                                                                                                                                                                                                                                                                                                                                                   | Compliance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------|------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                  |                                               | should be detrimental to the conservation of forests and the biodiversity they harbor.                                                                                                                                                                                                                                                                        | The project contemplates the adoption of management measures in these production systems that allow the conservation of biodiversity, the technical guidance and criteria for the development of the activities demonstrate that the project does not have negative impacts on biodiversity                                                                                                                                                                                                                                                                                         |
|          |                  | Provision of environmental goods and services | <p>REDD+ initiatives support the provision and enjoyment of ecosystem services.</p> <p>The implementation of REDD+ initiatives must not directly or indirectly affect the benefits provided by ecosystems, which are known as ecosystem services (supply, support, regulation and cultural), for example: water supply, soil, biodiversity, among others.</p> | Compliant. The project is expected to improve the conservation of ecosystem resources, so it does not have a negative impact on them. The project aims to protect the forests present in the territory of the reserve, as well as implement management actions that contribute to the conservation of ecosystem resources and the services they provide at the local and regional level. In its planning and execution, the entire project is focused on the conservation of the territory and aimed at improving the quality and quantity of the forest of environmental services. |

|  |                            |                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                      |
|--|----------------------------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | F. Prevent reversion risks | 13.Environmental and territorial management | <p>REDD+ initiatives support the consolidation of land-use and environmental management instruments provided for in the legislation, with a focus on conservation and sustainable forest management.</p> <p>It is necessary that the REDD+ initiatives carried out in the country recognize, respect, adapt or strengthen the measures and instruments of territorial and environmental planning that are defined by national legislation. It is also ideal to encourage citizen participation in the formulation and adjustment of these instruments, in accordance with land use.</p> <p>The land-use planning practices of ethnic groups and local communities should also be recognized in order to support their permanence over time.</p> | <p>Complies. The design and implementation of the project has taken into account the indigenous community's land and environmental management instruments, programs and applicable plans. As part of the strengthening of forest governance, the development of a land management plan is contemplated, taking into account the following aspects</p> <p>account of the forms of</p> |
|--|----------------------------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Thematic | Safeguard Cancun | Safeguard National    | Description                                                                                                                                                                                                                                                                                                                                                                                                               | Compliance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------|------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                  |                       | <p>measures and instruments of territorial and environmental planning that are defined by national legislation. It is also ideal to encourage citizen participation in the formulation and adjustment of these instruments, in accordance with land uses.</p> <p>The specific forms of land use planning of ethnic groups and local communities must also be recognized in order to support its permanence over time.</p> | the members of the reserve.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|          |                  | 14.Sectorial planning | <p>Sectoral REDD+ actions are proposed based on environmental and territorial planning instruments, as well as legislation related to the conservation of forests and their biodiversity.</p> <p>When a sector defines and implements REDD+ actions, these must be articulated with national legislation that protects forests, their conservation and the diversity they harbor.</p>                                     | <p>The project is in line with the Municipal Development Plan, with its general focus on meeting unsatisfied basic needs and the Sustainable Development Goals, under Pillar 1 of the Sustainable Environment, productive development and infrastructure and Pillar 3 of social inclusion and equality (See Annex 3.5). REDD+ activities contribute to the conservation of forests and their biodiversity.</p> <p>At the departmental level, the project supports the programs and projects against deforestation in the <i>Action Plan to reduce deforestation in the Municipality of Solano, Caquetá</i> (see Annex 3.2).</p> |

| Thematic | Safeguard Cancun                | Safeguard National                                                 | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Compliance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------|---------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                 |                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <p>Additionally, it is aligned with the strategic lines of the Departmental Development Plan, related to productivity with a socio-environmental approach and its programs for biodiversity conservation and ecosystem services, land use planning and development, and climate change management for low-carbon and climate-resilient developmentG. Likewise, with the strategic lines of infrastructure for development related to transportation, public services and housing; and the line related to governance (See Annex 3.7)</p>                           |
|          | G. Avoid displacement emissions | Forest control and surveillance to avoid displacement of emissions | <p>REDD+ initiatives incorporate measures to reduce emissions displacement in their design and ensure timely monitoring and control when emissions displacement occurs.</p> <p>Community monitoring, articulated with early warning systems for deforestation, and the activation of protocols that allow for timely responses, can be decisive in ensuring that the problems associated with forest loss and degradation do not spread to other parts of the country. other places.</p> | <p>Complies. One of the project's objectives is to contribute to the monitoring and conservation of forests and biodiversity present in the territory through the development of actions aimed at monitoring and control of the territory. The community has characterized the entire process of structuring the project, as well as the definition of REDD+ activities to curb deforestation. The project has also defined a leakage area that recognizes the dynamics of mobilization of deforestation agents and will be used as the basis for the project.</p> |



| Thematic | Safeguard Cancun | Safeguard National | Description | Compliance                                                                                                                                                                                                                                                                                             |
|----------|------------------|--------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                  |                    |             | <p>monitoring the permanence of the project, as well as the forest cover associated with the project boundaries.</p> <p>The project will be building capacity to improve forest monitoring and surveillance, which will also be complemented by the social control exercised by community members.</p> |

## 10. GHG emission reductions from REDD+ activities

### 10.1. Uncertainty management

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

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

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

Where:

t: Total uncertainty; T: Total associated GHG emissions. A=category A emissions, a=uncertainty of category A emissions, B=category B emissions, b=uncertainty of category B emissions, ...N=category N emissions, n=uncertainty of category N emissions.

a) *Emission Factor Uncertainty:*

Biomass area amazonia: = 444.8 tCO<sub>2</sub>/ha/year

Soil organic carbon amazonia: 14 tCO<sub>2</sub>/ha/year

Uncertainty factor of emission factor = Root  
 $((444,8 \text{ tCO}_2/\text{ha/yr} * 2.1\%)+(14 \text{ tCO}_2/\text{ha/yr}))$

Emission factor uncertainty = 2.04%.

b) *Uncertainty of activity data:*

Activity data: 9%.

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

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

Where,

U total: Total uncertainty; U<sub>1</sub> = percentage of uncertainty at each of the sources of uncertainty.

c) *Uncertainty of project reductions:*

Uncertainty of project estimates = Root ((2.04)<sup>2</sup> +(9)<sup>2</sup> Uncertainty of project estimates = 9.3%.

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

## 10.2. Activity data

### 10.2.1. Deforestation

#### 10.2.1.1. *Estimation of deforestation rate based on historical averages*

For the estimation of the deforestation rate, an analysis of the change from forest to non-forest cover was made between at least two dates, in this case 2007 and 2017. Additionally, gross deforestation was taken for its estimation and forest losses were omitted after one or more dates without information in order not to overestimate the rates.

#### 10.2.1.2. *Annual historical deforestation in the region of reference*

The following equation is used to estimate the annual historical deforestation in the reference region:

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

$$CSB_{año} = \left( \frac{1}{2017 - 2007} \right) \times (1.154.982 - 1.105.550)$$

$$CSB_{año} = 49.432 \text{ ha}$$

Where:

$$\begin{aligned}
 CSB_{año} &= \text{Annual change in the area covered by forest in} \\
 &\quad \text{the region of reference (ha)} \\
 t_2 &= \text{Year end of reporting period} \\
 t_1 &= \text{Initial year of the reference period}
 \end{aligned}$$



- $A_1$  = Forested area of the area under control at the initial moment.  
(ha)
- $A_2$  = Forested area of the area under control at the final moment.  
(ha)

#### 10.2.1.3. Projected annual deforestation in the scenario with REDD+ project

The following equation is used to estimate annual historical deforestation in the REDD+ project scenario:

$$CSB_{proy,año} = CSB_{lb,año} \times \% \text{ increase due to national circumstances} \times (1 - \%DD)$$

$$CSB_{proy,año} = 2,606 \times 31.77\% \times (1 - 70\%).$$

$$CSB_{proy,año} = 1.030 \text{ ha}$$

Where:

- $CSB_{proy,año}$  Annual change in the area covered by forest in the scenario with project (ha)
- $CSB_{lb,año}$  = Annual change in the area covered by forest in the scenario without project (ha)
- % = Projected decline in deforestation due to the implementation of REDD+ activities

#### 10.2.1.4. Historical annual deforestation in the leakage area

The following equation is used to estimate deforestation in the leakage area:

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

$$CSB_{f,año} = \left( \frac{1}{2017 - 2007} \right) \times (111.907 - 110.715)$$



$$f, año \text{ CSB} = 117.8 \text{ ha}$$

Where:

- $CSB_{f,año}$  = Annual change in the area covered by forest in the area of leakage, in the scenario without project (ha)
- $t_2$  = Year end of reporting period
- $t_1$  = Initial year of the reference period
- $A_1$  = Forested area of the leakage area at the initial moment of the reference period (ha)
- $A_2$  = Forested area of the leakage area at the final moment of the reference period (ha)

#### 10.2.1.5. Projected annual deforestation in the leakage area in the scenario with project

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

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

$$CSB_{REDD+proy, año} = 117 \times (1 + 10\%)$$

$$CSB_{REDD+proy, año} = 129 \text{ ha}$$

Where:

- $CSB_{REDD+proy, año}$  = Annual change in the area covered by forest in the leakage area, in the scenario with project (ha)
- $CSB_{f, lb}$  = Annual change in the area covered by forest in the leakage area, in the without-project scenario (ha)
- $\%Ef$  = Percentage increase in emissions in the area of leakage due to the implementation of REDD+ activities.

#### 10.2.2. Degradation

The degradation analysis is performed on the basis of a fragmentation analysis,



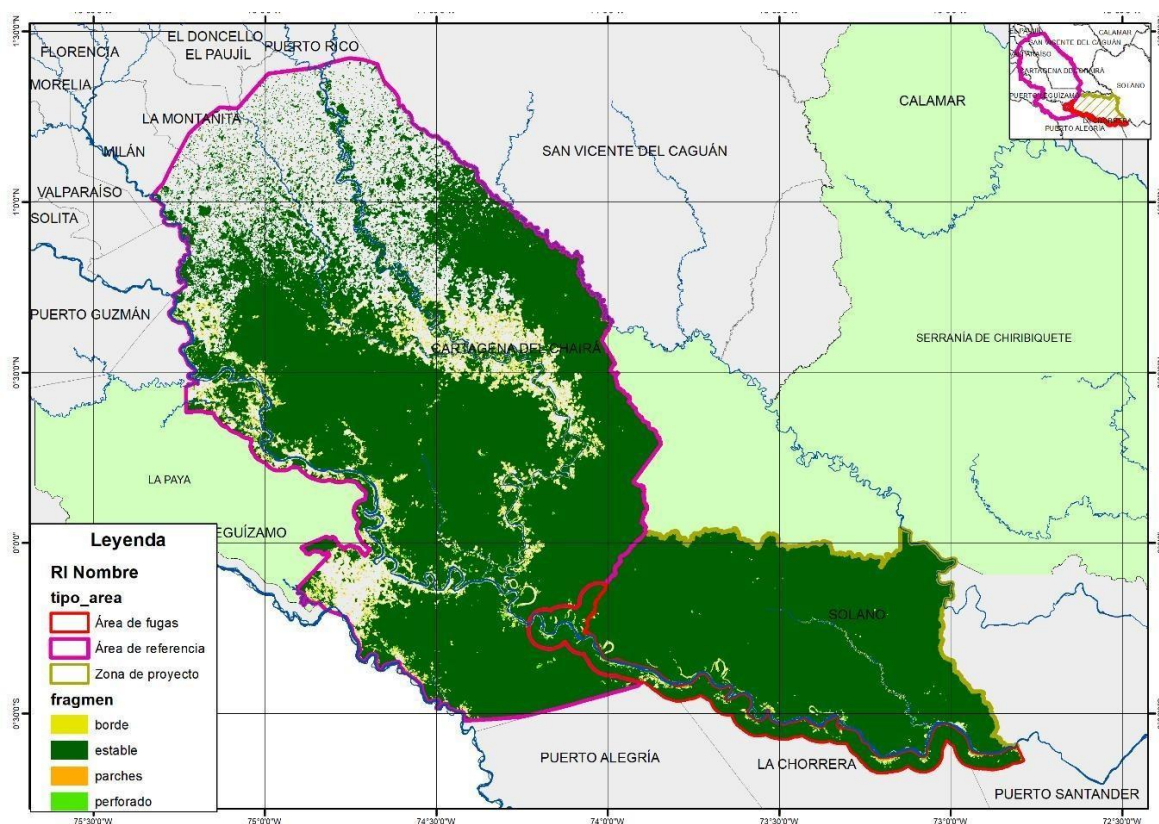
according to the methodology developed by the Forests and Carbon SMByC of the Institute of Hydrology, Meteorology and Environmental Studies - IDEAM in 2018.

To estimate forest degradation through fragmentation analysis, the Non-forest forest cover layers of the study area for the years 2007, 2014, 2017 and 2021 were used, the *Landscape Fragmentation Tool* processing tool for ESRI's ArcMap software was used, which performs an analysis of distances to the forest edge.

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

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

### 10.2.2.1. Layer of cartographic information used



Map 19. Degradation in the project area, reference region and leakage area in the period 2007-2017. Source: Own elaboration.

### 10.2.2.2. Fragmentation classes

Table 17. Fragmentation classes.

| Class      | Area (ha)          |            |            |            |
|------------|--------------------|------------|------------|------------|
|            | 2007 (map biomass) | 2007       | 2014       | 2017       |
| Core       |                    | 604.116,41 | 602.543,84 | 602.349,93 |
| Perforated |                    | 1086,42    | 786,53     | 806,02     |
| Patch      |                    | 137,42     | 175,03     | 177,52     |



#### 10.2.2.3. Precision analysis to reduce uncertainty in forest degradation estimates

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

#### 10.2.2.4. Transitions between fragmentation classes

*Transition of fragmentation classes (ha) for the period from 2007 to 2014 in the reference region.*

| Year 1 Class/Year 2 Class | Perforated | Patch |
|---------------------------|------------|-------|
| Core                      | 3.079      |       |
| Perforated                |            | 41,8  |

*Table 19. Transition of fragmentation classes (ha) for the period from 2014 to 2017 in reference region.*

| Year 1 Class/Year 2 Class | Perforated | Patch |
|---------------------------|------------|-------|
| Core                      | 466        |       |
| Perforated                |            | 556   |

#### 10.2.2.5. Annual historical degradation in the reference area at baseline

For the estimation of the annual historical degradation in the reference region, we start with the use of the following equation:

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

$$DFP_{lb,año} = 297 \text{ ha}$$

Where:

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

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

$$DFS_{lb,año} = 95,6 \text{ ha}$$

Donde:

- $DFS_{lb,año}$  = Annual historical secondary degradation in the without scenario  
 $t_2$  = Year end of reporting period  
 $t_1$  = Initial year of the reference period  
 $A_{perforado.lb}$  = Area of the reference region in class drilled in year of beginning of reference period (ha)  
 $A_{perforado-par.lb}$  = Area of the reference region that goes from drilled to patch in the final year of the reference period (ha)

#### 10.2.2.6. Annual historical degradation in leakage area in baseline scenario

The following equations are used to estimate degradation in the leakage area in the scenario without a REDD+ project:

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

$$DFP_{lb,f,año} = 6,3 \text{ ha}$$

where:

- $DFP_{lb,f,año}$  = Annual primary degradation in the leakage area (ha)  
 $t_2$  = Year end of reporting period  
 $t_1$  = Initial year of the reference period

- $A_{nucleo,lb,f}$  = Leakage area in core class in the year of the beginning of the period of reference (ha)
- $A_{nucleo-par,lb,f}$  = Leakage area going from core to patch in the final year of the reference period (ha)

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

$$DFS_{lb,f,año} = 5,1 \text{ ha}$$

Where:

- $DFS_{lb,f,año}$  = Annual secondary degradation in the area of leakage (ha)
- $t_2$  = Year end of reporting period
- $t_1$  = Initial year of the reference period
- $A_{perforado,lb,f}$  = Leakage area in perforated class in the year of start-up of the reference period (ha)
- $A_{perforado-par,lb,f}$  = Leakage area going from perforated to patch in a year end of reference period (ha)

#### 10.2.2.7. *Projected annual degradation in the project area in the scenario with REDD+ project*

The following equation is used to estimate the projected degradation in the project area:

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

$$DFPREDD+proy,año = 156 \times (1 - 70\%)$$

$$DFPREDD_{+prooy,año} = 47 \text{ ha}$$

Where:

$$DFPREDD_{+prooy,año} = \frac{\text{Annual primary degradation in the project area in the scenario with project (ha)}}{\text{Annual historical primary degradation in the without scenario project (ha)}} - \%$$

= Projection of the decrease in degradation due to the implementation of REDD+ activities

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

$$DFSREDD_{+,proy,año} = 34.1 \times (1 - \%70)$$

$$DFSREDD_{+,prooy,año} = 50.4 \text{ ha}$$

Where:

$$DFSREDD_{+,prooy,año} = \frac{\text{Secondary degradation in the scenario with project (ha)}}{\text{Annual historical secondary degradation in the without scenario project (ha)}} - \%$$

= Projection of the decrease in degradation due to the implementation of REDD+ activities

#### 10.2.2.8. Projected annual degradation in the leakage area in the scenario with REDD+ project

The following equations are used to estimate degradation in the scenario with REDD+ project, in the area of leakage:

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

$$f,año DDFP = 6.8 \text{ ha}$$

Where:



$$\frac{DDFP_{f,a}}{\tilde{n}o} = \text{Annual primary degradation of leakage area in the scenario with project (ha)}$$

$$\cdot = \text{Annual historical primary degradation of the leakage area in the scenario without project (ha)}$$

$$\% = \text{Percentage increase in emissions in the area of leakage due to the implementation of REDD+ activities.}$$

$$_{f,a\tilde{n}o} DFS = DFS_f \times (1 + \%Ef)$$

$$_{f,a\tilde{n}o} DDFS = 5.5 \text{ ha}$$

Where:

$$DDFS_{f,a\tilde{n}o} = \text{Annual secondary degradation of the leakage area in the scenario with project (ha)}$$

$$\cdot = \text{Annual historical secondary degradation of the area of leakage in scenario without project (ha)}$$

$$\% = \text{Percentage increase in emissions in the area of leaks due to the implementation of REDD+ activities.}$$

### 10.3. Emission factors

#### 10.3.1. Deforestation

##### 10.3.1.1. Carbon emission factor in total biomass

The estimation of the carbon dioxide equivalent contained in the total biomass is estimated from the following equation:

$$_{eq} CBF = \overset{44}{BT} \times \overset{44}{FC} \times 12 \cdot$$

$$_{eq} CBF = 315 \times 0.47 \times 12 \cdot$$

$$= 544 \text{ } ^2tCO$$

e





Where:

$$\begin{aligned}
 &= \text{Carbon dioxide equivalent contained in total biomass (tCO}_2\text{e/ha)} \\
 &\cdot \\
 &= \text{Total biomass (t/ha)} \\
 &\cdot \\
 &= \text{Carbon fraction of dry matter (0.47)}
 \end{aligned}$$

#### 10.3.1.2. Soil carbon emission factor

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

$$\begin{aligned}
 &\cdot \quad 44 \\
 &= 20 \times 12 \cdot \\
 &= 13.6 \frac{\text{tCO}_2\text{e}}{\text{ha}}
 \end{aligned}$$

Where:

$$\begin{aligned}
 &= \text{Carbon dioxide equivalent contained in soils (tCO}_2\text{e/ha)} \\
 &\cdot \\
 &= \text{Soil carbon content (tC/ha)}
 \end{aligned}$$

#### 10.3.1.3. Total carbon emission factor

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

$$\begin{aligned}
 &= + \\
 &= 557,6 \frac{\text{tCO}_2\text{e}}{\text{ha}}
 \end{aligned}$$



*ha*

Where:

- = Total carbon dioxide equivalent (tCO<sub>2e</sub>/ha)
- = Carbon dioxide equivalent contained in the total biomass (tCO<sub>2e</sub>/ha)



= Carbon  
dioxide  
equivalent  
contained in  
soils  
(tCO<sub>2</sub>e/ha)

### 10.3.2. Degradation

Table 20. Aerial biomass by fragmentation class.

| Fragmentation type | Average biomass by class<br>(tCO <sub>2</sub> /ha) |
|--------------------|----------------------------------------------------|
| Core               | 557,6                                              |
| Perforated         | 331,3                                              |
| Patch              | 255,2                                              |

Table 21. Difference in aerial biomass by fragmentation type.

| ID transition | Transition classes<br>fragmentation | Average biomass difference<br>aerial (tCO <sub>2</sub> /ha) |
|---------------|-------------------------------------|-------------------------------------------------------------|
| 1             | Core - patch                        | 226,3                                                       |
| 2             | Perforated - patch                  | 76,2                                                        |

## 10.4. GHG emissions in the period of analysis

### 10.4.1. Deforestation

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

$$lb EA = (DA_{lb} + \% Circunstancias Circunstancias nacionales) \times CT_{eq}$$

$$lb EA = (2,606 + 31.7\%) \times 557.6$$

$$= 1.915.171.2$$

Where:

$$= \text{Annual emissions in the baseline scenario (tCO}_2 \text{)}$$

= Annual historical deforestation in the baseline scenario (ha)

= Carbon dioxide equivalent contained in soils tCO<sub>2</sub>e/ha)





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

$$EAREDD+proy,año = DAREDD+proy \times CTeq$$

$$EAREDD+proy,año = 1,030 \times 557.6$$

$$EAREDD+proy,año = 574.551 \text{ tCO}_2e$$

Where:

$$\begin{aligned} EAREDD+proy,año &= \text{Annual emissions in the scenario with project (tCO}_2\text{ )} \\ + &= \text{Annual historical deforestation in the scenario with project (ha)} \\ &= \text{Total carbon dioxide equivalent (tCO}_2e\text{/ha)} \end{aligned}$$

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

$$EAf,año = DAf \times CTeq$$

$$f,año EA = 129 \times 557$$

$$f,año EA = 72.282 \text{ tCO}_2e$$

Where:

$$\begin{aligned} EAf,año &= \text{Annual emission in the leakage area (tCO}_2\text{/ha)} \\ \cdot &= \text{Annual historical deforestation in the area of leakage (ha)} \\ &= \text{Total carbon dioxide equivalent (tCO}_2e\text{/ha)} \end{aligned}$$

#### 10.4.2. Degradation

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



$$EAd,lb,año = (DDFPlb,año \times DCBTDP) + (DFS lb,año \times DCBTDS)$$



$$EAd,lb,año = 39.360 \text{ tCO}_2e$$

Where:

- $EAd,lb,año$  = Annual emission due to degradation in the line scenario base (tCO<sub>2</sub>/ha)
- $DFPlb,año$  = Annual historical primary degradation at baseline (ha)
- $DFSlb,año$  = Annual historical secondary degradation in the without

The annual emission per degradation in the scenario with project is calculated from the following equation:

$$EAd,REEDDD+proy,año = (DFPREDD+proy,año \times DCBTDp) + (DFSREDD+proy,año \times DCBTDS)$$

$$EAd,RREDD+proy,año = 11,808 \text{ tCO}_2e$$

Where:

- $EAd,RREDD+proy,año$  = Annual emission due to degradation under the scenario with project (tCO<sub>2</sub>/ha)
- $DFPREDD+proy,año$  = Annual historical primary degradation under the scenario with project (ha)
- $DFSREDD+proy,año$  = Annual historical secondary degradation under the scenario with project (ha)
- $DCBTDp$  = Equivalent carbon dioxide contained in the difference total biomass per hectare in the primary degradation case (tCO<sub>2</sub>e/ha)
- $DCBTDS$  =



.

