

MONITORING REPORT COCOMACIA COMMUNITY REDD+ PROGRAM, CHOCO/ANTIOQUIA COLOMBIA



Project title	COCOMACIA Community REDD+ Program, Choco/Antioquia Colombia
Project ID	2071
Crediting period	01 February 2021 – 31 January 2061
Monitoring period	01 February 2021 – 31 December 2023
(CCB) GHG accounting period	01 February 2021 – 31 December 2023; 3-years total period
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CCB Standards version	CCB 3.1Version number of the CCB Standards used by the project
Project location	Colombia, Departments of Choco and limited portion of Antioquia (approximately 3%)
Project proponent(s)	Consejo Comunitario Mayor de la Asociación Campesina Integral del Atrato (COCOMACIA) Pedro Julio Rivas Mena, Representante Legal del Consejo Comunitario info@cocomacia.org.co 57 3113111476 Choco Conservation, LLC Leslie Durschinger, Founder, CEO admin@terraglobalcapital.com +1.415.215.5941
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Prepared by	Terra Global Capital

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1 SUMMARY OF PROJECT BENEFITS

1.1 Unique Project Benefits

Outcome or Impact	Achievements during the Monitoring Period	Section Reference	Achievements during the Project Lifetime
1) Climate adaptation in face of climate change	0% of households interviewed who have adopted sustainable agricultural practices	4.1.1	0% of households interviewed that have adopted sustainable agricultural practices
2) Increase agriculture income and knowledge to enhance livelihoods	0% of households interviewed with increased knowledge on sustainable agriculture	4.1.1	0% of households interviewed who increased knowledge on sustainable agriculture
3) Increase abundance of trigger species in the Project Area	7 species benefit from reduced threats as a result of project activities EN species (6) <ul style="list-style-type: none"> • <i>Penelope orton</i> • <i>Rhinella acrolopha</i> • <i>Colostethus imbricolus</i> • <i>Oophaga andresi</i> • <i>Strabomantis bufoniformis</i> • <i>Ateles fusciceps</i> CR species (1) <ul style="list-style-type: none"> • <i>Oophaga lehmani</i> 	5.1.3	7 species

1.2 Standardized Benefit Metrics

Cat egory	Metric	Achievements during Monitoring Period	Section Reference	Achievements during the Project Lifetime
GHG emission reductions & removals	Net estimated emission removals in the project area, measured against the without-project scenario	N/A	N/A	N/A
	Net estimated reductions in the project area, measured against the without-project scenario	Net estimated reductions from AUDef are 2,863,992 tons of CO ₂ e	3.2.4	Net estimated reductions from AUDef are 2,863,992 tons of CO ₂ e
		Net estimated reductions from AUdeg are 2,827,910 tons of CO ₂ e		Net estimated reductions from AUdeg are 2,827,910 tons of CO ₂ e
	Total Net estimated reductions for the crediting period are 5,691,902 tons of CO ₂ e		Total Net estimated reductions for the crediting period are 5,691,902 tons of CO ₂ e	

Cat egory	Metric	Achievements during Monitoring Period	Section Reference	Achievements during the Project Lifetime
Forest ¹ cover	For REDD ² projects: Number of hectares of reduced forest loss in the project area measured against the without-project scenario	<p>9,721 hectares that would have been deforested in the baseline were protected by the program.</p> <p>11,059 hectares that would have been degraded in the baseline but were protected by the program.</p>	3.2.2	<p>9,721 hectares that would have been deforested in the baseline were protected by the program.</p> <p>11,059 hectares that would have been degraded in the baseline but were protected by the program.</p>
	For ARR ³ projects: Number of hectares of forest cover increased in the project area measured against the without-project scenario	N/A	N/A	N/A
Improved land management	Number of hectares of existing production forest land in which IFM ⁴ practices have occurred as a result of the project's activities, measured against the without-project scenario	N/A	N/A	N/A
	Number of hectares of non-forest land in which improved land management has occurred as a result of the project's activities, measured against the without-project scenario	N/A	N/A	N/A
Training	Total number of community members who have improved skills and/or knowledge resulting from training provided as part of project activities	5,140 community members had improved skills and/or knowledge	4.1.1	5,140 community members had improved skills and/or knowledge
	Number of female community members who have improved skills and/or knowledge resulting from training provided	38% of 1,943 women have improved skills and/or knowledge	4.1.1	38% of 1,943 women have improved skills and/or knowledge