=



Carbon dioxide equivalent  
contained in the difference total  
biomass per hectare in the  
degradation case. secondary  
(tCO<sub>2</sub>e/ha)



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

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

$$d,f,año EA = 1.980 tCO_2e$$

Where:

|                |   |                                                                                                                                             |
|----------------|---|---------------------------------------------------------------------------------------------------------------------------------------------|
| $E_{Ad,f,año}$ | = | Annual emission due to degradation in leakage area (tCO <sub>2</sub> /ha)                                                                   |
| $DDF_{f,año}$  | = | Historical annual primary degradation in the leakage area (ha)                                                                              |
| $DFS_{f,año}$  | = | Annual historical secondary degradation in the leakage area (ha)                                                                            |
| $DCBT_{DP}$    | = | Carbon dioxide equivalent contained in the difference total biomass per hectare in the case of primary degradation. (tCO <sub>2</sub> e/ha) |
| $DCBT_{DS}$    | = | Carbon dioxide equivalent contained in the difference total biomass per hectare in the degradation case. secondary (tCO <sub>2</sub> e/ha)  |

## 10.5. GHG emission reductions expected from the implementation of REDD+ activities

### 10.5.1. Deforestation

Emission reductions from avoided deforestation are estimated from the following equation:

$$REDEF, REDD+proy = (t_2 - t_1) \times (E_{ADEF, lb, año} - E_{ADEF, REDD+proy, año} - E_{ADEF, f, año})$$

$$, + = 30,690,863 \text{ t}$$





|                       |   |                                                                                             |
|-----------------------|---|---------------------------------------------------------------------------------------------|
| $_{,+}$               | = | Emission reductions from avoided deforestation in the project scenario (tCO <sub>2</sub> e) |
| $_2$                  | = | Year end of reporting period                                                                |
| $_1$                  | = | Initial year of the reference period                                                        |
| $EADEF,lb,año$        | = | Annual emissions from deforestation in the baseline scenario base (tCO <sub>2</sub> e)      |
| $EADEF,REDD+proy,año$ | = | Annual emission from deforestation in the project area (tCO <sub>2</sub> e)                 |
| $EADEF,f,año$         | = | Annual emission from deforestation in the leakage area (tCO <sub>2</sub> e)                 |

### 10.5.2. Degradation

Emission reductions from avoided degradation are estimated from the following equation:

$$REDEG,REDD+proy = \left( t_2 - t_1 \right) \times (EADEG,lb,año - EADEG,REDD+proy,año - EADEG,f,año)$$

$$_{,+} = 818,086_2$$

Where:

|                       |   |                                                                                             |
|-----------------------|---|---------------------------------------------------------------------------------------------|
| $_{,+}$               | = | Emission reductions due to avoided degradation in the project scenario (tCO <sub>2</sub> e) |
| $_2$                  | = | Year end of reporting period                                                                |
| $_1$                  | = | Initial year of the reference period                                                        |
| $EADEG,lb,año$        | = | Annual emission of degradation under the line scenario base (tCO <sub>2</sub> e)            |
| $EADEG,REDD+proy,año$ | = | Annual degradation emission in the project area (tCO <sub>2</sub> e)                        |
| $EADEG,f,año$         | = | Annual emission of degradation in the leak area (tCO <sub>2</sub> e)                        |



## 11. Monitoring plan

The monitoring plan presents the procedures for adequate follow-up of project activities, compliance with safeguards and reduction of GHG emissions in the project area.

The plan foresees collecting relevant information and data for:

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

The data collected shall be archived for at least two years after the last verification process has been completed. This shall include the data and parameters monitored, the methods used for their generation, their proper collection and archiving, and the processes related to sampling and quality control models.

### 11.1. Project limits

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

Monitoring of emissions reductions from deforestation and degradation will be carried out for the geographic areas covered by the project. Periodic verification of deforestation and degradation in the project area will be carried out following the guidelines established in section 10.5.

## 11.2. Implementation of REDD+ activities

The monitoring plan for project activities, including compliance with the Sustainable Development Goals (SDGs), is presented below:

|                                                 |                                                                                                                                                                                                                                                                        |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-1                                                                                                                                                                                                                                                                    |
| <b>Indicator ID</b>                             | A-1.1                                                                                                                                                                                                                                                                  |
| <b>Indicator name</b>                           | # of people participating in meetings, surveys or workshops on problem trees and the identification of drivers deforestation and production systems and governance management                                                                                          |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                                 |
| <b>Goal</b>                                     | The processes of identification and prioritization of activities will be participatory manner.                                                                                                                                                                         |
| <b>SDGs to be met</b>                           | SDG1 (carbon revenues and productive projects), SDG2 (productive projects), SDG8 (productive projects and governance activities), SDG13 (emissions reduction), SDG15 (forest habitat protection),                                                                      |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                 |
| <b>Monitoring methodology</b>                   | For the measurement and reporting of this indicator, we take into account the number of participants in meetings, workshops or surveys conducted                                                                                                                       |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                               |
| <b>Responsible for measurement</b>              | Carbo-Terra<br>Yauto                                                                                                                                                                                                                                                   |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                        |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Photographic and/or video recordings.</li> <li>• Attendance lists for workshops and meetings convened.</li> <li>• Minutes of the meetings and workshops convened.</li> <li>• Surveys applied to community members.</li> </ul> |
| <b>Remarks</b>                                  | Available documentation should be used                                                                                                                                                                                                                                 |

|                       |                                                                                                                                   |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>    | A-1                                                                                                                               |
| <b>Indicator ID</b>   | A-1.2                                                                                                                             |
| <b>Indicator name</b> | # of legal support agreements for the development and implementation of the project including commercialization of carbon credits |
| <b>Type</b>           | Result                                                                                                                            |
| <b>Goal</b>           | Monitor the agreements reached                                                                                                    |



|                       |                                                                                                                                                                                                   |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SDGs to be met</b> | SDG1 (carbon revenues and productive projects), SDG2 (productive projects), SDG8 (productive projects and governance activities), SDG13 (emissions reduction), SDG15 (forest habitat protection), |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                 |                                                                                                                                                                    |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Unit of measure</b>                          | Agreements                                                                                                                                                         |
| <b>Monitoring methodology</b>                   | For the measurement and reporting of this indicator, the following will be reviewed agreements entered into and the minutes or reports related to their execution. |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                           |
| <b>Responsible for measurement</b>              | Carbo-Terra<br>Yauto                                                                                                                                               |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                    |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Agreements</li> <li>• Minutes of the meetings.</li> </ul>                                                                 |
| <b>Remarks</b>                                  | Available documentation should be used                                                                                                                             |

|                                                 |                                                                                                                                                                                                   |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-1                                                                                                                                                                                               |
| <b>Indicator ID</b>                             | A-1.3                                                                                                                                                                                             |
| <b>Indicator name</b>                           | Registration of projects in the waste reduction certification program.<br>emissions                                                                                                               |
| <b>Type</b>                                     | Result                                                                                                                                                                                            |
| <b>Goal</b>                                     | Project registration                                                                                                                                                                              |
| <b>SDGs to be met</b>                           | SDG1 (carbon revenues and productive projects), SDG2 (productive projects), SDG8 (productive projects and governance activities), SDG13 (emissions reduction), SDG15 (forest habitat protection), |
| <b>Unit of measure</b>                          | Registration                                                                                                                                                                                      |
| <b>Monitoring methodology</b>                   | Review of registration in the registration platform                                                                                                                                               |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                          |
| <b>Responsible for measurement</b>              | Carbo-Terra                                                                                                                                                                                       |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                   |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Registration number</li> <li>• Link to field on platform</li> </ul>                                                                                      |
| <b>Remarks</b>                                  |                                                                                                                                                                                                   |

|                       |                                                                                                                             |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>    | A-2                                                                                                                         |
| <b>Indicator ID</b>   | A-2.1                                                                                                                       |
| <b>Indicator name</b> | # of people involved in system development<br>productive activities that participate in training sessions or training days. |
| <b>Type</b>           | Result                                                                                                                      |



|      |                                                                                                                     |
|------|---------------------------------------------------------------------------------------------------------------------|
| Goal | All people involved in the development of production systems participate in training or training days.<br>training. |
|------|---------------------------------------------------------------------------------------------------------------------|



|                                                 |                                                                                                                                                                                                                                                               |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SDGs to be met</b>                           | SDG1 (productive projects), SDG2 (productive projects), SDG8 (productive projects), SDG13 (emissions reduction), SDG15 (protection of forest habitat)                                                                                                         |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                        |
| <b>Monitoring methodology</b>                   | Number of community members attending the workshops<br>The value of the training provided for the management of the prioritized production systems is reported.                                                                                               |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                      |
| <b>Responsible for measurement</b>              | Carbo-<br>Terra<br>Yauto<br>Third party reports                                                                                                                                                                                                               |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                               |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Photographic and/or video recordings.</li> <li>• Attendance lists for training workshops for the management of prioritized production systems.</li> <li>• Meeting minutes</li> <li>• Meeting registration</li> </ul> |
| <b>Remarks</b>                                  | Use available information                                                                                                                                                                                                                                     |

|                                                 |                                                                                                                                                                                                                               |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-2                                                                                                                                                                                                                           |
| <b>Indicator ID</b>                             | A-2.2                                                                                                                                                                                                                         |
| <b>Indicator name</b>                           | # of women involved in the development of productive systems who participate in training sessions or training days.                                                                                                           |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                        |
| <b>Goal</b>                                     | All women involved in the development of productive systems participate in training or training days.<br>training.                                                                                                            |
| <b>SDGs to be met</b>                           | SDG1 (productive projects), SDG2 (productive projects), SDG5 (women's participation), SDG8 (productive projects), SDG13 (emissions reduction), SDG15 (habitat protection), and SDG14 (environmental protection).<br>forestry) |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                        |
| <b>Monitoring methodology</b>                   | Number of women who are part of the community that attend to the training sessions for the management of the prioritized production systems and the value obtained is reported.                                               |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                      |
| <b>Responsible for measurement</b>              | Carbo-Terra                                                                                                                                                                                                                   |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                               |



|                                                    |                                                                                                                                                                                                                           |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Documents to support the information</b></p> | <ul style="list-style-type: none"><li>• Photographic and/or video recordings.</li><li>• Attendance lists for training workshops for the management of prioritized production systems.</li><li>• Meeting minutes</li></ul> |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|         |                                                                  |
|---------|------------------------------------------------------------------|
|         | <ul style="list-style-type: none"> <li>Rapporteurship</li> </ul> |
| Remarks | Use available information                                        |

|                                          |                                                                                                                                                            |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity ID                              | A-2                                                                                                                                                        |
| Indicator ID                             | A-2.3                                                                                                                                                      |
| Indicator name                           | Productive activities identified                                                                                                                           |
| Type                                     | Product                                                                                                                                                    |
| Goal                                     | Sustainable productive activities to invest in are identified. resources generated by the project                                                          |
| SDGs to be met                           | SDG1 (productive projects), SDG2 (productive projects), SDG8 (productive projects), SDG13 (emissions reduction), SDG15 (protection of forest habitat)      |
| Unit of measure                          | Compliance/non-compliance                                                                                                                                  |
| Monitoring methodology                   | For the measurement and reporting of this indicator, compliance or non-compliance with the identification of productive activities is considered. priority |
| Frequency of monitoring                  | Annually                                                                                                                                                   |
| Responsible for measurement              | <ul style="list-style-type: none"> <li>Carbo-Terra</li> <li>Yauto</li> <li>Third Party Reports</li> </ul>                                                  |
| Indicator result in the reporting period |                                                                                                                                                            |
| Documents to support the information     | Workshop report                                                                                                                                            |
| Remarks                                  | From the fourth year                                                                                                                                       |

|                         |                                                                                                                                                            |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity ID             | A-3                                                                                                                                                        |
| Indicator ID            | A-3.1                                                                                                                                                      |
| Indicator name          | # of people from the reserve involved in the activities of the project                                                                                     |
| Type                    | Impact                                                                                                                                                     |
| Goal                    | Project activities offer full-time employment for the community                                                                                            |
| SDGs to be met          | SDG1 (employment), SDG2 (employment), SDG8 (employment), SDG13 (emissions reduction), SDG15 (forest habitat protection), SDG15 (forest habitat protection) |
| Unit of measure         | Number                                                                                                                                                     |
| Monitoring methodology  | For the measurement and reporting of this indicator, we take into account the number of people involved in project activities.                             |
| Frequency of monitoring | Annually                                                                                                                                                   |



|                                          |                                                                                                                                               |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Responsible for measurement              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible delegate on behalf of the reservation</li> </ul> |
| Indicator result in the reporting period |                                                                                                                                               |
| Documents to support the information     | Contracts entered into with members of the community.<br>Payment receipts.                                                                    |
| Remarks                                  |                                                                                                                                               |

|                                          |                                                                                                                                                       |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity ID                              | A-3                                                                                                                                                   |
| Indicator ID                             | A-3.2                                                                                                                                                 |
| Indicator name                           | # of women from the reserve involved in the activities of the project                                                                                 |
| Type                                     | Impact                                                                                                                                                |
| Goal                                     | Project activities offer full-time employment for women in the community                                                                              |
| SDGs to be met                           | SDG1 (employment), SDG2 (employment), SDG5 (gender equity), SDG8 (employment), SDG13 (emissions reduction), SDG15 (protection of forest habitat)      |
| Unit of measure                          | Number                                                                                                                                                |
| Monitoring methodology                   | For the measurement and reporting of this indicator, we take into account the number of women involved in project activities.                         |
| Frequency of monitoring                  | Annually                                                                                                                                              |
| Responsible for measurement              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible person delegated on behalf of the reservation</li> </ul> |
| Indicator result in the reporting period |                                                                                                                                                       |
| Documents to support the information     | Contracts entered into with women members of the community.<br>Payment receipts.                                                                      |
| Remarks                                  |                                                                                                                                                       |

|                |                                                                                 |
|----------------|---------------------------------------------------------------------------------|
| Activity ID    | A-3                                                                             |
| Indicator ID   | A-3.3                                                                           |
| Indicator name | # of people who improve their income with the systems productive                |
| Type           | Impact                                                                          |
| Goal           | The project activities enable members of the community to improve their income. |



|                                                 |                                                                                                                                                                                       |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SDGs to be met</b>                           | SDG1 (productive projects), SDG2 (productive projects), SDG8 (productive projects), SDG13 (emissions reduction), SDG15 (protection of forest habitat as it discourages deforestation) |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                |
| <b>Monitoring methodology</b>                   | For the measurement and reporting of this indicator, the following are taken into account number of beneficiaries who improve their income with the prioritized productive systems.   |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                              |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible delegate on behalf of the reservation</li> </ul>                                         |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                       |
| <b>Documents to support the information</b>     | Contracts entered into with women members of the community. Payment receipts.                                                                                                         |
| <b>Remarks</b>                                  |                                                                                                                                                                                       |

|                                                 |                                                                                                                                                                                                                                                                |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-3                                                                                                                                                                                                                                                            |
| <b>Indicator ID</b>                             | A-3.4                                                                                                                                                                                                                                                          |
| <b>Indicator name</b>                           | # of women who improve their income with the systems productive                                                                                                                                                                                                |
| <b>Type</b>                                     | Impact                                                                                                                                                                                                                                                         |
| <b>Goal</b>                                     | The project activities enable women members of the community to community to improve their income.                                                                                                                                                             |
| <b>SDGs to be met</b>                           | SDG1 (productive projects), SDG2 (productive projects), SDG5 (women's participation), SDG8 (productive projects), SDG13 (emissions reduction), SDG15 (habitat protection), and SDG14 (environmental protection). forestry since it discourages deforestation). |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                         |
| <b>Monitoring methodology</b>                   | Number of women receiving income from the systems prioritized productive activities.                                                                                                                                                                           |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                       |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible delegate on behalf of the reservation</li> </ul>                                                                                                                  |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                |
| <b>Documents to support the information</b>     | Contracts entered into with women members of the community. Payment receipts.                                                                                                                                                                                  |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                |

|                     |       |
|---------------------|-------|
| <b>Activity ID</b>  | A-3   |
| <b>Indicator ID</b> | A-3.5 |

|                                                 |                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Indicator name</b>                           | # of hectares of production systems that have measures in place special management measures to favor biodiversity                                                                                                                                                                                                         |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                                                                                    |
| <b>Goal</b>                                     | Management measures are implemented in productive systems that favor biodiversity.                                                                                                                                                                                                                                        |
| <b>SDGs to be met</b>                           | SDG15 (protection of forest habitat favoring biodiversity)                                                                                                                                                                                                                                                                |
| <b>Unit of measure</b>                          | Area (ha)                                                                                                                                                                                                                                                                                                                 |
| <b>Monitoring methodology</b>                   | For the measurement and reporting of this indicator, the productive area that has special management measures to improve biodiversity conditions is identified and estimated, and Geographic Information Systems, satellite images, sensors, etc. are used. and information taken in situ for the estimation of the area. |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                                                                  |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>Carbo-Terra</li> <li>Yauto</li> <li>Responsible person delegated on behalf of the reservation</li> </ul>                                                                                                                                                                           |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                                                           |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>Visitor's report.</li> <li>Photographic record.</li> <li>Satellite verification and measurement with GIS tools.</li> <li>Others</li> </ul>                                                                                                                                         |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                                                                           |

|                                    |                                                                                                                                                                                                                                                                                             |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                 | A-3                                                                                                                                                                                                                                                                                         |
| <b>Indicator ID</b>                | A-3.6                                                                                                                                                                                                                                                                                       |
| <b>Indicator name</b>              | # of hectares of productive systems that are improved or improved establish                                                                                                                                                                                                                 |
| <b>Type</b>                        | Result                                                                                                                                                                                                                                                                                      |
| <b>Goal</b>                        | Productive systems are implemented or systems are improved. existing production facilities.                                                                                                                                                                                                 |
| <b>SDGs to be met</b>              | SDG1 (productive projects), SDG2 (productive projects), SDG8 (productive projects), SDG13 (emissions reduction), SDG15 (protection of forest habitat as it discourages deforestation)                                                                                                       |
| <b>Unit of measure</b>             | Area (ha)                                                                                                                                                                                                                                                                                   |
| <b>Monitoring methodology</b>      | For the measurement and reporting of this indicator, the area to be used for the establishment of productive systems is defined. Subsequently, Geographic Information Systems are used with the help of satellite images, remote sensing and information taken in situ for area estimation. |
| <b>Frequency of monitoring</b>     | Annually                                                                                                                                                                                                                                                                                    |
| <b>Responsible for measurement</b> | <ul style="list-style-type: none"> <li>Carbo-Terra</li> <li>Yauto</li> <li>Responsible delegate on behalf of the reservation</li> </ul>                                                                                                                                                     |

|                                             |                                                                                                                                                                                                                              |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Indicator result</b>                     |                                                                                                                                                                                                                              |
| <b>in the reporting period</b>              |                                                                                                                                                                                                                              |
| <b>Documents to support the information</b> | <ul style="list-style-type: none"> <li>• Minutes of meetings with the community.</li> <li>• Photographic record.</li> <li>• Field visit report.</li> <li>• Satellite verification and measurement with GIS tools.</li> </ul> |
| <b>Remarks</b>                              |                                                                                                                                                                                                                              |

|                                             |                                                                                                                                                            |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                          | A-3                                                                                                                                                        |
| <b>Indicator ID</b>                         | A-3.7                                                                                                                                                      |
| <b>Indicator name</b>                       | # Surplus generating activities implemented                                                                                                                |
| <b>Type</b>                                 | Product                                                                                                                                                    |
| <b>Goal</b>                                 | At least 1 activity is implemented that generates surpluses economics.                                                                                     |
| <b>SDGs to be met</b>                       | SDG1 (productive projects), SDG2 (productive projects), SDG8 (productive projects), SDG13 (emissions reduction), SDG15 (protection of forest habitat)      |
| <b>Unit of measure</b>                      | Number                                                                                                                                                     |
| <b>Monitoring methodology</b>               | For the measurement and reporting of this indicator, we take into account the number of Business Plans prepared by the project implementer and proponents. |
| <b>Frequency of monitoring</b>              | Annually                                                                                                                                                   |
| <b>Responsible for measurement</b>          | Carbo-Terra<br>Yauto                                                                                                                                       |
| <b>Indicator result</b>                     |                                                                                                                                                            |
| <b>Documents to support the information</b> | <ul style="list-style-type: none"> <li>• Documents of prioritized resource-generating activities</li> </ul>                                                |
| <b>Remarks</b>                              |                                                                                                                                                            |

|                               |                                                                                                                                                                                                                                        |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>            | A-4                                                                                                                                                                                                                                    |
| <b>Indicator ID</b>           | A-4.1                                                                                                                                                                                                                                  |
| <b>Indicator name</b>         | # records of checks or maintenance performed/# of expected controls or maintenance                                                                                                                                                     |
| <b>Type</b>                   | Result                                                                                                                                                                                                                                 |
| <b>Goal</b>                   | The productive systems receive the controls or maintenance required.                                                                                                                                                                   |
| <b>SDGs to be met</b>         | SDG1 (productive projects), SDG2 (productive projects), SDG8 (Productive projects)                                                                                                                                                     |
| <b>Unit of measure</b>        | Percentage (%)                                                                                                                                                                                                                         |
| <b>Monitoring methodology</b> | The beneficiaries in charge of maintenance activities of the productive systems keep records of maintenance activities. For the measurement and reporting of this indicator quantifies the number of controls performed in the systems |

|                                                 |                                                                                                                                                                              |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                 | and is divided by the number of controls required or planned.                                                                                                                |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                     |
| <b>Responsible for measurement</b>              | Carbo-Terra<br>Yauto                                                                                                                                                         |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                              |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Visitor's report.</li> <li>• Photographic record.</li> <li>• Records of maintenance activities to the production systems</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                                              |

|                                                 |                                                                                                                                                                                                                                    |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-4                                                                                                                                                                                                                                |
| <b>Indicator ID</b>                             | A-4.2                                                                                                                                                                                                                              |
| <b>Indicator name</b>                           | Total quantity of goods or services produced in the production systems.<br>productive                                                                                                                                              |
| <b>Type</b>                                     | Product                                                                                                                                                                                                                            |
| <b>Goal</b>                                     | Productive systems are implemented that offer goods or services that are quantifiable services to the community                                                                                                                    |
| <b>SDGs to be met</b>                           | SDG1 (productive projects), SDG2 (productive projects), SDG8 (productive projects), SDG13 (emissions reduction), SDG15 (protection of forest habitat as it discourages deforestation)                                              |
| <b>Unit of measure</b>                          | Units                                                                                                                                                                                                                              |
| <b>Monitoring methodology</b>                   | For the measurement and reporting of this indicator, the production obtained per unit area of the established and/or improved production system is used as a starting point. For this purpose, the quantities of product produced. |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                           |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible delegate on behalf of the reservation</li> </ul>                                                                                      |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                    |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Records of production obtained in the production systems.</li> </ul>                                                                                                                      |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                    |

|                    |     |
|--------------------|-----|
| <b>Activity ID</b> | A-4 |
|--------------------|-----|





|              |       |
|--------------|-------|
| Indicator ID | A-4.3 |
|--------------|-------|

|                                          |                                                                                                                                                                                                                                                                               |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Indicator name                           | Balance of revenues and expenditures generated in the systems of production.                                                                                                                                                                                                  |
| Type                                     | Product                                                                                                                                                                                                                                                                       |
| Goal                                     | At least one productive system is implemented that presents positive balance.                                                                                                                                                                                                 |
| SDGs to be met                           | SDG1 (productive projects), SDG2 (productive projects), SDG8 (productive projects), SDG13 (emissions reduction), SDG15 (protection of forest habitat as it discourages deforestation)                                                                                         |
| Unit of measure                          | Currency                                                                                                                                                                                                                                                                      |
| Monitoring methodology                   | The measurement and reporting of this indicator is based on the recording of costs (associated with the production or provision of services: e.g., harvest, post-harvest and processing, logistics) and the costs of income associated with the sale of products or services. |
| Frequency of monitoring                  | Annually                                                                                                                                                                                                                                                                      |
| Responsible for measurement              | <ul style="list-style-type: none"> <li>Carbo-Terra</li> <li>Yauto</li> <li>Responsible delegate on behalf of the reservation</li> </ul>                                                                                                                                       |
| Indicator result in the reporting period |                                                                                                                                                                                                                                                                               |
| Documents to support the information     | <ul style="list-style-type: none"> <li>Records of income and expenses of the productive system.</li> </ul>                                                                                                                                                                    |
| Remarks                                  |                                                                                                                                                                                                                                                                               |

|                             |                                                                                                                                                                                                                                                                 |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity ID                 | A-5                                                                                                                                                                                                                                                             |
| Indicator ID                | A-5.1                                                                                                                                                                                                                                                           |
| Indicator name              | # of persons participating in meetings or workshops on topics of social investment                                                                                                                                                                              |
| Type                        | Result                                                                                                                                                                                                                                                          |
| Goal                        | The processes of identification and prioritization of social investments are participatory manner.                                                                                                                                                              |
| SDGs to be met              | SDG1 (social investment), SDG3 (investment in health), SDG4 (investment in education), SDG6 (investment in water and sanitation), SDG11 (investment in housing), SDG13 (emissions reduction), SDG15 (forest habitat protection as it discourages deforestation) |
| Unit of measure             | Number                                                                                                                                                                                                                                                          |
| Monitoring methodology      | Registration of participants Minutes<br>Rapporteur Ships                                                                                                                                                                                                        |
| Frequency of monitoring     | Annually                                                                                                                                                                                                                                                        |
| Responsible for measurement | Carbo-<br>Terra<br>Yauto                                                                                                                                                                                                                                        |



|  |                                              |
|--|----------------------------------------------|
|  | Entities or programs that develop activities |
|--|----------------------------------------------|

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

|                                                 |                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-5                                                                                                                                                                                                                                                                                            |
| <b>Indicator ID</b>                             | A-5.2                                                                                                                                                                                                                                                                                          |
| <b>Indicator name</b>                           | # of women who participate in meetings or workshops on women's issues social investment.                                                                                                                                                                                                       |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                                                         |
| <b>Goal</b>                                     | The processes of identification and prioritization of social investments are participatory manner.                                                                                                                                                                                             |
| <b>SDGs to be met</b>                           | SDG1 (social investment), SDG3 (investment in health), SDG4 (investment in education), SDG5 (gender equity), SDG6 (investment in water and sanitation), SDG11 (investment in housing), SDG13 (emissions reduction), SDG15 (habitat protection forestry since it discourages deforestation).    |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                                         |
| <b>Monitoring methodology</b>                   | For the measurement and reporting of this indicator, the number of female participants attending meetings, workshops or surveys conducted for the identification and prioritization of the following are taken into account of social investment to be developed or improved with the project. |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                                       |
| <b>Responsible for measurement</b>              | Carbo-<br>Terra<br>Yauto<br>Third Party Reports                                                                                                                                                                                                                                                |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                                |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Photographic and/or video recordings.</li> <li>• Attendance lists for workshops and meetings convened.</li> <li>• Minutes of the meetings and workshops convened.</li> <li>• Rapporteur Ships</li> </ul>                                              |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                                                |



|              |       |
|--------------|-------|
| Activity ID  | A-6   |
| Indicator ID | A-6.1 |

|                                                 |                                                                                                                                                                                                                                                 |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Indicator name</b>                           | # of persons participating in meetings or workshops on topics of transport                                                                                                                                                                      |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                          |
| <b>Goal</b>                                     | The identification and prioritization processes are carried out in the following ways participatory.                                                                                                                                            |
| <b>SDGs to be met</b>                           | SDG1 (social investment), SDG3 (transport for health), SDG8 (transport to get products out), SDG13 (emissions reduction), SDG15 (forest habitat protection since discourages deforestation)                                                     |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                          |
| <b>Monitoring methodology</b>                   | Registration of participants Minutes<br>Rapporteur Ships                                                                                                                                                                                        |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                        |
| <b>Responsible for measurement</b>              | Carbo-<br>Terra<br>Yauto<br>Entities or programs that develop activities                                                                                                                                                                        |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                 |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Photographic and/or video recordings.</li> <li>• Attendance lists for workshops and meetings convened.</li> <li>• Minutes of the meetings and workshops convened.</li> <li>• Rapporteurship</li> </ul> |
| <b>Remarks</b>                                  | Available information will be used                                                                                                                                                                                                              |

|                                |                                                                                                                                                                                                                                                             |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>             | A-6                                                                                                                                                                                                                                                         |
| <b>Indicator ID</b>            | A-6.2                                                                                                                                                                                                                                                       |
| <b>Indicator name</b>          | # of activities/elements that facilitate the mobilization of the people                                                                                                                                                                                     |
| <b>Type</b>                    | Product                                                                                                                                                                                                                                                     |
| <b>Goal</b>                    | Improved mobilization of community members                                                                                                                                                                                                                  |
| <b>SDGs to be met</b>          | SDG1 (social investment), SDG3 (transport for health), SDG4 (investment in education in traditional medicine), SDG6 (investment in water and sanitation), SDG13 (emissions reduction), SDG15 (protection of forest habitat since discourages deforestation) |
| <b>Unit of measure</b>         | Number                                                                                                                                                                                                                                                      |
| <b>Monitoring methodology</b>  | The project's resource execution and the number of activities or acquisition of elements that favor the mobilization of people.                                                                                                                             |
| <b>Frequency of monitoring</b> | Annually                                                                                                                                                                                                                                                    |

|                                                                                   |                                                                                                                                                                                                                                                                            |                                                                                                                                               |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|  | Responsible for measurement                                                                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible delegate on behalf of the reservation</li> </ul> |
|                                                                                   | Indicator result in the reporting period                                                                                                                                                                                                                                   |                                                                                                                                               |
| Documents to support the information                                              | <ul style="list-style-type: none"> <li>• Photographic record</li> <li>• Record of acquisitions and/or actions carried out within the framework of the project</li> <li>• Verification of purchased means of transportation</li> <li>• Program or entity reports</li> </ul> |                                                                                                                                               |
| Remarks                                                                           |                                                                                                                                                                                                                                                                            |                                                                                                                                               |

|                                          |                                                                                                                                                                                                                                                                               |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity ID                              | A-7                                                                                                                                                                                                                                                                           |
| Indicator ID                             | A-7.1                                                                                                                                                                                                                                                                         |
| Indicator name                           | # of persons participating in meetings or workshops on topics of education                                                                                                                                                                                                    |
| Type                                     | Result                                                                                                                                                                                                                                                                        |
| Goal                                     | The identification and prioritization processes are carried out in the following ways participatory.                                                                                                                                                                          |
| SDGs to be met                           | SDG1 (social investment), SDG4 (investment in education), SDG13 (emission reductions), SDG15 (forest habitat protection), SDG14 (forest carbon sequestration), SDG15 (forest carbon sequestration), and SDG16 (forest carbon sequestration). as it discourages deforestation) |
| Unit of measure                          | Number                                                                                                                                                                                                                                                                        |
| Monitoring methodology                   | <ul style="list-style-type: none"> <li>• Participant registration</li> <li>• Minutes</li> <li>• Rapporteur Ships</li> </ul>                                                                                                                                                   |
| Frequency of monitoring                  | Annually                                                                                                                                                                                                                                                                      |
| Responsible for measurement              | Carbo-Terra<br>Yauto<br>Entities or programs that develop activities                                                                                                                                                                                                          |
| Indicator result in the reporting period |                                                                                                                                                                                                                                                                               |
| Documents to support the information     | <ul style="list-style-type: none"> <li>• Photographic and/or video recordings.</li> <li>• Attendance lists for workshops and meetings convened.</li> <li>• Minutes of the meetings and workshops convened.</li> <li>• Rapporteurship</li> </ul>                               |
| Remarks                                  | Available information will be used                                                                                                                                                                                                                                            |

|                |                                                   |
|----------------|---------------------------------------------------|
| Activity ID    | A-7                                               |
| Indicator ID   | A-7.2                                             |
| Indicator name | # of educational facilities improved/constructed. |
| Type           | Product                                           |

|             |                                                                          |
|-------------|--------------------------------------------------------------------------|
| <b>Goal</b> | Improving or constructing educational facilities located in the reserves |
|-------------|--------------------------------------------------------------------------|



|                                                 |                                                                                                                                                                                                                                        |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SDGs to be met</b>                           | SDG1 (social investment), SDG4 (investment in education), SDG13 (emission reduction), SDG15 (protection of forest habitat as it discourages deforestation), SDG15 (protection of forest habitat as it discourages deforestation)       |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                 |
| <b>Monitoring methodology</b>                   | This is verified based on budget execution and records of construction or improvement activities of educational facilities under the project.                                                                                          |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                               |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible delegate on behalf of the reservation</li> <li>• Entities or programs</li> </ul>                                                          |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                        |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Verification during on-site visits.</li> <li>• Photographic record.</li> <li>• Budget execution.</li> <li>• Records of maintenance and construction activities.</li> <li>• Reports</li> </ul> |
| <b>Remarks</b>                                  | Use available information                                                                                                                                                                                                              |

|                                                 |                                                                                                                                                                                                                                                                               |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-7                                                                                                                                                                                                                                                                           |
| <b>Indicator ID</b>                             | A-7.3                                                                                                                                                                                                                                                                         |
| <b>Indicator name</b>                           | # of instructors funded                                                                                                                                                                                                                                                       |
| <b>Type</b>                                     | Product                                                                                                                                                                                                                                                                       |
| <b>Goal</b>                                     | Improving the provision of educational services                                                                                                                                                                                                                               |
| <b>SDGs to be met</b>                           | SDG1 (social investment), SDG4 (investment in education), SDG13 (emission reductions), SDG15 (forest habitat protection), SDG14 (forest carbon sequestration), SDG15 (forest carbon sequestration), and SDG16 (forest carbon sequestration). as it discourages deforestation) |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                        |
| <b>Monitoring methodology</b>                   | Instructor registration                                                                                                                                                                                                                                                       |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                      |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible delegate on behalf of the reservation</li> <li>• Entities or programs</li> </ul>                                                                                                 |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                               |

|                                      |                                                                                                                                                      |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Documents to support the information | <ul style="list-style-type: none"> <li>• Verification during on-site visits.</li> <li>• Photographic record.</li> <li>• Budget execution.</li> </ul> |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|

|         |                                                                                                                            |
|---------|----------------------------------------------------------------------------------------------------------------------------|
|         | <ul style="list-style-type: none"> <li>• Records of maintenance and construction activities.</li> <li>• Reports</li> </ul> |
| Remarks | Use available information                                                                                                  |

|                                          |                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity ID                              | A-8                                                                                                                                                                                                                                                                                                                             |
| Indicator ID                             | A-8.1                                                                                                                                                                                                                                                                                                                           |
| Indicator name                           | # people with access to formal education programs or to a better quality education                                                                                                                                                                                                                                              |
| Type                                     | Result                                                                                                                                                                                                                                                                                                                          |
| Goal                                     | The quality of education or access to training programs is improved.<br>formal education for community members.                                                                                                                                                                                                                 |
| SDGs to be met                           | SDG1 (social investment), SDG4 (investment in education), SDG13 (emission reductions), SDG15 (forest habitat protection), SDG14 (forest carbon sequestration), SDG15 (forest carbon sequestration), and SDG16 (forest carbon sequestration). as it discourages deforestation)                                                   |
| Unit of measure                          | Number                                                                                                                                                                                                                                                                                                                          |
| Monitoring methodology                   | The execution of project resources is verified and the people who are involved in the project are verified.<br>access to formal education or better quality education.                                                                                                                                                          |
| Frequency of monitoring                  | Annually                                                                                                                                                                                                                                                                                                                        |
| Responsible for measurement              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible delegate on behalf of the reservation</li> </ul>                                                                                                                                                                                   |
| Indicator result in the reporting period |                                                                                                                                                                                                                                                                                                                                 |
| Documents to support the information     | <ul style="list-style-type: none"> <li>• Execution of project resources.</li> <li>• Development of formal education programs.</li> <li>• Record of actions aimed at improving the education of the community.</li> <li>• Registration of beneficiaries of actions aimed at improving the education of the community.</li> </ul> |
| Remarks                                  |                                                                                                                                                                                                                                                                                                                                 |

|              |       |
|--------------|-------|
| Activity ID  | A-8   |
| Indicator ID | A-8.2 |

|                       |                                                                                                                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Indicator name</b> | # of women with access to formal education programs or a better quality education                                                                                                                                                             |
| <b>SDGs to be met</b> | SDG1 (social investment), SDG4 (investment in education), SDG5 (women's participation), SDG13 (emission reductions), SDG15 (gender equality), and SDG14 (gender equality). (protection of the forest habitat as it discourages deforestation) |
| <b>Type</b>           | Result                                                                                                                                                                                                                                        |



|      |                                                                                                                        |
|------|------------------------------------------------------------------------------------------------------------------------|
| Goal | The quality of education or access to training programs is improved.<br>formal education for women in the communities. |
|------|------------------------------------------------------------------------------------------------------------------------|

|                                                 |                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                                                                                |
| <b>Monitoring methodology</b>                   | The execution of project resources is verified and the women who access to formal education or better quality education.                                                                                                                                                                                                              |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                                                                              |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible person delegated on behalf of the reservation</li> </ul>                                                                                                                                                                                 |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                                                                       |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Execution of project resources.</li> <li>• Development of formal education programs.</li> <li>• Record of actions aimed at improving the education of the community.</li> <li>• Registration of women beneficiaries of actions aimed at improving the education of the community.</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                                                                                       |

|                                                 |                                                                                                                                          |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-9                                                                                                                                      |
| <b>Indicator ID</b>                             | A-9.1                                                                                                                                    |
| <b>Indicator name</b>                           | # of persons participating in meetings or workshops on topics of health                                                                  |
| <b>Type</b>                                     | Result                                                                                                                                   |
| <b>Goal</b>                                     | The identification and prioritization processes are carried out in the following ways participatory.                                     |
| <b>SDGs to be met</b>                           | SDG1 (social investment), SDG3 (health), SDG13 (emission reductions), SDG15 (forest habitat protection) since discourages deforestation) |
| <b>Unit of measure</b>                          | Number                                                                                                                                   |
| <b>Monitoring methodology</b>                   | <ul style="list-style-type: none"> <li>• Participant registration</li> <li>• Minutes</li> <li>• Rapporteur Ships</li> </ul>              |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                 |
| <b>Responsible for measurement</b>              | Carbo-Terra<br>Yauto<br>Entities or programs that develop activities                                                                     |
| <b>Indicator result in the reporting period</b> |                                                                                                                                          |



|                                                    |                                                                                                                                                                                                                                            |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Documents to support the information</b></p> | <ul style="list-style-type: none"><li>• Photographic and/or video recordings.</li><li>• Attendance lists for workshops and meetings convened.</li><li>• Minutes of the meetings and workshops convened.</li><li>• Rapporteurship</li></ul> |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                |                                    |
|----------------|------------------------------------|
| <b>Remarks</b> | Available information will be used |
|----------------|------------------------------------|

|                                                 |                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-9                                                                                                                                                                                                                                                                                      |
| <b>Indicator ID</b>                             | A-9.2                                                                                                                                                                                                                                                                                    |
| <b>Indicator name</b>                           | # of people with access to health services                                                                                                                                                                                                                                               |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                                                   |
| <b>Goal</b>                                     | Access to health services is improved for the members of the community.                                                                                                                                                                                                                  |
| <b>SDGs to be met</b>                           | SDG1 (social investment), SDG3 (health), SDG13 (emission reductions), SDG15 (forest habitat protection) since discourages deforestation)                                                                                                                                                 |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                                   |
| <b>Monitoring methodology</b>                   | The execution of project resources and the investments made in health service improvements are verified. The number of people in the community who have access to health services is quantified. health care or to improvements in this service.                                         |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                                 |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible delegate on behalf of the reservation</li> <li>• Entities or programs</li> </ul>                                                                                                            |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                          |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Execution of project resources.</li> <li>• Development of health programs.</li> <li>• Record of actions aimed at improving access to health services by the community.</li> <li>• Registration of persons accessing health services.</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                                          |