¹ Land with woody vegetation that meets an internationally accepted definition (e.g., UNFCCC, FAO, or IPCC) of what constitutes a forest, which includes threshold parameters, such as minimum forest area, tree height and level of crown cover, and may include mature, secondary, degraded and wetland forests (*VCS Program Definitions*)

² Reduced emissions from deforestation and forest degradation (REDD) – Activities that reduce GHG emissions by slowing or stopping conversion of forests to non-forest land and/or reduce the degradation of forest land where forest biomass is lost (*VCS Program Definitions*)

³ Afforestation, reforestation and revegetation (ARR) – Activities that increase carbon stocks in woody biomass (and in some cases soils) by establishing, increasing and/or restoring vegetative cover through the planting, sowing and/or human-assisted natural regeneration of woody vegetation (*VCS Program Definitions*)

⁴ Improved forest management (IFM) – Activities that change forest management practices and increase carbon stock on forest lands managed for wood products such as saw timber, pulpwood, and fuelwood (*VCS Program Definitions*)

Category	Metric	Achievements during Monitoring Period	Section Reference	Achievements during the Project Lifetime
	as part of project activities of project activities			
Employment	Total number of people employed in of project activities, ⁵ expressed as number of full-time employees ⁶	8 people are employed as full-time employees	4.1.1	8 people are employed as full-time employees
	Number of women employed in project activities, expressed as number of full-time employees	2 women are employed as full-time employees	4.1.1	2 women are employed as full-time employees
Livelihoods	Total number of people with improved livelihoods ⁷ or income generated as a result of project activities	209 people have improved income from project activities, from patrolling and program coordination	4.1.1	209 people have improved income from project activities, from patrolling and program coordination
	Number of women with improved livelihoods or income generated as a result of project activities	35 women have improved income from project activities	4.1.1	35 women have improved income from project activities
Health	Total number of people for whom health services were improved as a result of project activities, measured against the without-project scenario	N/A	N/A	N/A
	Number of women for whom health services were improved as a result of project activities, measured against the without-project scenario	N/A	N/A	N/A
Education	Total number of people for whom access to, or quality of, education was improved as a result of project activities, measured against the without-project scenario	N/A	N/A	N/A
	Number of women and girls for whom access to, or quality of, education was improved as a result of project activities, measured against the without-project scenario	N/A	N/A	N/A

⁵ Employed in project activities means people directly working on project activities in return for compensation (financial or otherwise), including employees, contracted workers, sub-contracted workers, and community members that are paid to carry out project-related work.

⁶ Full time equivalency is calculated as the total number of hours worked (by full-time, part-time, temporary and/or seasonal staff) divided by the average number of hours worked in full-time jobs within the country, region, or economic territory (adapted from UN System of National Accounts (1993) paragraphs 17.14[15.102]; [17.28])

⁷ Livelihoods are the capabilities, assets (including material and social resources) and activities required for a means of living (Krantz, Lasse, 2001. *The Sustainable Livelihood Approach to Poverty Reduction*. SIDA). Livelihood benefits may include benefits reported in the Employment metrics of this table.

Category	Metric	Achievements during Monitoring Period	Section Reference	Achievements during the Project Lifetime
Water	Total number of people who experienced increased water quality and/or improved access to drinking water as a result of project activities, measured against the without-project scenario	N/A	N/A	N/A
	Number of women who experienced increased water quality and/or improved access to drinking water as a result of project activities, measured against the without-project scenario	N/A	N/A	N/A
Well-being	Total number of community members whose well-being ⁸ was improved as a result of project activities	296 community member have improved well-being	4	296 community member have improved well-being
	Number of women whose well-being was improved as a result of project activities	35 women have improved well-being	4	35 women have improved well-being
Biodiversity conservation	Change in the number of hectares significantly better managed by the project for biodiversity conservation, ⁹ measured against the without-project scenario	639,550 hectares better managed by the project for biodiversity conservation.	3.2.2	639,550 hectares better managed by the project for biodiversity conservation.
	Number of globally Critically Endangered or Endangered species ¹⁰ benefiting from reduced threats as a result of project activities, ¹¹ measured against the without-project scenario	7 species IUCN listed as Critically Endangered (CR) or Endangered Species (EN) 6 Endangered <i>Penelope ortonii</i> <i>Rhinella acrolopha</i> <i>Colostethus imbricolus</i> <i>Oophaga andresi</i> <i>Strabomantis bufoniformis</i> <i>Ateles fusciceps</i> 1 Critically Endangered <i>Oophaga lehmani</i>	5.1.3	7 species