|                        |                                                                                                                                          |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>     | A-9                                                                                                                                      |
| <b>Indicator ID</b>    | A-9.3                                                                                                                                    |
| <b>Indicator name</b>  | # of health posts constructed/improved                                                                                                   |
| <b>Type</b>            | Result                                                                                                                                   |
| <b>Goal</b>            | The infrastructure to provide health services to the population is improved. members of the communities.                                 |
| <b>SDGs to be met</b>  | SDG1 (social investment), SDG3 (health), SDG13 (emission reductions), SDG15 (forest habitat protection) since discourages deforestation) |
| <b>Unit of measure</b> | Number                                                                                                                                   |

|                                                 |                                                                                                                                                                                               |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Monitoring methodology</b>                   | The execution of project resources and investments is verified.<br>The number of health posts built or improved is quantified.<br>The number of health posts built or improved is quantified. |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                      |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible delegate on behalf of the reservation</li> <li>• Entities or programs</li> </ul>                 |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                               |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Execution of project resources.</li> <li>• Health posts built and adequate.</li> <li>• Evidence of contract</li> </ul>                               |
| <b>Remarks</b>                                  | Use available information                                                                                                                                                                     |

|                                                 |                                                                                                                                                                                                                                                  |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-9                                                                                                                                                                                                                                              |
| <b>Indicator ID</b>                             | A-9.4                                                                                                                                                                                                                                            |
| <b>Indicator name</b>                           | # of people who are trained in traditional and ancestral medicine                                                                                                                                                                                |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                           |
| <b>Goal</b>                                     | Knowledge of traditional and ancestral medicine is strengthened, and western medicine of the members of the communities                                                                                                                          |
| <b>SDGs to be met</b>                           | SDG1 (social investment), SDG3 (health), SDG13 (emission reductions), SDG15 (forest habitat protection) since discourages deforestation)                                                                                                         |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                           |
| <b>Monitoring methodology</b>                   | The execution of project resources and investments made in capacity building in traditional and ancestral medicine and western medicine are verified. The number of people attending these training sessions is quantified.<br>capacity building |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                         |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible delegate on behalf of the reservation</li> </ul>                                                                                                    |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                  |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Execution of project resources.</li> <li>• Evidence of the workshops held</li> <li>• Conference proceedings</li> <li>• Attendance list</li> <li>• Photographic record</li> </ul>                        |



| Remarks | Use available information |
|---------|---------------------------|
|---------|---------------------------|

|                                                 |                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-10                                                                                                                                                                                                                                                                            |
| <b>Indicator ID</b>                             | A-10.1                                                                                                                                                                                                                                                                          |
| <b>Indicator name</b>                           | # of persons participating in meetings or workshops on topics housing, water and sanitation                                                                                                                                                                                     |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                                          |
| <b>Goal</b>                                     | The identification and prioritization processes are carried out in the following ways participatory.                                                                                                                                                                            |
| <b>SDGs to be met</b>                           | SDG1 (social investment), SDG3 (health), SDG6 (water), SDG13 (emission reductions), SDG15 (forest habitat protection), SDG15 (forest habitat protection), SDG6 (water), SDG13 (emissions reductions), and SDG14 (forest carbon sequestration). as it discourages deforestation) |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                          |
| <b>Monitoring methodology</b>                   | <ul style="list-style-type: none"> <li>Participant registration</li> <li>Minutes</li> <li>Rapporteur Ships</li> </ul>                                                                                                                                                           |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                        |
| <b>Responsible for measurement</b>              | Carbo-<br>Terra<br>Yauto<br>Entities or programs that develop activities                                                                                                                                                                                                        |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                 |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>Photographic and/or video recordings.</li> <li>Attendance lists for workshops and meetings convened.</li> <li>Minutes of the meetings and workshops convened.</li> <li>Rapporteurship</li> </ul>                                         |
| <b>Remarks</b>                                  | Available information will be used                                                                                                                                                                                                                                              |

|                        |                                                                                                                                          |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>     | A-10                                                                                                                                     |
| <b>Indicator ID</b>    | A-10.2                                                                                                                                   |
| <b>Indicator name</b>  | # of people with access to safe drinking water or improved water quality water                                                           |
| <b>Type</b>            | Result                                                                                                                                   |
| <b>Goal</b>            | People in the community have access to drinking water. or better water quality.                                                          |
| <b>SDGs to be met</b>  | SDG1 (social investment), SDG6 (water), SDG13 (emission reductions), SDG15 (forest habitat protection because discourages deforestation) |
| <b>Unit of measure</b> | Number                                                                                                                                   |



### Monitoring methodology

The execution of project resources and the investments made in drinking water treatment systems are verified. The number of people who have access to safe drinking water or improved access to safe drinking water is quantified. water quality.

|                                                 |                                                                                                                                                                            |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                   |
| <b>Responsible for measurement</b>              | Carbo-<br>Terra<br>Yauto<br>Community representative<br>Entities or programs that develop activities                                                                       |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                            |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Execution of project resources.</li> <li>• Construction of drinking water treatment systems.</li> <li>• Award contract</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                                            |

|                                                 |                                                                                                                                                                                                                                                                               |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-10                                                                                                                                                                                                                                                                          |
| <b>Indicator ID</b>                             | A-10.3                                                                                                                                                                                                                                                                        |
| <b>Indicator name</b>                           | # of dwellings or infrastructure that have water and wastewater systems electrical energy                                                                                                                                                                                     |
| <b>Type</b>                                     | Product                                                                                                                                                                                                                                                                       |
| <b>Goal</b>                                     | Access to electric energy from panels is improved. in the indigenous reservation.                                                                                                                                                                                             |
| <b>SDGs to be met</b>                           | SDG1 (social investment), SDG7 (energy), SDG13 (reduction of greenhouse gas emissions), and SDG14 (energy efficiency). emissions), SDG15 (protection of forest habitat as it discourages deforestation), SDG15 (protection of forest habitat as it discourages deforestation) |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                        |
| <b>Monitoring methodology</b>                   | The execution of project resources and investments is verified. in the installation of energy sources. The number of homes receiving improvements in electricity systems is quantified.                                                                                       |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                      |
| <b>Responsible for measurement</b>              | Carbo-<br>Terra<br>Yauto<br>Community representative<br>Entities or programs                                                                                                                                                                                                  |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                               |



|                                             |                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Documents to support the information</b> | <ul style="list-style-type: none"><li>• Execution of project resources.</li><li>• Records of activities for the installation of non- conventional energy sources in dwellings.</li><li>• Records of activities for the installation of non- conventional energy sources.</li><li>• Reports</li></ul> |
| <b>Remarks</b>                              |                                                                                                                                                                                                                                                                                                      |



|             |      |
|-------------|------|
| Activity ID | A-10 |
|-------------|------|

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Indicator ID</b>                             | A-10.4                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Indicator name</b>                           | # of actions aimed at strengthening integrated waste management                                                                                                                                                                                                                                                                                                                                |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Goal</b>                                     | Actions are implemented to ensure the proper management of waste in the reserve.                                                                                                                                                                                                                                                                                                               |
| <b>SDGs to be met</b>                           | SDG1 (social investment), SDG3 (health for improved sanitation), SDG6 (sanitation), SDG11 (improved and healthier housing), SDG13 (emissions reduction), SDG15 (forest habitat protection), SDG15 (forest habitat protection), SDG6 (sanitation), SDG11 (improved and healthier housing), SDG13 (emissions reduction), and SDG14 (forest habitat protection). as it discourages deforestation) |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Monitoring methodology</b>                   | The execution of project resources and investments is verified. The company has been involved in the development of activities to strengthen waste management in the communities.                                                                                                                                                                                                              |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Responsible for measurement</b>              | Carbo-<br>Terra<br>Yauto<br>Community representative<br>Entities or programs                                                                                                                                                                                                                                                                                                                   |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Execution of project resources.</li> <li>• Records of actions implemented to promote integrated waste management.</li> <li>• Contracts</li> <li>• Reports</li> </ul>                                                                                                                                                                                  |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                                                                                                                                                |

|                                |                                                                                                                                                                                                                                                      |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>             | A-10                                                                                                                                                                                                                                                 |
| <b>Indicator ID</b>            | A-10.5                                                                                                                                                                                                                                               |
| <b>Indicator name</b>          | # of houses improved/constructed                                                                                                                                                                                                                     |
| <b>Type</b>                    | Result                                                                                                                                                                                                                                               |
| <b>Goal</b>                    | Homes of community members are improved or built.                                                                                                                                                                                                    |
| <b>SDGs to be met</b>          | SDG1 (social investment), SDG3 (health for improved sanitation), SDG11 (improved housing), SDG13 (emission reductions), SDG15 (improved sanitation), and SDG14 (improved health). (protection of the forest habitat as it discourages deforestation) |
| <b>Unit of measure</b>         | Number                                                                                                                                                                                                                                               |
| <b>Monitoring methodology</b>  | The number of houses improved or built is quantified.                                                                                                                                                                                                |
| <b>Frequency of monitoring</b> | Annually                                                                                                                                                                                                                                             |



| Responsible for measurement | Carbo-<br>Terra<br>Yauto<br>Community representative<br>Entities or programs |
|-----------------------------|------------------------------------------------------------------------------|
|-----------------------------|------------------------------------------------------------------------------|





| Indicator result<br>in the reporting period |  |
|---------------------------------------------|--|
|---------------------------------------------|--|

|                                             |                                                                                                                                                                                   |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Documents to support the information</b> | <ul style="list-style-type: none"> <li>• Execution of project resources</li> <li>• Records of home improvement activities</li> <li>• On-site visits</li> <li>• Reports</li> </ul> |
| <b>Remarks</b>                              |                                                                                                                                                                                   |

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-11                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Indicator ID</b>                             | A-11.1                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Indicator name</b>                           | # of persons participating in meetings or workshops on topics of governance and planning                                                                                                                                                                                                                                                                                                              |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Goal</b>                                     | The Safeguards Plan construction/updating process or community plans are carried out in a participatory manner.                                                                                                                                                                                                                                                                                       |
| <b>SDGs to be met</b>                           | SDG1 (social and productive investment), SDG2 (social and productive investment), SDG3 (investment in health), SDG4 (investment in education), SDG5 (women's participation), SDG6 (investment in water and sanitation), SDG8 (improved employment and economic growth), SDG11 (investment in housing), SDG13 (emissions reduction), SDG15 (forest habitat protection as it discourages deforestation) |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Monitoring methodology</b>                   | For the measurement and reporting of this indicator, the number of participants in meetings or workshops related to the following are taken into account with the themes of the Indigenous Life Plan.                                                                                                                                                                                                 |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Responsible for measurement</b>              | Carbo-<br>Terra<br>Yauto<br>Community representative                                                                                                                                                                                                                                                                                                                                                  |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Photographic and/or video records.</li> <li>• Attendance lists for workshops and meetings convened.</li> <li>• Minutes of the meetings and workshops convened.</li> <li>• Reports</li> </ul>                                                                                                                                                                 |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                                                                                                                                                       |

|                       |                                          |
|-----------------------|------------------------------------------|
| <b>Activity ID</b>    | A-11                                     |
| <b>Indicator ID</b>   | A-11.2                                   |
| <b>Indicator name</b> | # of community plans prepared or updated |
| <b>Type</b>           | Product                                  |



|      |                                        |
|------|----------------------------------------|
| Goal | At least 1 Community Plan is prepared. |
|------|----------------------------------------|

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SDGs to be met</b>                           | SDG1 (social and productive investment), SDG2 (social and productive investment), SDG3 (investment in health), SDG4 (investment in education), SDG5 (women's participation), SDG6 (investment in water and sanitation), SDG8 (improved employment and economic growth), SDG11 (investment in housing), SDG13 (emissions reduction), SDG15 (forest habitat protection as it discourages deforestation) |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Monitoring methodology</b>                   | The number of life plans prepared or updated.                                                                                                                                                                                                                                                                                                                                                         |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Responsible for measurement</b>              | Carbo-<br>Terra<br>Yauto<br>Community representative<br>Entities or programs                                                                                                                                                                                                                                                                                                                          |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Community Plan documents developed.</li> <li>• Minutes of meetings.</li> <li>• Reports</li> </ul>                                                                                                                                                                                                                                                            |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                                                                                                                                                       |

|                                |                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>             | A-11                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Indicator ID</b>            | A-11.3                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Indicator name</b>          | # community plans being implemented                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Type</b>                    | Result                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Goal</b>                    | Actions are implemented that contribute to the fulfillment of the community development plans.                                                                                                                                                                                                                                                                                                        |
| <b>SDGs to be met</b>          | SDG1 (social and productive investment), SDG2 (social and productive investment), SDG3 (investment in health), SDG4 (investment in education), SDG5 (women's participation), SDG6 (investment in water and sanitation), SDG8 (improved employment and economic growth), SDG11 (investment in housing), SDG13 (emissions reduction), SDG15 (forest habitat protection as it discourages deforestation) |
| <b>Unit of measure</b>         | Number                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Monitoring methodology</b>  | This indicator will be reported based on the number of Community plans with implementation actions.                                                                                                                                                                                                                                                                                                   |
| <b>Frequency of monitoring</b> | Annually                                                                                                                                                                                                                                                                                                                                                                                              |



| Responsible for measurement | Carbo-<br>Terra<br>Yauto<br>Community representative<br>Entities or Programs |
|-----------------------------|------------------------------------------------------------------------------|
| Indicator result            |                                                                              |

|                                             |                                                                                                                                                                             |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>in the reporting period</b>              |                                                                                                                                                                             |
| <b>Documents to support the information</b> | <ul style="list-style-type: none"> <li>Records of implementation actions of the community plans.</li> <li>Photographic and/or video recordings.</li> <li>Reports</li> </ul> |
| <b>Remarks</b>                              |                                                                                                                                                                             |

|                                                 |                                                                                                                                                         |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-12                                                                                                                                                    |
| <b>Indicator ID</b>                             | A-12.1                                                                                                                                                  |
| <b>Indicator name</b>                           | # of indigenous land management plans elaborated                                                                                                        |
| <b>Type</b>                                     | Product                                                                                                                                                 |
| <b>Goal</b>                                     | The Land Use and Zoning Plan is in harmony with the regional planning instruments, such as the Serranía de Chiribiquete National Park Management Plan.  |
| <b>SDGs to be met</b>                           | SDG13 (emissions reduction), SDG15 (habitat protection), SDG14 (climate change), and SDG14 (climate change). forestry as it discourages deforestation). |
| <b>Unit of measure</b>                          | Number                                                                                                                                                  |
| <b>Monitoring methodology</b>                   | The elaboration of the land management plans is verified. Territory developed.                                                                          |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                |
| <b>Responsible for measurement</b>              | Carbo-<br>Terra<br>Yauto<br>Community representative<br>Entities or programs                                                                            |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                         |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>Land Management Plan Documents.</li> <li>Reports</li> </ul>                                                      |
| <b>Remarks</b>                                  |                                                                                                                                                         |

|                               |                                                                                                                                                         |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>            | A-12                                                                                                                                                    |
| <b>Indicator ID</b>           | A-12.2                                                                                                                                                  |
| <b>Indicator name</b>         | # of land management plans being implemented                                                                                                            |
| <b>Type</b>                   | Result                                                                                                                                                  |
| <b>Goal</b>                   | Implementation of at least 1 Management Plan is initiated. Territorial.                                                                                 |
| <b>SDGs to be met</b>         | SDG13 (emissions reduction), SDG15 (habitat protection), SDG14 (climate change), and SDG14 (climate change). forestry as it discourages deforestation). |
| <b>Unit of measure</b>        | Number                                                                                                                                                  |
| <b>Monitoring methodology</b> | This indicator will be reported based on the number of Management Plans that are being implemented.                                                     |



|                         |          |
|-------------------------|----------|
| Frequency of monitoring | Annually |
|-------------------------|----------|

|                                                 |                                                                                                                                                                                   |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Responsible for measurement</b>              | Carbo-<br>Terra<br>Yauto<br>Community representative<br>Entities or programs                                                                                                      |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                   |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>Records of implementation actions of the Indigenous Life Plans.</li> <li>Photographic and/or video recordings.</li> <li>Reports</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                                                   |

|                                                 |                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-13                                                                                                                                                                                                                                                                                             |
| <b>Indicator ID</b>                             | A-13.1                                                                                                                                                                                                                                                                                           |
| <b>Indicator name</b>                           | Persons participating in training sessions, meetings or conferences training programs related to indigenous culture                                                                                                                                                                              |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                                                           |
| <b>Goal</b>                                     | Strengthening the capacities of community members to to maintain, recover and improve the elements of their own culture                                                                                                                                                                          |
| <b>SDGs to be met</b>                           | SDG 3 - Health and well-being<br>SDG 11 - Sustainable cities and communities                                                                                                                                                                                                                     |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                                           |
| <b>Monitoring methodology</b>                   | The number of community members attending training, meetings or training sessions is quantified. related to indigenous culture.                                                                                                                                                                  |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                                         |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>Carbo-Terra</li> <li>Yauto</li> <li>Community representative</li> <li>Entities or programs</li> </ul>                                                                                                                                                     |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                                  |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>Attendance lists for training workshops related to indigenous culture.</li> <li>Minutes of meetings and photographic record of training sessions related to indigenous culture</li> <li>Photographic and/or video recordings.</li> <li>Reports</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                                                  |

|                     |        |
|---------------------|--------|
| <b>Activity ID</b>  | A-13   |
| <b>Indicator ID</b> | A-13.2 |



|                                                 |                                                                                                                                                                                                                                                        |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Indicator name</b>                           | Women participating in trainings, meetings or conferences training programs related to indigenous culture.                                                                                                                                             |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                 |
| <b>Goal</b>                                     | Strengthening the capacities of women in the communities to to maintain, recover and improve the elements of their own culture                                                                                                                         |
| <b>SDGs to be met</b>                           | SDG 3 - Health and well-being<br>SDG 11 - Sustainable cities and communities                                                                                                                                                                           |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                 |
| <b>Monitoring methodology</b>                   | The number of women in the community who attend the training, meetings or training sessions related to indigenous culture.                                                                                                                             |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                               |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Community representative</li> <li>• Entities or programs</li> </ul>                                                                                                   |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                        |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Attendance lists for training workshops related to indigenous culture.</li> <li>• Minutes of meetings and photographic record of training sessions related to indigenous culture</li> <li>• Report</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                        |

|                                    |                                                                                                                                                                |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                 | A-14                                                                                                                                                           |
| <b>Indicator ID</b>                | A-14.1                                                                                                                                                         |
| <b>Indicator name</b>              | # of people participating in awareness-raising events, meetings or training sessions related to monitoring                                                     |
| <b>Type</b>                        | Result                                                                                                                                                         |
| <b>Goal</b>                        | Strengthening the capacities of community members to biodiversity monitoring and deforestation control                                                         |
| <b>SDGs to be met</b>              | SDG13 (emissions reduction), SDG15 (habitat protection), SDG14 (climate change), and SDG14 (climate change). forestry as it discourages deforestation).        |
| <b>Unit of measure</b>             | Number                                                                                                                                                         |
| <b>Monitoring methodology</b>      | Number of community members attending sensitizations, meetings or training sessions on the following topics biodiversity monitoring and deforestation control. |
| <b>Frequency of monitoring</b>     | Annually                                                                                                                                                       |
| <b>Responsible for measurement</b> | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Community representative</li> <li>• Entities or programs</li> </ul>           |

| Indicator result in the reporting period |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Documents to support the information     | <ul style="list-style-type: none"> <li>Attendance lists for workshops and awareness workshops for the identification of the causes and agents of deforestation, natural resource management, equipment management and techniques for biodiversity monitoring, conflict resolution.</li> <li>Meeting minutes and photographic record of training sessions for the identification of the causes and agents of deforestation, natural resource management, handling of equipment and techniques for biodiversity monitoring, conflict resolution.</li> </ul> |
| Remarks                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity ID                              | A-14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Indicator ID                             | A-14.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Indicator name                           | # of women participating in awareness-raising events, meetings or training sessions related to monitoring                                                                                                                                                                                                                                                                                                                                                                                  |
| Type                                     | Result                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Goal                                     | Strengthening the capacities of women in the communities for the biodiversity monitoring and deforestation control                                                                                                                                                                                                                                                                                                                                                                         |
| SDGs to be met                           | SDG5 (women's participation), SDG13 (emission reductions), SDG15 (forest habitat protection as it discourages deforestation)                                                                                                                                                                                                                                                                                                                                                               |
| Unit of measure                          | Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Monitoring methodology                   | Number of women in the community who attend awareness-raising sessions, meetings or training sessions on the following topics biodiversity monitoring and deforestation control.                                                                                                                                                                                                                                                                                                           |
| Frequency of monitoring                  | Annually                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Responsible for measurement              | <ul style="list-style-type: none"> <li>Carbo-Terra</li> <li>Yauto</li> <li>Community representative</li> <li>Entities or programs</li> </ul>                                                                                                                                                                                                                                                                                                                                               |
| Indicator result in the reporting period |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Documents to support the information     | <ul style="list-style-type: none"> <li>Attendance lists for training sessions for the identification of the causes and agents of deforestation, natural resource management, equipment management and techniques for biodiversity monitoring, conflict resolution.</li> <li>Meeting minutes and photographic record of the training sessions for the identification of causes and agents deforestation, natural resource management, natural resource management, deforestation</li> </ul> |

|         |                                                                            |
|---------|----------------------------------------------------------------------------|
|         | equipment and techniques for biodiversity monitoring, conflict resolution. |
| Remarks |                                                                            |

|                                          |                                                                                                                                                                     |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity ID                              | A-14                                                                                                                                                                |
| Indicator ID                             | A-14.3                                                                                                                                                              |
| Indicator name                           | Document of constitution or formalization of the Group of Families protectors of the forest                                                                         |
| Type                                     | Product                                                                                                                                                             |
| Goal                                     | Formalize the group of families protecting the forest.                                                                                                              |
| SDGs to be met                           | SDG13 (emissions reduction), SDG15 (habitat protection), SDG14 (climate change), and SDG14 (climate change). forestry since it discourages deforestation).          |
| Unit of measure                          | Number                                                                                                                                                              |
| Monitoring methodology                   | Number of incorporation and formalization documents<br>Group of families protecting the forest                                                                      |
| Frequency of monitoring                  | Annually                                                                                                                                                            |
| Responsible for measurement              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Community representative</li> <li>• Entities or programs</li> </ul>                |
| Indicator result in the reporting period |                                                                                                                                                                     |
| Documents to support the information     | <ul style="list-style-type: none"> <li>• Formalization documents and constitution of the Group of Forest Protector Families.</li> <li>• Meeting minutes.</li> </ul> |
| Remarks                                  |                                                                                                                                                                     |

|                         |                                                                                                                                                            |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity ID             | A-14                                                                                                                                                       |
| Indicator ID            | A-14.4                                                                                                                                                     |
| Indicator name          | # of members belonging to the Protective Families Group of the forest                                                                                      |
| Type                    | Product                                                                                                                                                    |
| Goal                    | Linking community members in the family group protectors of the forest                                                                                     |
| SDGs to be met          | SDG13 (emissions reduction), SDG15 (habitat protection), SDG14 (climate change), and SDG14 (climate change). forestry since it discourages deforestation). |
| Unit of measure         | Number                                                                                                                                                     |
| Monitoring methodology  | For the measurement and reporting of this indicator, we use the list of the members of the Group of Families protecting the forest                         |
| Frequency of monitoring | Annually                                                                                                                                                   |

|                                                 |                                                                                                                                                                                                         |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>Carbo-Terra</li> </ul>                                                                                                                                           |
|                                                 | <ul style="list-style-type: none"> <li>Yauto</li> <li>Community representative</li> <li>Entities or programs</li> </ul>                                                                                 |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                         |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>List of members of the Forest Protector Families Group</li> <li>Minutes of the meeting for the constitution of the Group of Forest Protector Families</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                                                                         |