⁸ Well-being is people's experience of the quality of their lives. Well-being benefits may include benefits reported in other metrics of this table (e.g. Training, Employment, Health, Education, Water, etc.), but could also include other benefits such as empowerment of community groups, strengthened legal rights to resources, conservation of access to areas of cultural significance, etc.

⁹ Biodiversity conservation in this context means areas where specific management measures are being implemented as a part of project activities with an objective of enhancing biodiversity conservation.

¹⁰ Per IUCN's Red List of Threatened Species

¹¹ In the absence of direct population or occupancy measures, measurement of reduced threats may be used as evidence of benefit

2 PROJECT DETAILS

2.1 Summary Description of the Implementation Status of the Project

2.1.1 Summary Description of the Project (VCS, 2.1, 3.6; CCB, G1.2)

This is an Agriculture, Forestry and Other Land Use (AFOLU) program which is a REDD+ avoided unplanned deforestation and degradation grouped project type, that is nested into the Choco Department JNR FREL (VCS ID 5079). The First Project Activity Instance encompasses the forest area of the territory of the *Consejo Comunitario Mayor de la Asociación Campesina Integral del Atrato (COCOMACIA)*, which is a legally recognized Black community territory (Consejo), with tenure over 639,880 hectares of forest of which 74.9% is in Chocó and 25.1% in the Antioquia Department.

Starting with the signing of the REDD+ Agreement in February 2021, the project activities that have been implemented within the Project Activity Instance to reduce deforestation and degradation through improved governance and enforcement of forest areas at risk as well as implement livelihood activities to address the main drivers, agents and underlying causes of deforestation. The revenue from monetization of the emission reductions generated from the climate component of the Project Activity Instance will be used to provide to support the Project Objectives and the targeted climate, community, and biodiversity outcomes.

During this monitoring period, where activities were financed with private sector reimbursable climate finance the implementation of Program activities started. This includes the establishment of the REDD+ Management Team that is staffed fully with COCOMACIA community members, the engagement and awareness meetings throughout the nine zones and 124 communities, start of community patrolling,

The main Program objectives are three-fold: 1) mitigation of climate change by reducing carbon dioxide emissions from land-use activities that result in deforestation and degradation, 2) improve community livelihoods, especially for women and vulnerable groups, by strengthening community land-use rights and through alternative livelihood activities and carbon finance, and 3) contribute to the conservation of biodiversity by enhancing the extent and connectivity of intact natural forest cover, protecting and bolstering populations of threatened native species.

The Program seeks to produce the following outcomes:

1. Robust administrative and fiscal management of the REDD+ Program led by COCOMACIA
2. The Program area has clear boundaries and land tenure secured with internal management plans and use rights recognized and applied by local communities
3. Strengthened governance, planning and zoning capacity for conservation of the Program Area
4. Artisanal and traditional mining areas are carried out in accordance with agreements, zoning and protocols established by the Local Community Councils
5. Diversified agricultural production (legal crops) to facilitate communities' access to food

6. Reduction of the expansion of illicit crops in the program area
7. Increased income of participants from Program communities (crops and NTFPs)
8. Continuous monitoring of the Program Activities and Outcomes
9. Climate Finance repaid and program revenue generated through monetization of emission reductions
10. Validation of emission reductions and social and biodiversity benefits
11. Verification of emissions reductions and social and biodiversity benefits
12. Financing and monetization of emission reductions
13. Additional environmental and livelihood programs

These objectives and their related activities are intended to address the key drivers of deforestation and forest degradation including shifting cultivation for agriculture, illegal deforestation, and fuelwood gathering. It is expected that approximately 45,000 people will benefit from this project.

The Program will generate an estimated 2,801,035 tCO₂e average annual emission reductions for a total of 112,041,399 million tCO₂e emission reductions over the 40-year crediting period. During the first Monitoring Period (2021-2023) the estimated net emission reductions and removals from AUDef are 2,863,992 tCO₂e, emission reductions and removals from AUdeg are 2,827,910 tCO₂e for a total of 5,691,902 tCO₂e.

2.1.2 Audit History (VCS, 4.1)

Audit Type	Period	Program	VVB Name		Number of years
Validation	01 February 2021 – 31 January 2061	VSC-CCB	SCS Services	Global	40 years
Verification	01 February 2021 – 31 December 2023	VSC-CCB	SCS Services	Global	3 years

2.1.3 Sectoral Scope and Project Type (VCS, 3.2)

Sectoral Scope	14: Agriculture, forestry, and other land use (AFOLU).
AFOLU Project Category	Reducing Emissions from deforestation and Degradation (REDD).
Project Activity Type	Avoided Unplanned Deforestation & Degradation (AUDD).

2.1.4 Project Proponent (VCS, 3.7; CCB, G1.1)

Organization name	Consejo Comunitario Mayor de la Asociación Campesina Integral del Atrato - COCOMACIA
Contact person	Pedro Julio Rivas Mena
Title	Legal Representative of the Community Council

Address	Carrera 3ª No.23 -26 Quibdó, Choco
Telephone	+57 3113111476
Email	info@COCOMACIA.org.co

Organization name	Choco Conservation, LLC
Contact person	Leslie Durschinger
Title	Founder,CEO
Address	6114 La Salle Suite 441 , Oakland, CA 94611 USA San Francisco, CA 94104 USA
Telephone	+1 415-400-4491
Email	admin@terraglobalcapital.com

2.1.5 Other Entities Involved in the Project

Terra Global is responsible for the technical development of the JNR FREL, Project Description, and Monitoring Reports that support the listing, validation and verification (as defined in the Verra Standard). This includes the procedures and training for field development, providing CODECHOCO with the training and support to manage the spatial allocation of the FREL to the Project Areas, and managing the validation and verification process. Terra Global is also providing CODECHOCO a FREL allocation software tool to calculate emissions for the Project Areas and across the JNR Area.

Organization name	Terra Global Capital, LLC
Role in the project	Carbon Developer, Registry Manager
Contact person	Leslie Durschinger
Title	Founder, CEO, CIO
Address	6114 La Salle Suite 441 , Oakland, CA 94611 USA
Telephone	+1 415-215-5941
Email	admin@terraglobalcapital.com

CODECHOCO, a legally authorized government agency to oversee natural resources in the Department of Choco, provides all oversight for the activities related to natural resources, will administer the FREL allocation of other projects seeking nesting under the JNR FREL and supports stakeholders within the department under the FREL. It has and will continue to accompany and facilitate meetings to disseminate information on the jurisdictional baseline in the Choco Department.

Organization name	Corporación Autónoma Regional para el Desarrollo Sostenible del Chocó (CODECHOCO)
Role in the project	JNR FREL Proponent
Contact person	Arnold Alexander Rincón López,
Title	General Director and Legal Representative
Address	Carrera 1 # 22 – 96 - Quibdó - Chocó - Colombia
Telephone	+57 (604) 6711510
Email	contacto@codechoco.gov.co

Terra Global Investment Management, LLC (TGIM) secured the private sector climate finance that was provided initially in 2021 and provided bridge funding to issuance. In addition, TGIM is the exclusive marketing agent for the VCUs of the Program.

Organization name	Terra Global Investment Management, LLC
Role in the project	Investment Manager and Investor
Contact person	Leslie Durschinger
Title	Founder, CEO, CIO
Address	6114 La Salle Suite 441 , Oakland, CA 94611 USA
Telephone	+1 415-215-5941
Email	admin@terraglobalcapital.com

2.1.6 Project Start Date (VCS, 3.8)

Project start date	01-February-2021
Justification	The start date is defined as the date when the REDD+ agreement was signed between COCOMACIA and Terra Global Capital, which led to the implementation of Program activities to start the generation of emission reductions.