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-14                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Indicator ID</b>                             | A-14.5                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Indicator name</b>                           | Programming of the activities of the Protective Families Group of the forest                                                                                                                                                                                                                                                                                                                 |
| <b>Type</b>                                     | Product                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Goal</b>                                     | Implementing the scheduling of the monitoring activities of the group of families protecting the forest                                                                                                                                                                                                                                                                                      |
| <b>SDGs to be met</b>                           | SDG13 (emissions reduction), SDG15 (habitat protection), SDG14 (climate change), and SDG14 (climate change). forestry since it discourages deforestation).                                                                                                                                                                                                                                   |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Monitoring methodology</b>                   | Check if there is evidence of the implementation of the programming of the activities of the Group of families protecting the forest and report the number of programs in the following table.<br>implementation.                                                                                                                                                                            |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>Carbo-Terra</li> <li>Yauto</li> <li>Community representative</li> <li>Entities or programs</li> </ul>                                                                                                                                                                                                                                                 |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>Evidence of the implementation of the activities planned for the Group of families protecting the forest.</li> <li>Meeting minutes to define the schedule of activities to be carried out by the group of families protecting the forest.</li> <li>Schedules of activities of the Group of families protecting the forest</li> <li>Reports</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                                                                                                                                              |



|                                                 |                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Indicator ID</b>                             | A-14                                                                                                                                                                                                                                                                                                                                  |
| <b>Indicator ID</b>                             | A-14.6                                                                                                                                                                                                                                                                                                                                |
| <b>Indicator name</b>                           | Tours and/or expeditions carried out                                                                                                                                                                                                                                                                                                  |
| <b>Type</b>                                     | Product                                                                                                                                                                                                                                                                                                                               |
| <b>Goal</b>                                     | Conduct tours and/or expeditions for monitoring of the biodiversity and deforestation control and management                                                                                                                                                                                                                          |
| <b>SDGs to be met</b>                           | SDG13 (emissions reduction), SDG15 (habitat protection), SDG14 (climate change), and SDG14 (climate change). forestry since it discourages deforestation).                                                                                                                                                                            |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                                                                                |
| <b>Monitoring methodology</b>                   | The development of tours or expeditions in the area of the indigenous reservation is verified in order to identify and/or monitor the biodiversity and the state of the forest cover present in the area.<br>the territory.                                                                                                           |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                                                                              |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Community representative</li> <li>• Entities or programs</li> </ul>                                                                                                                                                                                  |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                                                                       |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Evidence of the development of tours and/or expeditions in the territory.</li> <li>• Meeting minutes to define the scheduling of tours and/or expeditions.</li> <li>• Schedules of activities of the Group of families protecting the forest</li> <li>• Program or entity reports</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                                                                                       |

|                               |                                                                                                                                                            |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>            | A-15                                                                                                                                                       |
| <b>Indicator ID</b>           | A-15.1                                                                                                                                                     |
| <b>Indicator name</b>         | # of hectares of standing forest in project area                                                                                                           |
| <b>Type</b>                   | Impact                                                                                                                                                     |
| <b>Goal</b>                   | Monitor the progress of deforestation and its changes in coverage                                                                                          |
| <b>SDGs to be met</b>         | SDG13 (emissions reduction), SDG15 (habitat protection), SDG14 (climate change), and SDG14 (climate change). forestry since it discourages deforestation). |
| <b>Unit of measure</b>        | Number                                                                                                                                                     |
| <b>Monitoring methodology</b> | Assessment of forest and non-forest maps according to PROCLIMA methodology                                                                                 |



|                                |          |
|--------------------------------|----------|
| <b>Frequency of monitoring</b> | Annually |
|--------------------------------|----------|

|                                          |                                                                                                                                                   |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Responsible for measurement              | <ul style="list-style-type: none"> <li>Carbo-Terra</li> <li>Yauto</li> <li>Responsible delegate on behalf of the reservation</li> </ul>           |
| Indicator result in the reporting period |                                                                                                                                                   |
| Documents to support the information     | <ul style="list-style-type: none"> <li>Deforestation analysis from maps</li> <li>Calculations of deforestation and deforestation rates</li> </ul> |
| Remarks                                  |                                                                                                                                                   |

|                                          |                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity ID                              | A-15                                                                                                                                                                                                                                                                                                                |
| Indicator ID                             | A-15.2                                                                                                                                                                                                                                                                                                              |
| Indicator name                           | # of tons of CO <sub>2</sub> not emitted                                                                                                                                                                                                                                                                            |
| Type                                     | Impact                                                                                                                                                                                                                                                                                                              |
| Goal                                     | Reduce carbon emissions                                                                                                                                                                                                                                                                                             |
| SDGs to be met                           | SDG13 (emissions reduction), SDG15 (habitat protection), SDG14 (climate change), and SDG14 (climate change). forestry since it discourages deforestation).                                                                                                                                                          |
| Unit of measure                          | Tons (tCO <sub>2</sub> )                                                                                                                                                                                                                                                                                            |
| Monitoring methodology                   | For the measurement and reporting of this indicator, the area of standing forest present in the territory of the indigenous reservation is identified and estimated using Geographic Information Systems and remote sensing satellite images. Subsequently, the following is applied the applicable emission factor |
| Frequency of monitoring                  | Annually                                                                                                                                                                                                                                                                                                            |
| Responsible for measurement              | Carbo-Terra                                                                                                                                                                                                                                                                                                         |
| Indicator result in the reporting period |                                                                                                                                                                                                                                                                                                                     |
| Documents to support the information     | <ul style="list-style-type: none"> <li>Use of IDEAM non-forest forest maps (SMBYC)</li> <li>Use of NREF emission factors</li> <li>Calculation supports</li> </ul>                                                                                                                                                   |
| Remarks                                  |                                                                                                                                                                                                                                                                                                                     |

|                 |                                                                                                                                                            |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity ID     | A-15                                                                                                                                                       |
| Indicator ID    | A-15.3                                                                                                                                                     |
| Indicator name  | # of people employed for community monitoring                                                                                                              |
| Type            | Impact                                                                                                                                                     |
| Goal            | Employ members of the community in the activities of biodiversity monitoring and follow-up                                                                 |
| SDGs to be met  | SDG13 (emissions reduction), SDG15 (habitat protection), SDG14 (climate change), and SDG14 (climate change). forestry since it discourages deforestation). |
| Unit of measure | Number                                                                                                                                                     |

|                                                 |                                                                                                                                         |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Monitoring methodology</b>                   | Number of persons employed full time by the following companies project activities related to the monitoring component.                 |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>Carbo-Terra</li> <li>Yauto</li> <li>Responsible delegate on behalf of the reservation</li> </ul> |
| <b>Indicator result in the reporting period</b> |                                                                                                                                         |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>Contracts entered into with members of the community.</li> <li>Payment records.</li> </ul>       |
| <b>Remarks</b>                                  |                                                                                                                                         |

|                                                 |                                                                                                                                                              |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-15                                                                                                                                                         |
| <b>Indicator ID</b>                             | A-15.4                                                                                                                                                       |
| <b>Indicator name</b>                           | # of hectares of standing forest in leakage area                                                                                                             |
| <b>Type</b>                                     | Impact                                                                                                                                                       |
| <b>Goal</b>                                     | Monitor the progress of deforestation and its changes in coverage in the leakage area                                                                        |
| <b>SDGs to be met</b>                           | SDG13 (emissions reduction), SDG15 (habitat protection), SDG14 (climate change), and SDG14 (climate change). forestry since it discourages deforestation).   |
| <b>Unit of measure</b>                          | hectares                                                                                                                                                     |
| <b>Monitoring methodology</b>                   | Assessment of forest and non-forest maps according to PROCLIMA methodology                                                                                   |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                     |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>Carbo-Terra</li> <li>Yauto</li> <li>Responsible delegate on behalf of the reservation</li> </ul>                      |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                              |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>Spatial analysis of deforestation from maps</li> <li>Calculations of deforestation and deforestation rates</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                              |

|                       |                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------|
| <b>Activity ID</b>    | A-15                                                                                          |
| <b>Indicator ID</b>   | A-15.5                                                                                        |
| <b>Indicator name</b> | Meetings with public or private entities to review deforestation trends at project boundaries |
| <b>Type</b>           | Result                                                                                        |

|                                                 |                                                                                                                                                                                                     |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Goal</b>                                     | Strengthen the processes of regional articulation of the reserve and identify opportunities to improve governance based on joint management with private and public entities.                       |
| <b>SDGs to be met</b>                           | SDG15 (protection of forest habitat)                                                                                                                                                                |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                              |
| <b>Monitoring methodology</b>                   | Number of meetings held for the purpose of reviewing the deforestation issues inside and outside the project boundaries, either with public or private entities.                                    |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                            |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• reserve</li> <li>• Carbo-Terra-Yauto</li> </ul>                                                                                                            |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                     |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Photographic and/or video recordings.</li> <li>• Meeting attendance lists.</li> <li>• Meeting minutes.</li> <li>• Other meetings are supported.</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                                                                     |

|                                    |                                                                                                                                                                                                                                                           |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                 | A-16                                                                                                                                                                                                                                                      |
| <b>Indicator ID</b>                | A-16.1                                                                                                                                                                                                                                                    |
| <b>Indicator name</b>              | # of people participating in awareness-raising events, meetings or training sessions on administrative issues                                                                                                                                             |
| <b>Type</b>                        | Result                                                                                                                                                                                                                                                    |
| <b>Goal</b>                        | Strengthen the capacities of community members for the management of productive systems, including administrative, legal and financial aspects, as well as strengthening of forest governance management                                                  |
| <b>SDGs to be met</b>              | SDG1 (productive projects), SDG2 (productive projects), SDG8 (Productive projects), SDG13 (emissions reduction), SDG15 (forest habitat protection))                                                                                                       |
| <b>Unit of measure</b>             | Number                                                                                                                                                                                                                                                    |
| <b>Monitoring methodology</b>      | Number of community members attending training sessions for the management of productive systems, including administrative, legal and financial aspects, as well as the strengthening of forest governance and management. the value obtained is reported |
| <b>Frequency of monitoring</b>     | Annually                                                                                                                                                                                                                                                  |
| <b>Responsible for measurement</b> | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Programs or Entities</li> <li>• Community representatives</li> </ul>                                                                                                     |
| <b>Indicator result</b>            |                                                                                                                                                                                                                                                           |



|                                             |                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>in the reporting period</b>              |                                                                                                                                                                                                                                                                                                                                 |
| <b>Documents to support the information</b> | <ul style="list-style-type: none"> <li>• Photographic and/or video recordings.</li> <li>• Attendance lists for the workshops and awareness-raising days.</li> <li>• Meeting minutes and photographic record of the training sessions for the implementation of reforestation actions.</li> <li>• Third party reports</li> </ul> |
| <b>Remarks</b>                              |                                                                                                                                                                                                                                                                                                                                 |

|                                                 |                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-16                                                                                                                                                                                                                                                                                                   |
| <b>Indicator ID</b>                             | A-16.2                                                                                                                                                                                                                                                                                                 |
| <b>Indicator name</b>                           | # of women participating in awareness-raising events, meetings or training sessions on administrative issues                                                                                                                                                                                           |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                                                                 |
| <b>Goal</b>                                     | Strengthen the capacities of women members of the communities to manage administrative, legal and financial aspects of the project.<br>financial                                                                                                                                                       |
| <b>SDGs to be met</b>                           | SDG1 (productive projects), SDG2 (productive projects), SDG8 (productive projects), SDG13 (emissions reduction), SDG15 (protection of forest habitat))                                                                                                                                                 |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                                                 |
| <b>Monitoring methodology</b>                   | Number of women community members attending training sessions for the management of production systems and business plans, including administrative, legal and financial aspects, as well as the strengthening of forest governance management, and the value of the training is reported.<br>obtained |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                                               |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Community representative</li> </ul>                                                                                                                                                                                   |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                                        |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Photographic and/or video record</li> <li>• Attendance lists for the workshops and awareness-raising days</li> <li>• Minutes of meetings and photographic record of the training</li> </ul>                                                                   |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                                                        |

|                     |        |
|---------------------|--------|
| <b>Activity ID</b>  | A-17   |
| <b>Indicator ID</b> | A-17.1 |

|                                                 |                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Indicator name</b>                           | # of people participating in awareness-raising events, meetings or training sessions on restoration issues                                                                                                                                                                                  |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                                                      |
| <b>Goal</b>                                     | Strengthening community capacities for development of restoration actions                                                                                                                                                                                                                   |
| <b>SDGs to be met</b>                           | SDG5 (women's participation), SDG13 (emissions reduction), SDG15 (protection of forest habitat as it discourages deforestation)                                                                                                                                                             |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                                      |
| <b>Monitoring methodology</b>                   | Number of community members attending sensitization, meetings or training sessions on the following topics restoration actions                                                                                                                                                              |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                                    |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Entities or programs</li> </ul>                                                                                                                                                                            |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                             |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Attendance lists for the workshops and awareness-raising days for the implementation of restoration actions.</li> <li>• Meeting minutes and photographic record of the training sessions for the implementation of restoration actions.</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                                             |

|                                    |                                                                                                                              |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                 | A-17                                                                                                                         |
| <b>Indicator ID</b>                | A-17.2                                                                                                                       |
| <b>Indicator name</b>              | # of women participating in awareness-raising events, meetings or training sessions on restoration issues                    |
| <b>Type</b>                        | Result                                                                                                                       |
| <b>Goal</b>                        | Strengthening the capacities of women in the communities for the development of restoration actions                          |
| <b>SDGs to be met</b>              | SDG5 (women's participation), SDG13 (emission reductions), SDG15 (forest habitat protection as it discourages deforestation) |
| <b>Unit of measure</b>             | Number                                                                                                                       |
| <b>Monitoring methodology</b>      | Number of women in the community who attend the awareness-raising, meetings or training sessions on restoration activities   |
| <b>Frequency of monitoring</b>     | Annually                                                                                                                     |
| <b>Responsible for measurement</b> | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> </ul>                                             |

|                                                 |                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                 | <ul style="list-style-type: none"> <li>Entities or programs</li> </ul>                                                                                                                                                                                                                  |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                         |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>Attendance lists for the workshops and awareness-raising days for the implementation of restoration actions.</li> <li>Meeting minutes and photographic record of the training sessions for the implementation of restoration actions.</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                                         |

|                                                 |                                                                                                                                                                                                                                               |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-17                                                                                                                                                                                                                                          |
| <b>Indicator ID</b>                             | A-17.3                                                                                                                                                                                                                                        |
| <b>Indicator name</b>                           | # of hectares subject to restoration actions                                                                                                                                                                                                  |
| <b>Type</b>                                     | Impact                                                                                                                                                                                                                                        |
| <b>Goal</b>                                     | Develop restoration actions in intervened areas                                                                                                                                                                                               |
| <b>SDGs to be met</b>                           | SDG13 (emissions reduction), SDG15 (habitat protection), SDG14 (climate change), and SDG14 (climate change). forestry since it discourages deforestation).                                                                                    |
| <b>Unit of measure</b>                          | Area (ha)                                                                                                                                                                                                                                     |
| <b>Monitoring methodology</b>                   | Restoration actions carried out by members of the community                                                                                                                                                                                   |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                      |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>Carbo-Terra</li> <li>Yauto</li> <li>Responsible person delegated on behalf of the reservation</li> </ul>                                                                                               |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                               |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>Social mapping.</li> <li>Minutes of meetings with the community.</li> <li>Photographic record.</li> <li>Field visit report.</li> <li>Satellite verification and measurement with GIS tools.</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                               |

|                       |                                                                                                                                       |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>    | A-18                                                                                                                                  |
| <b>Indicator ID</b>   | A-18.1                                                                                                                                |
| <b>Indicator name</b> | # of persons participating in meetings or workshops on topics of communications                                                       |
| <b>Type</b>           | Result                                                                                                                                |
| <b>Goal</b>           | The processes of identification and prioritization of social investments in communications are carried out in a participatory manner. |

|                                                 |                                                                                                                                                                                                                                                                      |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SDGs to be met</b>                           | SDG1 (social investment), SDG11 (connectivity), SDG13 (reduction of poverty), and SDG14 (social investment). emissions), SDG15 (protection of forest habitat as it discourages deforestation), SDG15 (protection of forest habitats as it discourages deforestation) |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                               |
| <b>Monitoring methodology</b>                   | Number of community members attending the workshops training on communication issues                                                                                                                                                                                 |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                             |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Community representative</li> </ul>                                                                                                                                                 |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                      |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Community meeting minutes</li> <li>• Attendance lists</li> <li>• Photographic record</li> </ul>                                                                                                                             |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                      |

|                                                 |                                                                                                                                                                               |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-18                                                                                                                                                                          |
| <b>Indicator ID</b>                             | A-18.2                                                                                                                                                                        |
| <b>Indicator name</b>                           | # of people with access to communications services                                                                                                                            |
| <b>Type</b>                                     | Result                                                                                                                                                                        |
| <b>Goal</b>                                     | Improved access to communication services for members of the community.                                                                                                       |
| <b>SDGs to be met</b>                           | SDG1 (social investment), SDG11 (connectivity), SDG13 (emissions reduction), SDG15 (forest habitat protection because discourages deforestation)                              |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                        |
| <b>Monitoring methodology</b>                   | The number of people with access to health care services is recorded. communication                                                                                           |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                      |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible delegate on behalf of the reservation</li> <li>• Entities or programs</li> </ul> |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                               |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Social mapping.</li> <li>• Entity Report</li> <li>• Community Report</li> </ul>                                                      |
| <b>Remarks</b>                                  |                                                                                                                                                                               |

|                                                 |                                                                                                                                                                                              |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-18                                                                                                                                                                                         |
| <b>Indicator ID</b>                             | A-18.3                                                                                                                                                                                       |
| <b>Indicator name</b>                           | # of elements/infrastructure (antennas and communications) upgraded / in operation                                                                                                           |
| <b>Type</b>                                     | Result                                                                                                                                                                                       |
| <b>Goal</b>                                     | The infrastructure is improved in order to provide communication to the members of the communities.                                                                                          |
| <b>SDGs to be met</b>                           | SDG1 (social investment), SDG11 (connectivity), SDG13 (emissions reduction), SDG15 (forest habitat protection because discourages deforestation)                                             |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                       |
| <b>Monitoring methodology</b>                   | The elements, installed infrastructure, improved infrastructure and in operation that allows access to the communications of community members                                               |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                     |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible delegate on behalf of the reservation</li> <li>• Telecommunications services company</li> </ul> |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                              |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Social mapping.</li> <li>• Photographic record.</li> <li>• Field visit report.</li> </ul>                                                           |
| <b>Remarks</b>                                  |                                                                                                                                                                                              |

|                                |                                                                                                                                                                                                                                                                      |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>             | A-19                                                                                                                                                                                                                                                                 |
| <b>Indicator ID</b>            | A-19.1                                                                                                                                                                                                                                                               |
| <b>Indicator name</b>          | # of people participating in awareness-raising events, meetings or training workshops on traditions and culture                                                                                                                                                      |
| <b>Type</b>                    | Result                                                                                                                                                                                                                                                               |
| <b>Goal</b>                    | Improve the capabilities of community members to traditional and ancestral strengthening of cabildos and organization                                                                                                                                                |
| <b>SDGs to be met</b>          | SDG1 (social investment), SDG11 (organization), SDG13 (reduction of poverty), and SDG14 (social investment). emissions), SDG15 (protection of forest habitat as it discourages deforestation), SDG15 (protection of forest habitats as it discourages deforestation) |
| <b>Unit of measure</b>         | Number                                                                                                                                                                                                                                                               |
| <b>Monitoring methodology</b>  | Number of community members who attend sensitization, meetings or training sessions for traditional and ancestral strengthening of the cabildos and the organization                                                                                                 |
| <b>Frequency of monitoring</b> | Annually                                                                                                                                                                                                                                                             |

|                                                 |                                                                                                                                                         |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible delegate on behalf of the reservation</li> </ul>           |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                         |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Minutes of meetings with the community.</li> <li>• Attendance lists</li> <li>• Photographic record.</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                                                         |

|                                                 |                                                                                                                                                                                                                                                                      |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activity ID</b>                              | A-19                                                                                                                                                                                                                                                                 |
| <b>Indicator ID</b>                             | A-19.2                                                                                                                                                                                                                                                               |
| <b>Indicator name</b>                           | # of women participating in awareness-raising events, meetings or training sessions on traditions and culture                                                                                                                                                        |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                               |
| <b>Goal</b>                                     | Strengthening the capacities of women in the communities to traditional and ancestral strengthening of cabildos and organization                                                                                                                                     |
| <b>SDGs to be met</b>                           | SDG1 (social investment), SDG11 (organization), SDG13 (reduction of poverty), and SDG14 (social investment). emissions), SDG15 (protection of forest habitat as it discourages deforestation), SDG15 (protection of forest habitats as it discourages deforestation) |
| <b>Unit of measure</b>                          | Number of persons                                                                                                                                                                                                                                                    |
| <b>Monitoring methodology</b>                   | Number of women in the community who attend sensitizations, meetings or training sessions for traditional and ancestral strengthening of the cabildos and the organization                                                                                           |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                             |
| <b>Responsible for measurement</b>              | <ul style="list-style-type: none"> <li>• Carbo-Terra</li> <li>• Yauto</li> <li>• Responsible delegate on behalf of the reservation</li> <li>• Entities or programs</li> </ul>                                                                                        |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                      |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Community meeting minutes</li> <li>• Attendance lists</li> <li>• Photographic record</li> </ul>                                                                                                                             |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                                      |

|                     |        |
|---------------------|--------|
| <b>Activity ID</b>  | A-19   |
| <b>Indicator ID</b> | A-19.3 |



| Indicator name | # of grandfathers and grandmothers and/or grandmothers and/or grandfathers' grandmothers and/or grandfathers' grandfathers supported |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------|
|----------------|--------------------------------------------------------------------------------------------------------------------------------------|

| Type                                     | Result                                                                                                                                                                                                                                    |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Goal                                     | Support grandfathers and grandmothers and grandfathers and grandmothers and grandmothers and grandmothers and grandmothers in strengthening traditional and ancestral                                                                     |
| SDGs to be met                           | SDG1 (social investment), SDG13 (emission reductions), SDG15 (social investment), SDG13 (emission reductions), SDG14 (emissions reductions), SDG15 (social investment) (protection of the forest habitat as it discourages deforestation) |
| Unit of measure                          | Number of grandfathers, grandmothers and grandfathers and grandfathers and grandfathers and grandfathers and grandfathers and grandfathers                                                                                                |
| Monitoring methodology                   | Number of grandfathers, grandmothers and grandfathers and grandmothers who are supported in the traditional and ancestral strengthening                                                                                                   |
| Frequency of monitoring                  | Annually                                                                                                                                                                                                                                  |
| Responsible for measurement              | <ul style="list-style-type: none"> <li>Carbo-Terra</li> <li>Yauto</li> <li>Responsible delegate on behalf of the reservation</li> <li>Entities or programs</li> </ul>                                                                     |
| Indicator result in the reporting period |                                                                                                                                                                                                                                           |
| Documents to support the information     | <ul style="list-style-type: none"> <li>Social mapping.</li> <li>Photographic record.</li> </ul>                                                                                                                                           |
| Remarks                                  |                                                                                                                                                                                                                                           |

|                                          |                                                                                                                                                                               |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activity ID                              | A-19                                                                                                                                                                          |
| Indicator ID                             | A-19.4                                                                                                                                                                        |
| Indicator name                           | Community bylaws document prepared                                                                                                                                            |
| Type                                     | Result                                                                                                                                                                        |
| Goal                                     | Number of documents                                                                                                                                                           |
| SDGs to be met                           | SDG 3 - Health and well-being<br>SDG 11 - Sustainable cities and communities                                                                                                  |
| Unit of measure                          | Number                                                                                                                                                                        |
| Monitoring methodology                   | The number of documents produced is counted                                                                                                                                   |
| Frequency of monitoring                  | Annually                                                                                                                                                                      |
| Responsible for measurement              | <ul style="list-style-type: none"> <li>Carbo-Terra</li> <li>Yauto</li> <li>Responsible person delegated on behalf of the reservation</li> <li>Entities or programs</li> </ul> |
| Indicator result in the reporting period |                                                                                                                                                                               |
| Documents to support the information     | <ul style="list-style-type: none"> <li>Documents prepared</li> <li>Attendance lists of conferences held</li> </ul>                                                            |





| Remarks |  |
|---------|--|
|---------|--|



|              |        |
|--------------|--------|
| Activity ID  | A-19   |
| Indicator ID | A-19.5 |

|                                          |                                                                                                                                                                                        |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Indicator name                           | Malocas built or suitable                                                                                                                                                              |
| Type                                     | Product                                                                                                                                                                                |
| Goal                                     | Number of malocas                                                                                                                                                                      |
| SDGs to be met                           | SDG 3 - Health and well-being<br>SDG 11 - Sustainable cities and communities                                                                                                           |
| Unit of measure                          | Number                                                                                                                                                                                 |
| Monitoring methodology                   | The number of malocas built or suitable for the construction of the community                                                                                                          |
| Frequency of monitoring                  | Annually                                                                                                                                                                               |
| Responsible for measurement              | <ul style="list-style-type: none"> <li>Carbo-Terra</li> <li>Yauto</li> <li>Responsible person delegated on behalf of the reservation</li> <li>Entities or programs</li> </ul>          |
| Indicator result in the reporting period |                                                                                                                                                                                        |
| Documents to support the information     | <ul style="list-style-type: none"> <li>Record of actions for the construction and/or adaptation of malocas</li> <li>Photographic records</li> <li>Entity or program reports</li> </ul> |
| Remarks                                  |                                                                                                                                                                                        |

### 11.3. Monitoring of REDD+ Safeguards

The monitoring plan for each applicable safeguard is presented below:

|                             |                                                                                                                                                                                                                                                                                        |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safeguard ID                | SVG-1                                                                                                                                                                                                                                                                                  |
| Indicator ID                | SVG-1.1                                                                                                                                                                                                                                                                                |
| Indicator name              | Correspondence with national legislation                                                                                                                                                                                                                                               |
| Type                        | Result                                                                                                                                                                                                                                                                                 |
| Goal                        | 100%                                                                                                                                                                                                                                                                                   |
| Unit of measure             | Percentage                                                                                                                                                                                                                                                                             |
| Monitoring methodology      | <p>The current regulations are verified and it is verified that the proposed activities comply with them. The following equation will be used to monitor and report this indicator:</p> $\frac{\# \text{ de actividades compatibles}}{\# \text{ de actividades totales}} \times 100\%$ |
| Frequency of monitoring     | Annually or when a change in the activities of the company is proposed.<br>project                                                                                                                                                                                                     |
| Responsible for measurement | Carbo-Terra<br>Yauto                                                                                                                                                                                                                                                                   |



|                  |      |
|------------------|------|
| Indicator result | 100% |
|------------------|------|

|                                             |                                                                                                                                                                                                                                                         |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>in the reporting period</b>              |                                                                                                                                                                                                                                                         |
| <b>Documents to support the information</b> | <ul style="list-style-type: none"> <li>Regulatory support documents.</li> <li>Analysis of legal correspondence by project activities.</li> <li>Attendance lists, meeting minutes, photographic records and recordings of community meetings.</li> </ul> |
| <b>Remarks</b>                              | All project activities have been carried out by giving compliance with the pertinent regulations and legal aspects.                                                                                                                                     |

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safeguard ID</b>                             | SVG-2                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Indicator ID</b>                             | SVG-2.1                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Indicator name</b>                           | Transformation and access to information                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Goal</b>                                     | 100%                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Unit of measure</b>                          | Percentage                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Monitoring methodology</b>                   | <p>Access to information in language and media appropriate for the community will be verified. The number of community leaders who have access to the documents developed will be verified. The following equation will be used to monitor this safeguard and report on this indicator:</p> $\frac{\# \text{ de líderes de la comunidad con acceso a información}}{\# \text{ de líderes totales de la comunidad de la comunidad}} * 100\%$ |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Responsible for measurement</b>              | Carbo-Terra<br>Yauto                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Indicator result in the reporting period</b> | 100%                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>Meeting minutes</li> <li>Socialization minutes</li> <li>Workshop attendance lists</li> <li>Community interviews and surveys</li> </ul>                                                                                                                                                                                                                                                              |
| <b>Remarks</b>                                  | Leaders have information in language and media appropriate.                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Safeguard ID</b>                             | SVG-3                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Indicator ID</b>                             | SVG-3.1                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Indicator name</b>                           | Accountability                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Type</b>                                     | Product                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Goal</b>                                     | Submit an accountability report within 6 months. months after the verification process.                                                                                                                                                                                                                                                                                                                                                    |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                                                                                                                                                                                     |

|                                                 |                                                                                                                                                                                                                                                   |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Monitoring methodology</b>                   | For the measurement of this indicator, the generation of accountability reports by the project implementer will be taken into account. Likewise, reporting and accountability sessions will be held with the stakeholders.<br>interested parties. |
| <b>Frequency of monitoring</b>                  | Within 6 months of the verification process                                                                                                                                                                                                       |
| <b>Responsible for measurement</b>              | Carbo-Terra<br>Yauto                                                                                                                                                                                                                              |
| <b>Indicator result in the reporting period</b> | Does not report                                                                                                                                                                                                                                   |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>Meeting minutes, attendance list and photographic record of the informative spaces.</li> <li>Accountability reports.</li> </ul>                                                                            |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                                                   |

|                                                 |                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safeguard ID</b>                             | SVG-4                                                                                                                                                                                                                                                                                |
| <b>Indicator ID</b>                             | SVG-4.1                                                                                                                                                                                                                                                                              |
| <b>Indicator name</b>                           | Recognition of forest governance structures                                                                                                                                                                                                                                          |
| <b>Type</b>                                     | Impact                                                                                                                                                                                                                                                                               |
| <b>Goal</b>                                     | Recognize compliance with the forest governance structures established by the authorities of the reserve and their concordance with those established by other institutions present in the area. in the territory.                                                                   |
| <b>Unit of measure</b>                          | Compliance                                                                                                                                                                                                                                                                           |
| <b>Monitoring methodology</b>                   | It will be verified that REDD+ actions are developed in accordance with the forest governance structure associated with the territorial jurisdiction by the indigenous reservation, and the forest governance structures established by other institutions present in the territory. |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                             |
| <b>Responsible for measurement</b>              | Carbo-Terra<br>Yauto                                                                                                                                                                                                                                                                 |
| <b>Indicator result in the reporting period</b> | 100%                                                                                                                                                                                                                                                                                 |
| <b>Documents to support the information</b>     | Forest governance structure documents for each reserve<br>Meeting minutes and attendance lists.<br>Documents prepared by institutions on forest governance.<br>Administrative acts of territorial planning                                                                           |
| <b>Remarks</b>                                  | At present, each reserve has a structure of forest governance.                                                                                                                                                                                                                       |

|                                                 |                                                                                                                                                                                                                                                                 |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safeguard ID</b>                             | SVG-5                                                                                                                                                                                                                                                           |
| <b>Indicator ID</b>                             | SVG-5.1                                                                                                                                                                                                                                                         |
| <b>Indicator name</b>                           | Capacity building                                                                                                                                                                                                                                               |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                          |
| <b>Goal</b>                                     | To increase the technical, legal and administrative capabilities of the members of the indigenous reservation                                                                                                                                                   |
| <b>Unit of measure</b>                          | Number of workshops held                                                                                                                                                                                                                                        |
| <b>Monitoring methodology</b>                   | Thematic training sessions will be held (technical, legal and administrative), and tests will be administered at the end of the training sessions in order to evaluate the adoption of knowledge by the community members.<br>will report the results obtained. |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                        |
| <b>Responsible for measurement</b>              | Carbo-<br>Terra<br>Yauto<br>SENA, SINCHI, Research Centers                                                                                                                                                                                                      |
| <b>Indicator result in the reporting period</b> | No reports                                                                                                                                                                                                                                                      |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Community questionnaires</li> <li>• Photographic record of property visits</li> <li>• Training workshop attendance lists, meeting minutes and photographic records</li> </ul>                                          |
| <b>Remarks</b>                                  | From the third year                                                                                                                                                                                                                                             |

|                                                 |                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safeguard ID</b>                             | SVG-6                                                                                                                                                                                                                                                                                                                               |
| <b>Indicator ID</b>                             | SVG-6.1                                                                                                                                                                                                                                                                                                                             |
| <b>Indicator name</b>                           | Free, Prior and Informed Consent                                                                                                                                                                                                                                                                                                    |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                                                                                              |
| <b>Goal</b>                                     | Ensure that the consultation spaces are carried out in accordance with the national provisions on consultation and free, prior and informed consent established in legislation and jurisprudence, as well as the guidelines issued by the Ministry of the Interior and the control agencies for the<br>with indigenous communities. |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                                                                              |
| <b>Monitoring methodology</b>                   | Stakeholder consultation days will be held and a<br>will report the number of days completed.                                                                                                                                                                                                                                       |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                                                                            |
| <b>Responsible for measurement</b>              | Carbo-Terra<br>Yauto                                                                                                                                                                                                                                                                                                                |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                                                                     |

|                                             |                                                                                                                          |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Documents to support the information</b> | Evidence of relations and consultation with communities (minutes of meetings, list of participants, photographic record) |
| <b>Remarks</b>                              |                                                                                                                          |

|                                                 |                                                                                                                                                                                                                           |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safeguard ID</b>                             | SVG-7                                                                                                                                                                                                                     |
| <b>Indicator ID</b>                             | SVG-7.1                                                                                                                                                                                                                   |
| <b>Indicator name</b>                           | Respect for traditional knowledge                                                                                                                                                                                         |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                    |
| <b>Goal</b>                                     | Ensure that the communities' ways of understanding and relating to the environment have been taken into consideration and respected, so as not to affect the communities' traditions, uses and customs of the communities |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                    |
| <b>Monitoring methodology</b>                   | The number of stakeholder consultation days will be quantified, the proposal for the development of the deforestation initiative will be validated with the community and the number of conferences carried out.          |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                  |
| <b>Responsible for measurement</b>              | C Carbo-Terra<br>Yauto                                                                                                                                                                                                    |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                           |
| <b>Documents to support the information</b>     | Evidence of relations and consultation with communities (minutes of meetings, list of participants, photographic record)                                                                                                  |
| <b>Remarks</b>                                  |                                                                                                                                                                                                                           |

|                                |                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safeguard ID</b>            | SVG-8                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Indicator ID</b>            | SVG-8.1                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Indicator name</b>          | Profit sharing                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Type</b>                    | Impact                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Goal</b>                    | Ensure that 100% of the benefits derived from the implementation of policies, measures and actions to reduce deforestation and generated from traditional knowledge, innovations and practices for the conservation and sustainable use of forests, their diversity and ecosystem services are distributed fairly and equitably.<br>for the members of the indigenous reservation linked to the project. |
| <b>Unit of measure</b>         | Currency                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Monitoring methodology</b>  | Considering that there is a scheme for the distribution of resources derived from the commercialization of carbon certificates agreed upon with the communities, a registry will be kept of resources received by the indigenous reservation.                                                                                                                                                            |
| <b>Frequency of monitoring</b> | Annually                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Responsible for</b>         | Carbo-Terra                                                                                                                                                                                                                                                                                                                                                                                              |





|             |  |
|-------------|--|
| measurement |  |
|-------------|--|

|                                                 |                                                                                                   |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------|
|                                                 | Yauto<br>Representatives of the indigenous reservation                                            |
| <b>Indicator result in the reporting period</b> | 100%                                                                                              |
| <b>Documents to support the information</b>     | Resource sharing agreement defined and signed<br>Financial or economic transaction supports       |
| <b>Remarks</b>                                  | The distribution of resources will be made once expenses have been covered.<br>project operations |

|                                                 |                                                                                                                                                             |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safeguard ID</b>                             | SVG-9                                                                                                                                                       |
| <b>Indicator ID</b>                             | SVG-9.1                                                                                                                                                     |
| <b>Indicator name</b>                           | Territorial rights                                                                                                                                          |
| <b>Type</b>                                     | Result                                                                                                                                                      |
| <b>Goal</b>                                     | Guarantee the respect of collective and territorial rights of the indigenous reserve. As well as its use and cultural, economic and spiritual significance. |
| <b>Unit of measure</b>                          | Compliance or non-compliance                                                                                                                                |
| <b>Monitoring methodology</b>                   | The regulations issued in the area of human rights are reviewed. territorial boundaries for each one of the reserve and the respect of these are verified.  |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                    |
| <b>Responsible for measurement</b>              | Carbo-Terra<br>Yauto                                                                                                                                        |
| <b>Indicator result in the reporting period</b> | 100%                                                                                                                                                        |
| <b>Documents to support the information</b>     | Resolutions on land titling in favor of the reserve indigenous                                                                                              |

|                                    |                                                                                                                                                                                                                                                |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safeguard ID</b>                | Safeguard 10                                                                                                                                                                                                                                   |
| <b>Indicator ID</b>                | SVG-10.1                                                                                                                                                                                                                                       |
| <b>Indicator name</b>              | Participation                                                                                                                                                                                                                                  |
| <b>Type</b>                        | Result                                                                                                                                                                                                                                         |
| <b>Goal</b>                        | Ensuring full and effective stakeholder participation involved to ensure good governance and decision making on REDD+.                                                                                                                         |
| <b>Unit of measure</b>             | Compliance or non-compliance                                                                                                                                                                                                                   |
| <b>Monitoring methodology</b>      | Stakeholder participation will be verified to ensure adequate governance and decision making in the spaces designated for this purpose, in accordance with the provisions established in national regulations and local forms of participation |
| <b>Frequency of monitoring</b>     | Annually                                                                                                                                                                                                                                       |
| <b>Responsible for measurement</b> | Carbo-Terra<br>Yauto                                                                                                                                                                                                                           |
| <b>Indicator result</b>            | 100%                                                                                                                                                                                                                                           |

|                                             |                                                                                                                                                 |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>in the reporting period</b>              |                                                                                                                                                 |
| <b>Documents to support the information</b> | Evidence of relationship, participation and consultation with the communities (minutes of meetings, lists of participants, photographic record) |
| <b>Remarks</b>                              |                                                                                                                                                 |

|                                                 |                                                                                                                         |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Safeguard ID</b>                             | Safeguard 11                                                                                                            |
| <b>Indicator ID</b>                             | SVG-11.1                                                                                                                |
| <b>Indicator name</b>                           | Forest conservation and biodiversity                                                                                    |
| <b>Type</b>                                     | Impact                                                                                                                  |
| <b>Goal</b>                                     | Ensuring that the project is not detrimental to the conservation of forests and the biodiversity they harbor.           |
| <b>Unit of measure</b>                          | Compliance or non-compliance                                                                                            |
| <b>Monitoring methodology</b>                   | The area of forest present in the project area will be verified through the use of Geographic Information Systems.      |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                |
| <b>Responsible for measurement</b>              | Carbo-Terra<br>Yauto                                                                                                    |
| <b>Indicator result in the reporting period</b> |                                                                                                                         |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Generation of cartographic products</li> <li>• On-site observations</li> </ul> |
| <b>Remarks</b>                                  |                                                                                                                         |

|                                                 |                                                                                                                                                                                                                              |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safeguard ID</b>                             | SVG-12                                                                                                                                                                                                                       |
| <b>Indicator ID</b>                             | SVG-12.1                                                                                                                                                                                                                     |
| <b>Indicator name</b>                           | Provision of environmental goods and services                                                                                                                                                                                |
| <b>Type</b>                                     | Impact                                                                                                                                                                                                                       |
| <b>Goal</b>                                     | Ensure that ecosystem services (provisioning, supporting, regulating and cultural) are not directly or indirectly affected, e.g. water supply, soil, biodiversity, among others for the execution of the project activities. |
| <b>Unit of measure</b>                          | Compliance or non-compliance                                                                                                                                                                                                 |
| <b>Monitoring methodology</b>                   | The forest cover present in the territory of the reserve will be monitored. In addition, biodiversity monitoring activities will be conducted and reports will be generated as a result of these activities.                 |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                     |
| <b>Responsible for measurement</b>              | Carbo-Terra<br>Yauto                                                                                                                                                                                                         |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                              |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Generation of cartographic products</li> <li>• Biodiversity monitoring reports</li> </ul>                                                                                           |

|         |                                                                        |
|---------|------------------------------------------------------------------------|
|         | <ul style="list-style-type: none"> <li>On-site observations</li> </ul> |
| Remarks |                                                                        |

|                                          |                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safeguard ID                             | Safeguard -13                                                                                                                                                                                                                                                                                                                                                                     |
| Indicator ID                             | SVG-13.1                                                                                                                                                                                                                                                                                                                                                                          |
| Indicator name                           | Environmental and territorial planning                                                                                                                                                                                                                                                                                                                                            |
| Type                                     | Result                                                                                                                                                                                                                                                                                                                                                                            |
| Goal                                     | Consolidate the instruments of territorial and environmental management under a focus on conservation and sustainable forest management, recognizing the specific forms of forest management.<br>indigenous reservation and the territorial context.                                                                                                                              |
| Unit of measure                          | Compliance                                                                                                                                                                                                                                                                                                                                                                        |
| Monitoring methodology                   | It will be verified that the project promotes the consolidation of environmental and territorial planning instruments under a conservation and sustainable forest management approach, respecting the forms of government and interests of the communities of the indigenous reservation that participate in the project, and the forms of identified in the territorial context. |
| Frequency of monitoring                  | Annually                                                                                                                                                                                                                                                                                                                                                                          |
| Responsible for measurement              | Carbo-Terra<br>Yauto                                                                                                                                                                                                                                                                                                                                                              |
| Indicator result in the reporting period |                                                                                                                                                                                                                                                                                                                                                                                   |
| Documents to support the information     | Land Management Plan Documents Developed Indigenous Life Plan<br>Meeting minutes and attendance lists.<br>Documents prepared by institutions on forest governance.<br>Administrative acts of territorial planning                                                                                                                                                                 |
| Remarks                                  | These activities will be developed within the framework of the project.                                                                                                                                                                                                                                                                                                           |

|                        |                                                                                                                                                      |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safeguard ID           | Safeguard -14                                                                                                                                        |
| Indicator ID           | SVG-14.1                                                                                                                                             |
| Indicator name         | Sector planning                                                                                                                                      |
| Type                   | Result                                                                                                                                               |
| Goal                   | Ensuring that REDD+ actions are articulated with the legislation related to forests and their biodiversity                                           |
| Unit of measure        | Compliance                                                                                                                                           |
| Monitoring methodology | The community members and Carbo-Terra will verify that the REDD+ actions are articulated with legislation related to forests and their biodiversity. |



|                         |          |
|-------------------------|----------|
| Frequency of monitoring | Annually |
|-------------------------|----------|



|                                                 |                                                                                                                                                                          |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Responsible for measurement</b>              | Carbo-Terra                                                                                                                                                              |
|                                                 | Yauto                                                                                                                                                                    |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                          |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Municipal Development Plan</li> <li>• Departmental Development Plan</li> <li>• Environmental Authorities Action Plan</li> </ul> |
| <b>Remarks</b>                                  | The monitoring activities will be developed within the framework of the project.                                                                                         |

|                                                 |                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safeguard ID</b>                             | Safeguard -15                                                                                                                                                                                                                                                                            |
| <b>Indicator ID</b>                             | SVG-15.1                                                                                                                                                                                                                                                                                 |
| <b>Indicator name</b>                           | Forestry control and surveillance to prevent the displacement of emissions                                                                                                                                                                                                               |
| <b>Type</b>                                     | Result                                                                                                                                                                                                                                                                                   |
| <b>Goal</b>                                     | Guarantee the development of monitoring and control actions. community to reduce the displacement of emissions and identify the events that cause them                                                                                                                                   |
| <b>Unit of measure</b>                          | Number                                                                                                                                                                                                                                                                                   |
| <b>Monitoring methodology</b>                   | GHG emissions are quantified in the leakage area of the project and compared to the baseline to identify the trend of change.                                                                                                                                                            |
| <b>Frequency of monitoring</b>                  | Annually                                                                                                                                                                                                                                                                                 |
| <b>Responsible for measurement</b>              | Carbo-Terra<br>Yauto                                                                                                                                                                                                                                                                     |
| <b>Indicator result in the reporting period</b> |                                                                                                                                                                                                                                                                                          |
| <b>Documents to support the information</b>     | <ul style="list-style-type: none"> <li>• Reports of the tours performed</li> <li>• Records of identified emissions displacement events</li> <li>• Reports on the execution of protocols to deal with emissions displacement events.</li> <li>• Georeferenced satellite images</li> </ul> |
| <b>Remarks</b>                                  | The monitoring activities will be developed within the framework of the project.                                                                                                                                                                                                         |

#### 11.4. Permanence of the project

The following table shows the non-permanence risks identified, as well as the level of

risk, mitigation measures, monitoring indicators and the reporting procedure in the event of any of these situations.

Table 22. Permanence risk analysis.

| Risk  | Risk Level | Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                   | Indicators Monitoring                                                                                                                                                                     | Reporting Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Frequency monitoring |
|-------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Fires | Under      | <ul style="list-style-type: none"> <li>- Visual detection of fires during tours conducted by community members.</li> <li>- Interpretation of satellite images.</li> <li>- Buffer of 15%.</li> <li>- Define a communication and support request mechanism with entities that attend to emergencies (Corpoamazonia, Firefighters, Army, National Unit for Disaster Risk Management - UNGRD).</li> </ul> | <p>M.1. # of fires detected</p> <p>M.2. # of hectares affected by fires</p> <p>M.3. tCO<sub>2</sub> emitted by fire incidence.</p> <p>M.4. tCH<sub>4</sub> emitted by fire incidence.</p> | <ol style="list-style-type: none"> <li>1. Communicate to the Captain of the reserve the detection of a fire, its location and approximate length.</li> <li>2. Record the fire information in a document: Persons who detected the fire, Date of Occurrence, Location, Extent, Duration of the event.</li> <li>3. Event report to CARBO-TERRA e local emergency response institutions (Corpoamazonia, UNGRD, Firefighters, etc.).</li> <li>4. Estimation of the affected area by means of satellite imagery and field verification (if possible).</li> <li>5. Quantification of CO<sub>2</sub> and CH<sub>4</sub> emissions associated with the fire.</li> <li>6. Deduct the emissions generated from the 15% buffer.</li> </ol> <p>during the period of monitoring activities REDD+ as appropriate.</p> | Annual               |

|        |       |                                                                                                                                                                                                                                                                        |                                      |                                                                                                                                                                                                                                                                                                                                           |        |
|--------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Floods | Under | <ul style="list-style-type: none"> <li>- Visual detection of flooding during travel by community members.</li> <li>- Interpretation of satellite images.</li> <li>- Buffer of 15%.</li> <li>- Define a mechanism communication and request for support with</li> </ul> | M.5 # of hectares affected by floods | <ol style="list-style-type: none"> <li>1. Communicate to the Captain of the Reserve the detection of a flood, its location and approximate extent.</li> <li>2. Record the flood information in a document: Persons who detected the event, Date of Occurrence, Location, Extent.</li> <li>3. Report the event to CARBO-TERRA e</li> </ol> | Annual |
|--------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|



| Risk | Risk Level | Mitigation Measures                                                                                                   | Indicators Monitoring | Reporting Procedure                                                                                                                                                                                                                                                                                                                                                                                                                             | Frequency monitoring |
|------|------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
|      |            | entities that attend to emergencies (CAR, Fire Department, Army, National Unit for Disaster Risk Management - UNGRD). |                       | <p>local emergency response institutions (Corpoamazonia, UNGRD, Firefighters, etc.), if necessary.</p> <p>4. Estimation of the affected area by means of satellite imagery and field verification (only if possible).</p> <p>5. Quantification of associated CO<sub>2</sub> emissions to flooding.</p> <p>6. Deduct the emissions generated from the 15% buffer.</p> <p>during the period of monitoring of REDD+ activities as appropriate.</p> |                      |

|                            |       |                  |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |
|----------------------------|-------|------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Land<br>tenure<br>disputes | Under | - Buffer of 15%. | M.6 # of<br>hectares<br>under land<br>tenure dispute<br>land | <ol style="list-style-type: none"> <li>1. The Captain of the Indigenous Reservation shall identify the actors wishing to claim rights to lands titled as Indigenous reserve territory.</li> <li>2. Report to the Ministry of the Interior, to the liaisons<br/>The indigenous people of the respective local mayor's offices and governor's office and to CARBO-TERRA the intention of a third party to claim the rights of land titling.</li> <li>3. Attend to the procedures and conduits<br/>regular procedures for settling land tenure disputes.</li> <li>4. Record the information in the project monitoring and verification reports.<br/>Subtract the areas of forest that were reclaimed and granted to a third party, and</li> </ol> | Annual |
|----------------------------|-------|------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|

| Risk                                   | Risk Level | Mitigation Measures                                                                                                                                                                    | Indicators Monitoring                                                        | Reporting Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Frequency monitoring |
|----------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
|                                        |            |                                                                                                                                                                                        |                                                                              | exclude emission reductions associated with the REDD+ project from the REDD+ buffer. of 15%.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |
| Conflicts between project stakeholders | Medium     | <ul style="list-style-type: none"> <li>- Definition of an instance of dialogue and mechanisms for conflict resolution among project stakeholders.</li> <li>- Buffer of 15%.</li> </ul> | M.7 # of hectares deforested due to conflicts between project stakeholders . | <ol style="list-style-type: none"> <li>1. The Captain and/or Governor of the IR will report to CARBO-TERRA and to the defined dialogue instance the situation. conflict, the actors involved and the possible implications on forest cover.</li> <li>2. Attend to the conflict situation by following the mechanisms for conflict resolution among project stakeholders.</li> <li>3. Calculate the areas of deforested forest that are associated with conflict.</li> <li>4. Subtracting the emissions generated by the loss of forest product of the conflict of the total emission reductions obtained during the corresponding monitoring period of the buffer of the 15%.</li> </ol> | Annual               |

|                                     |        |                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |
|-------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Non-ownership of project activities | Medium | <ul style="list-style-type: none"> <li>- Implementation of the activities defined and agreed with the community, according to the stages to be defined.</li> <li>- Monitoring of progress and expected results at each stage.</li> <li>- Definition and implementation of improvement actions to address the problems of appropriation of the</li> </ul> | <p>M.8. # of REDD+ activities that cannot be implemented due to low ownership by project stakeholders</p> <p>M.9. # of hectares of deforested forests</p> | <p>1. Review the results obtained from the activities and stages of implementation and identify problems of appropriation by the project stakeholders.</p> <p>2. To quantify the hectares of forest deforested and estimate the emissions of CO<sub>2</sub> emissions associated with the non-appropriation of project activities.</p> <p>3. Deduct the emissions generated from the 15% buffer.</p> <p>during the period of</p> | Annual |
|-------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|

| Risk               | Risk Level | Mitigation Measures                                                                                                                                                                                                                                                                                                                                        | Indicators Monitoring                                                              | Reporting Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Frequency monitoring |
|--------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
|                    |            | <p>activities identified</p> <ul style="list-style-type: none"> <li>- Provide constant support to the actors involved in the project.</li> <li>- Buffer of 15% of the emissions reductions from the project.</li> </ul>                                                                                                                                    | <p>due to the low ownership of the project activities.</p>                         | <p>monitoring of REDD+ activities as appropriate.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |
| Governance deficit | Medium     | <ul style="list-style-type: none"> <li>- Update or elaboration of the Indigenous Life Plan and implementation of prioritized activities.</li> <li>- Development of the Territorial Management Plans of the Indigenous Reservation.</li> <li>- Capacity building for the management of traditional production systems.</li> <li>- Buffer of 15%.</li> </ul> | <p>M.io. # of hectares of forest deforested due to low territorial governance.</p> | <ol style="list-style-type: none"> <li>1. To review the results obtained from the activities associated with the territorial governance and implementation stages and identify problems of ownership by project stakeholders.</li> <li>2. Quantify the hectares of forest deforested and estimate the CO<sub>2</sub> emissions associated with the deficit of forest cover. governance.</li> <li>3. Deduct the emissions generated from the 15% buffer. during the period of monitoring activities REDD+ as appropriate.</li> </ol> | Annual               |

|                       |        |                                                                                                                                                                                                                                                                                        |                                                                                                                                |                                                                                                                                                                                                                                                                                                                                             |        |
|-----------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Community involvement | Medium | <ul style="list-style-type: none"> <li>- Ensure the active participation of all community members involved in project activities.</li> <li>- Socialize the progress of the project activities according to the defined planning.</li> <li>- Ensure the participation of the</li> </ul> | <p>M.11. # of community members involved in project activities</p> <p>M.12. # of hectares of forest deforested for lack of</p> | <p>1. Verify the participation of the members of the community in the areas of socialization, training and decision making.</p> <p>2. Quantify the hectares of forest deforested and estimate the CO<sub>2</sub> emissions associated with deforestation. community participation in the REDD+ project.</p> <p>3. Discounting emissions</p> | Annual |
|-----------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|

| Risk | Risk Level | Mitigation Measures                                                                                                                 | Indicators Monitoring   | Reporting Procedure                                                                        | Frequency monitoring |
|------|------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------------------------------------------------------------------------|----------------------|
|      |            | <p>members of the community who are required to participate in the project's decision-making processes.</p> <p>- Buffer of 15%.</p> | community participation | generated from the 15% buffer during the applicable monitoring period of REDD+ activities. |                      |

## 11.5. Project emissions

During project implementation, activity data and emission factors are monitored in accordance with Section 10.1, Uncertainty Management. Project emissions will be estimated following the procedure and equations presented in section 10.4 GHG emissions in the analysis period.

### 11.5.1. Activity data

#### 11.5.1.1. Annual deforestation in the project area

It is estimated with the following equation:

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

$$CSB_{proy,año} = 412 \text{ ha}$$

Where:

$CSB_{proy,año}$  by = Annual change in the area covered forest in the project area (ha)

= Year end of monitoring period

$t_2$  = Initial year of the monitoring period

$t_1$  = Area in forest, in the project area as of December 31, 2008 - start of monitoring period (ha)



Area in forest, in the project area as of December  
- 31, 2008  
end of monitoring period (ha)





### 11.5.1.2. Annual deforestation in the leakage area

It is calculated from the following equation:

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

$$f,año \text{ } CSB = 41 \text{ ha}$$

Where:

$$CSB_{f,año} = \frac{\text{Annual change in the area covered by forest in the leakage area (ha)}}{t_2 - t_1}$$

$t_2$  = Year end of monitoring period

$t_1$  = Initial year of the monitoring period

$Af_{,1}$  = Area in forest, in the area of leaks to the start of monitoring period (ha)

$Af_{,2}$  = Area in forest, in the area of leaks to the end of monitoring period (ha)

### 11.5.1.3. Annual degradation in the project area

It is estimated with the following equations:

$$D_{FPRDD} + p_{rooyañ} = \frac{1}{t_2 - t_1} \times (Anúcleo)$$

- Anúcleo-parche )



Where:

$DFPREDD+prooy,año$

= Annual primary degradation in the area of the project (ha)

$2$

= Year end of monitoring period

$1$

= Initial year of the monitoring period

$Anúcleo .$

= Project area in core class at the start of the monitoring period (ha)



$$Anúcleo-parche = \text{Project area changing from core to patch at the end of the monitoring period (ha)}$$

$$\frac{1}{DFSR\ ED\ D+\ pr\ oo\ y,\ añ\ o} (t_2 - t_1) \times = (Aperforado - Aperforado-parche)$$

Where:  $DFSREDD+prooy,año = 10.3\ ha$

$DFSREDD+prooy,añ$  the area of

$Anúcleo .$  = Project area in class drilled at the start of the project.  
monitoring period (ha)

$Anúcleo-parche$  = Project area changing from drilled to patch at the end of the monitoring period (ha)

#### 11.5.1.4. Annual degradation in the leak area

It is estimated with the following equations:

$$f,año\ DFP = \frac{1}{(Anúcleo, f - Anúcleo-parche, f)} (t_2 - t_1) \times$$

$$f,año\ DDFP = 1.3\ ha$$

Where:

$DDFPf,año$  = Annual primary degradation in the leak area (ha)

$t_2$  = Year end of monitoring period

$t_1$  = Initial year of the monitoring

period

Anúcleo,f

= Leakage area in core class at start-



Anúcleo-  
parche,f

up

=



monitoring period (ha)

Leakage area that  
changes from core to  
patch at end of  
monitoring period (ha)





$$DFS = \frac{1}{\left( \frac{f_2}{f_1} - t_1 \right) \times \left( \frac{f_2}{f_1} - t_1 \right)}$$

(Aperforado,  $f_1$  - Aperforado-parche,  $f_2$ )

$$f, \text{año } DDFS = 3.8 \text{ ha}$$

Where:

|                                |   |                                                                                        |
|--------------------------------|---|----------------------------------------------------------------------------------------|
| $DDFS_{f, \text{año}}$         | = | Annual secondary degradation in the area of                                            |
| $f_2$                          | = | Year end of monitoring period                                                          |
| $f_1$                          | = | Initial year of the monitoring period                                                  |
| $Anúcleo_{f, \text{start-up}}$ | = | Leakage area in perforated class at start-up monitoring period (ha)                    |
| $Anúcleo_{parche, f}$          | = | Leakage area changing from punched to patched at the end of the monitoring period (ha) |

## 11.5.2. GHG emissions during the monitoring period

### 11.5.2.1. Deforestation

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

$$EAREDD + \text{proy, año} = DEFREDD + \text{proy, año} \times tCO_{2eq}$$

$$EAREDD + \text{proy, año} = 230,130 \text{ tCO}_2e$$

Where:





the project (ha)

- = Year end of monitoring period
- = Initial year of the monitoring period





$$f, año EA = 23,203 \text{ tCO}_2\text{e}$$

Where:

$$\begin{aligned}
 EEAR_{f, año} &= \text{Annual emission in the leakage area (tCO}_2\text{/ha)} \\
 DDDEF_{f, año} &= \text{Annual deforestation in the area of leakage (ha)} \\
 &\quad \text{Dioxide from carbon dioxide} \\
 &\quad \text{e} \\
 &\quad \text{2} \quad \text{equivalent} \quad \text{total (tCO}_2\text{e/ha)} \\
 EAlb_{f, año} &= \text{Annual emissions from deforestation in the} \\
 &\quad \text{area of} \\
 &\quad \text{leakage in the baseline scenario (tCO}_2\text{e)}
 \end{aligned}$$

#### 11.5.2.2. Degradation

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

$$\begin{aligned}
 EAREDD_{+prooy, año} &= (DFPREDD_{+prooy, año} \times DTBCO_{2eq,1}) \\
 &\quad + (DFsREDD_{+prooy, año} \times DTBCO_{2eq,2})
 \end{aligned}$$

$$EAREDD_{+prooy, año} = 2.102 \text{ tCO}_2\text{e}$$

Where:

$$\begin{aligned}
 EAREDD_{+prooy, año} &= \text{Annual issuance in the project area for the period} \\
 &\quad \text{monitored (tCO}_2\text{/ha)} \\
 DFPREDD_{+prooy, año} &= \text{Annual primary degradation in the project area (ha)} \\
 &\quad \text{Carbon dioxide equivalent contained in the difference} \\
 2,1 &= \text{in total biomass per} \\
 &\quad \text{hectare in the class of} \\
 &\quad \text{primary degradation}
 \end{aligned}$$



(tCO<sub>2</sub>e/ha)

*DFsREDD+prooy,año*



=

Annual secondary degradation in the project area  
(ha)





2,2

=



Carbon dioxide equivalent  
contained in the difference in total  
biomass per hectare in the class of  
secondary degradation (tCO<sub>2</sub>e/ha)

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

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

$$f,año EA = 601.2 \text{ tCO}_2\text{e}$$

Where:

|               |              |                                                       |                                                                                                    |
|---------------|--------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|               | $EA_{f,año}$ | =                                                     | Annual emission in the area of leakage for the period monitored (tCO <sub>2</sub> /ha)             |
| $DDF_{f,año}$ | =            | Annual primary degradation in the leakage area (ha)   |                                                                                                    |
|               |              | Carbon dioxide equivalent contained in the difference |                                                                                                    |
|               | $2,1$        | =                                                     | in total biomass per hectare in the class of primary degradation (tCO <sub>2</sub> e/ha)           |
| $DFS_{f,año}$ | =            | Annual secondary degradation in the leakage area (ha) |                                                                                                    |
|               |              | Carbon dioxide equivalent contained in the            |                                                                                                    |
|               | $2,2$        | =                                                     | difference in total biomass per hectare in the secondary degradation class (tCO <sub>2</sub> e/ha) |

### 11.5.3. Quantification of the project's emission reductions

#### 11.5.3.1. Deforestation

Emission reductions from avoided deforestation in the monitoring period are estimated according to the equation:

$$REDEF, REDD+proy = (t_2 - t_1) \times (EADEF, lb, año - EADEF, REDD+proy, año - EADEF, f, año)$$



Where:

,+



,+ = 1,768,348 tCO<sub>2</sub>e



= Emission reductions from avoided deforestation in the project scenario (tCO<sub>2</sub>e)

|                         |   |                                                                                        |
|-------------------------|---|----------------------------------------------------------------------------------------|
| $t_2$                   | = | Year end of reporting period                                                           |
| $t_1$                   | = | Initial year of the reference period                                                   |
| $EADEF, lb, año$        | = | Annual emissions from deforestation in the baseline scenario base (tCO <sub>2</sub> e) |
| $EADEF, REDD+proy, año$ | = | Annual emission from deforestation in the project area (tCO <sub>2</sub> e)            |
| $EADEF, f, año$         | = | Annual emission from deforestation in the leakage area (tCO <sub>2</sub> e)            |

#### 11.5.3.2. Degradation

Emission reductions from avoided degradation are estimated from the following equation:

$$REDEG, REDD+proy = (t_2 - t_1) \times (EADEG, lb, año - EADEG, REDD+proy, año - EADEG, f, año)$$

$$, + = 124,362 \text{ tCO}_2\text{e}$$

Where:

|                         |   |                                                                                             |
|-------------------------|---|---------------------------------------------------------------------------------------------|
| $, +$                   | = | Emission reductions due to avoided degradation in the project scenario (tCO <sub>2</sub> e) |
| $t_2$                   | = | Year end of reporting period                                                                |
| $t_1$                   | = | Initial year of the reference period                                                        |
| $EADEG, lb, año$        | = | Annual emission of degradation under the line scenario base (tCO <sub>2</sub> e)            |
| $EADEG, REDD+proy, año$ | = | Annual degradation emission in the project area (tCO <sub>2</sub> e)                        |
| $EADEG, f, año$         | = | Annual emission of degradation in the leak area (tCO <sub>2</sub> e)                        |

#### 11.5.3.3. Total project emissions reduction

The total avoided deforestation and degradation emissions reductions are estimated from the following equation:



$$+ = + +$$

$$+ = 6,189,218 \text{ tCO}_2\text{e}$$

Where:

$$+ = \text{Reduction of total emissions from deforestation and degradation avoided in the scenario with project (tCO}_2\text{e)}$$

$$,+ = \text{Emission reductions from avoided deforestation in the project scenario (tCO}_2\text{e)}$$

$$,+ = \text{Emission reductions due to avoided degradation in the project scenario (tCO}_2\text{e)}$$

## 11.6. Quality control and quality assurance procedures

Annex 7, file *QC-QA Procedure Puerto Zábalo and Los Monos v1.pdf*, presents the procedure to be followed to ensure the quality of the information and that the GHG emissions estimates reflect the characteristics of the project in an accurate, consistent, complete and transparent manner.

## Risk Management

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

Table 23. Probability and impact matrix.

| Rating (Probability<br>x Impact) | Risk Classification |        |
|----------------------------------|---------------------|--------|
|                                  | Value               | Level  |
| 9                                | 3                   | High   |
| 6                                | 3                   | High   |
| 4                                | 2                   | Medium |



|   |   |        |
|---|---|--------|
| 3 | 2 | Medium |
| 2 | 1 | Under  |
| 1 | 1 | Under  |



Table 24. Project Risk Analysis.

| Dimension            | Risk                                                                                                          | Probability | Impact | Rating | Ranking |
|----------------------|---------------------------------------------------------------------------------------------------------------|-------------|--------|--------|---------|
| <b>Social</b>        | Forced displacements of members of the community                                                              | 1           | 3      | 3      | Medium  |
|                      | Weakening of governance structures defined by the indigenous reservation                                      | 1           | 3      | 3      | Medium  |
|                      | Community dissatisfaction with the REDD+ project implementation                                               | 1           | 3      | 3      | Medium  |
|                      | Economic dependence on income generated for the commercialization of CCVs                                     | 1           | 2      | 2      | Under   |
|                      | Cultural changes (e.g., loss of cultural practices) traditional IR)                                           | 1           | 1      | 2      | Under   |
| <b>Environmental</b> | Extreme weather events (e.g., floods), mass removal phenomena, etc.).                                         | 1           | 2      | 2      | Under   |
|                      | Displacement of deforestation and deforestation actions and degradation for the implementation of the project | 2           | 2      | 2      | Medium  |
|                      | Fires of anthropogenic origin                                                                                 | 2           | 2      | 4      | Medium  |
|                      | Expansion of the agricultural and livestock frontier                                                          | 2           | 2      | 4      | Medium  |
|                      | Pests and diseases in production systems                                                                      | 1           | 2      | 2      | Under   |
|                      | Changes in land use in the project area                                                                       | 3           | 2      | 4      | Medium  |
| <b>Financial</b>     | The project breaks even after more than 7 years                                                               | 1           | 2      | 2      | Under   |
|                      | Market price sensitivity                                                                                      | 1           | 3      | 3      | Medium  |
|                      | Annual budget deficit                                                                                         | 1           | 3      | 3      | Medium  |



| Dimension | Risk                                                                                         | Probability | Impact | Rating | Ranking |
|-----------|----------------------------------------------------------------------------------------------|-------------|--------|--------|---------|
|           | Delays in the implementation of the activities of the project due to poor budget programming | 1           | 2      | 2      | Under   |
|           | The project ensures a percentage of less than 50% financing                                  | 1           | 3      | 3      | Medium  |
|           | Financial viability of the project                                                           | 1           | 2      | 2      | Under   |

Below are the mitigation measures defined to mitigate the risks identified and presented in Table 24:

Table 25. Risk mitigation measures.

| Risk                                                                         | Mitigation measures                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Forced displacements of community members                                    | <ul style="list-style-type: none"> <li>Strengthening the governance structures defined by the RI</li> <li>Operation of the PQR Attention Mechanism (early alerts)</li> <li>Strengthening capacities for conflict management with community members</li> </ul> |
| Weakening of the governance structures defined by the indigenous reservation | Execution of the Governance component, whose actions include to strengthen governance structures                                                                                                                                                              |
| Community dissatisfaction with implementation of the REDD+ project           | Operation of the PQR Attention Mechanism (early alerts, early warnings, etc.) and design of actions to make the pertinent adjustments).                                                                                                                       |
| Economic dependence on the income generated by the marketing of CCVs         | Development of an alternative livelihoods component ensures that there is no economic dependence                                                                                                                                                              |

| Risk                                                                                                 | Mitigation measures                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cultural changes (e.g., loss of traditional IR practices)                                            | Execution of activities aimed at strengthening traditional practices and knowledge transfer (e.g., strengthening of traditional medicine, conservation of the traditional indigenous languages, among others) |
| Extreme weather events (e.g., floods, hurricanes, floods, droughts, flooding)<br>mass removal, etc.) | <ul style="list-style-type: none"> <li>• Project area monitoring</li> <li>• Development of passive restoration actions</li> </ul>                                                                             |
| Displacement of deforestation and degradation actions for the implementation of the project          | <ul style="list-style-type: none"> <li>• Monitoring of vegetation cover in the leakage area. defined for the project</li> </ul>                                                                               |
| Fires of anthropogenic origin                                                                        | <ul style="list-style-type: none"> <li>• Project area monitoring</li> <li>• Early warning and detection system</li> </ul>                                                                                     |
| Expansion of the agricultural and livestock frontier                                                 | <ul style="list-style-type: none"> <li>• Land management</li> <li>• Activities to improve the yield per unit area of the production systems.</li> <li>• Community agreements</li> </ul>                       |
| Pests and diseases in production systems                                                             | Technical assistance for the management of production systems                                                                                                                                                 |
| Changes in land use in the project area                                                              | <ul style="list-style-type: none"> <li>• Project area monitoring</li> <li>• Land management</li> </ul>                                                                                                        |
| The project reaches break-even point after more than 7 years                                         | The project breaks even before year 7 of implementation                                                                                                                                                       |
| Market price sensitivity                                                                             | Regulated prices for carbon tax management                                                                                                                                                                    |
| Annual budget deficit                                                                                | Within the framework of the project implementation, it was defined that the Annual Investment Plan will be prepared annually, with a ceiling of no more than must exceed the available budget amount          |



| Risk                                                                         | Mitigation measures                                                                                                                                                                                  |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Delays in the execution of project activities due to poor budget programming | Within the framework of the project implementation, it was defined that the Annual Investment Plan will be prepared annually, with a ceiling of no more than must exceed the available budget amount |
| The project assures a financing percentage lower than 50%                    | The project has more than 85% of the required financing. insured                                                                                                                                     |
| Financial viability of the project                                           | The project has positive financial indicators and presents a sustainable cash flow for its implementation period.                                                                                    |



## References

- Solano Municipal Mayor's Office (2019). *ACTION PLAN TO REDUCE DEFORESTATION IN THE MUNICIPALITY OF SOLANO, DEPARTMENT OF CAQUETA - STC 4360 DE 2018*. Retrieved from [https://solanocaqueta.micolombiadigital.gov.co/sites/solanocaqueta/content/files/o\\_00433/21606\\_plan-de-accion-contra-deforestacion--solano-v6.pdf](https://solanocaqueta.micolombiadigital.gov.co/sites/solanocaqueta/content/files/o_00433/21606_plan-de-accion-contra-deforestacion--solano-v6.pdf)
- ANLA. (2021). *Catalog of maps*. Retrieved from SIAC: <http://sig.anla.gov.co:8083/>
- Calderón-Sáenz, E. (2006). *Red book of plants of Colombia. Volume 3: Orchids. Part One*. Bogotá: Alexander von Humboldt Institute.
- Cárdenas L., D., & Salinas, N. R. (2007). *Red book of plants of Colombia. Volume 4. Threatened timber species: Part One*. Bogotá: Instituto Amazónico de Investigaciones Científicas SINCHI.
- Cárdenas López, D. N., Casataño Arboleda, N., Marín Canchala, M., & Osorno Muñoz, E. (2019). *Flora and fauna species. From Jirijirimo to Cerro Morroco, a Sample of Biodiversity in an Ancestral Territory*. Bogotá: Instituto Amazónico de Investigaciones Científicas SINCHI.
- Office of the Comptroller General of the Republic (February 06, 2017). *Report on the state of Natural Resources and the Environment 2016-2017*. Retrieved from Comptroller's Office: [http://campusvirtual.contraloria.gov.co/campus/docsBiblio/RecursosNaturales\\_2016-2017\\_Chapter05.pdf](http://campusvirtual.contraloria.gov.co/campus/docsBiblio/RecursosNaturales_2016-2017_Chapter05.pdf)
- CORPOAMAZONIA. (2015). *DETERMINANTS AND ENVIRONMENTAL ISSUES FOR LAND USE PLANNING IN THE DEPARTMENT OF CAQUETÁ*. Retrieved from [http://www.corpoamazonia.gov.co/files/Ordenamiento/Determinantes/Caqueta\\_201501.pdf](http://www.corpoamazonia.gov.co/files/Ordenamiento/Determinantes/Caqueta_201501.pdf)
- CORPOAMAZONIA (n.d.). *Department of Caquetá*. Retrieved from [http://www.corpoamazonia.gov.co/region/Caqueta/Caq\\_Natural.htm](http://www.corpoamazonia.gov.co/region/Caqueta/Caq_Natural.htm)
- DANE. (April 14, 2020). *Ethnic groups - Technical information*. Retrieved from DANE:



[https://www.dane.gov.co/index.php/estadisticas-por-tema/demografia-y-población/grupos-eticos/informacion-tecnica](https://www.dane.gov.co/index.php/estadisticas-por-tema/demografia-y-poblacion/grupos-eticos/informacion-tecnica)

Gaia Amazonas (January 14, 2019). *The chagra: source of food, system integrates and foundation of life*. Retrieved from Gaia Amazonas:



[https://www.gaiaamazonas.org/noticias/2019-01-14\\_la-chagra-fuente-de-alimento-system-integral-and-foundation-of-life/#:~:text=Every%20people%20ind%20ind%C3%ADgena%20le,the%20coca%20and%20tobacco.](https://www.gaiaamazonas.org/noticias/2019-01-14_la-chagra-fuente-de-alimento-system-integral-and-foundation-of-life/#:~:text=Every%20people%20ind%20ind%C3%ADgena%20le,the%20coca%20and%20tobacco.)

Gaia Amazonas (n.d.). *Geovisor of the Colombian Amazon*. Retrieved from Gaia Amazonas: <https://www.gaiaamazonas.org/lamazoniaenmapas/13/mapasInteractivos/>

Government of Caquetá. (2013). *Biodiversity and climate change in the ecosystems of Caquetá*. Retrieved from [https://issuu.com/gobernacioncaqueta/docs/biodiversidad\\_y\\_cambio\\_climatico\\_en\\_los\\_ecosistema](https://issuu.com/gobernacioncaqueta/docs/biodiversidad_y_cambio_climatico_en_los_ecosistema)

Government of Caqueta (2012). *MUNICIPAL PLAN FOR DISASTER RISK MANAGEMENT IN THE MUNICIPALITY OF SOLANO*. Retrieved from [https://caqueta.micolombiadigital.gov.co/sites/caqueta/content/files/000623/31145\\_pmgrd-solano-final.pdf](https://caqueta.micolombiadigital.gov.co/sites/caqueta/content/files/000623/31145_pmgrd-solano-final.pdf)

IDEAM. (2013). *Zoning and Codification of Hydrographic Basins*. Bogotá, Colombia. Retrieved from IDEAM: <http://documentacion.ideam.gov.co/openbiblio/bvirtual/022655/MEMORIA%20MAPA%20ZONIFICACION%20HIDROGRAFICA.pdf>

IDEAM. (2014a). *Monitoring of the area covered by natural forest*. Retrieved from IDEAM: [http://www.ideam.gov.co/web/ecosistemas/superficie-cubierta-por-bosque-natural?p\\_p\\_id=110\\_INSTANCE\\_dqBGl6hKQrD&p\\_p\\_lifecycle=o&p\\_p\\_state=normal&p\\_p\\_mode=view&p\\_p\\_col\\_id=column-2&p\\_p\\_col\\_pos=1&p\\_p\\_col\\_count=2&110\\_INSTANCE\\_dqBGl6hKQrD\\_struts\\_action=%2Fdo](http://www.ideam.gov.co/web/ecosistemas/superficie-cubierta-por-bosque-natural?p_p_id=110_INSTANCE_dqBGl6hKQrD&p_p_lifecycle=o&p_p_state=normal&p_p_mode=view&p_p_col_id=column-2&p_p_col_pos=1&p_p_col_count=2&110_INSTANCE_dqBGl6hKQrD_struts_action=%2Fdo)

IDEAM. (2014b). *Regionalization of Colombia according to the seasonality of monthly mean precipitation, through Principal Component Analysis (PCA)*. Retrieved from IDEAM: <http://www.ideam.gov.co/documents/21021/21789/Regionalizaci%C3%B3n%20de%20la%20lluvia%20en%20Colombia.pdf/92287f96-840f-4408-8e76-98b668b83664>

IDEAM. (2015). *Annual precipitation*. Retrieved from IDEAM:



[http://www.ideam.gov.co/documents/10182/98893526/Precipitacion+Annual+A%C3%](http://www.ideam.gov.co/documents/10182/98893526/Precipitacion+Annual+A%C3%99)



Bio+2015.pdf/4fba809f-2e5e-4965-be36-c566ba100153?version=1.0.

Alexander von Humboldt Biological Resources Research Institute (1997). *National report on the state of biodiversity in Colombia. Volume I*. Retrieved from





[https://www.researchgate.net/profile/Andres\\_Etter/publication/266385454\\_Ecosistema-de-Bosque-Humedo-Tropical/links/542ec7280cf27e39fa965548/Ecosistema-de-Bosque-Humedo-Tropical.pdf](https://www.researchgate.net/profile/Andres_Etter/publication/266385454_Ecosistema-de-Bosque-Humedo-Tropical/links/542ec7280cf27e39fa965548/Ecosistema-de-Bosque-Humedo-Tropical.pdf)

IUCN (2021). *Red List*. Retrieved from IUCN: <https://www.iucnredlist.org/>

Londoño Vega, A. C., & Alvarez Dávila, E. (1997). Floristic composition of two forests (terra firme and varzea) in the Araracuara region, Colombian Amazonia. *Caldasia* 19, 431-463.

MinAmbiente (2018). *Visión Amazonía and its projects*. Retrieved from Visión Amazonía: <https://visionamazonia.minambiente.gov.co/proteccion-de-la-amazonia/>

Ministry of the Interior & Regional Indigenous Council of the Middle Amazon (CRIMA). (2012).

*DIAGNOSIS AND LINES OF ACTION OF THE UITOTO PEOPLE SAFEGUARD PLAN, ARARACUARA CHAPTER, PRELIMINARY DIAGNOSIS REPORT*. Retrieved of Interadministrative Partnership Agreement No. 26345-131-2012: [https://www.mininterior.gov.co/sites/default/files/p.s\\_uitoto\\_araracuara.pdf](https://www.mininterior.gov.co/sites/default/files/p.s_uitoto_araracuara.pdf)

Mojica, J. I., Usma Oviedo, J. S., Álvarez León, R., & Lasso, C. A. (2012). Red book of freshwater fishes of Colombia 2012. Bogotá D.C., Cundinamarca, Colombia: Instituto de Investigación de Recursos Biológicos Alexander von Humboldt.

Morales-Betancourt, M. A., Lasso, C. A., Páez, V. P., & Bock, B. C. (2015). Red book of reptiles of Colombia (2015). Bogotá D.C., Cundinamarca, Colombia: Instituto de Investigación de Recursos Biológicos Alexander von Humboldt.

One Earth (2020). *Caquetá Moist Forest*. Retrieved from One Earth: <https://www.oneearth.org/ecoregions/caqueta-moist-forests/>

National Natural Parks of Colombia (2016). Cambio Bosque 2000-2014. Bogotá, Colombia.

Peña-Venegas, C. P., & Vanegas Cardona, G. I. (December 2010). *Dynamics of Amazonian soils: degradation processes and alternatives for their recovery*. Retrieved from Instituto Amazónico de Investigaciones Científicas - SINCHI: <https://sinchi.org.co/files/publicaciones/publicaciones/pdf/librosuelosweb.pdf>

Peñuela Mora, M. C. (2014). *Understanding Colombian Amazonian White Sand Forests*.  
Panamericana Formas e Impresos SA.

Phillips Bernal, J. F., Duque Montoya, Á., Yepes Quintero, A., Cabrera Torres, K. R., García



Dávila, M. C., Navarrete Encinales, D. A., Cardenas Lopez, D. (2011). Estimation of current (2010) carbon stocks stored in aboveground biomass in.



natural forests of Colombia. Bogotá, Colombia. Retrieved from <http://documentacion.ideam.gov.co/openbiblio/bvirtual/022100/EstimaciondelasReservas2010.pdf>

- PID Amazonía . (2017). *EXPAND TWO INDIGENOUS RESERVES TO CREATE A LARGE CONSERVATION CORRIDOR IN THE AMAZON*. Retrieved from <https://www.pidamazonia.com/content/amp1%C3%ADan-dos-reserves-ind%C3%ADgenas-para-crear-un-gran-corredor-de-conservaci%C3%B3n-en-el-amazonas>
- Rangel-Ch, O. (2008). The vegetation of the Colombian Amazon region. In *Colombia Diversidad Biótica VII : vegetation, palynology and paleoecology of the Colombian Amazon* ( pp. 1- 53). Bogotá: Universidad Nacional de Colombia.
- Renjifo, L. M., Amaya-Villarreal, Á. M., Burbano-Girón, J., & Velásquez-Tibatá, J. (2016). *Red book of birds in Colombia*. Bogotá: Pontificia Universidad Javeriana.
- reserve Puerto Zábalo and Los Monos (2016). *Environmental Management Plan*.
- Rodríguez-Mahecha, J. V., Amézquita, A., & Lynch, J. D. (2004). *Libro rojo de anfibios de Colombia*. Bogotá: Conservation International Colombia.
- Rudas L., A., & Prieto C., A. (1998). Floristic analysis of the Amacayucu National Natural Park and Mocagua Island, Amazonas (Colombia). *Caldasia* 20, 142-172.
- RUEDA-ALMONACID, J. V., LYNCH, J., & AMÉZQUITA, A. (2004). *Red book of amphibians of* (Conservation International Colombia, Instituto de Ciencias Naturales - Universidad Nacional de Colombia, Ministerio del Medio Ambiente). Retrieved from Serie Libros Rojos de Especies Amenazadas de Colombia.
- Sánchez Sáenz, M. (1997). *Preliminary annotated catalog of the flora of middle Caquetá. Studies of the Colombian Amazon* (Vol. 12). Bogotá, Colombia: Tropenbos.
- SINCHI. (2009). *Food security in indigenous communities of the Amazon: yesterday and today*. Retrieved from SINCHI: <https://sinchi.org.co/files/publicaciones/publicaciones/pdf/Seguridad%20alimentaria%20Web.pdf>