2.1.7 Benefits Assessment and Project Crediting Period (VCS, 3.9; CCB, G1.9)

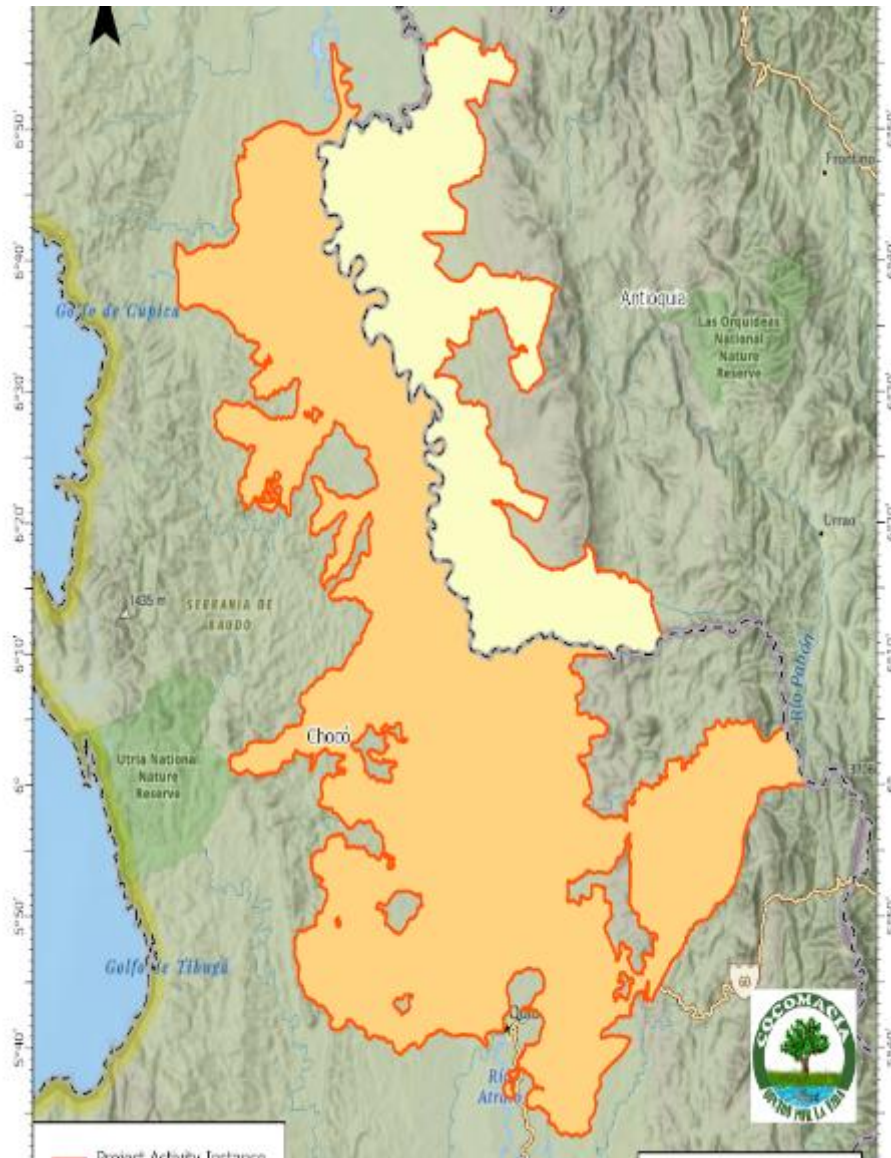
Crediting Period	<p>The Program's initial crediting period is 40 years with the intention of renewing the period for a maximum of 100 years. The chosen crediting period complies with VCS Program requirements outlined in Section 3.9 of the VCS Standard V 4.6. This period aligns with AFOLU project guidelines, allowing for initial crediting periods ranging from 20 to 100 years, renewable up to four times. As the Project falls under AFOLU and aims for carbon dioxide removals, the selected timeframe adheres to project regulations. Additionally, the Program has a robust management plan as per VCS requirements.</p> <p>State the selected crediting period and justify how it conforms with the VCS Program requirements</p>
Start Date of First or Fixed Crediting Period	01 February 2021
Total Number of Years of Crediting Period	<p>The Program's initial crediting period is 40 years with the intention of renewing the period for a maximum of 100 years.</p> <p>The Program's initial crediting period is 40 years with the intention of renewing the period for a maximum of 100 years.</p>
CCB Benefits Assessment Period	01 February 2021 – 31 January 2061 (40 years)

2.1.8 Project Location (VCS, 3.11; CCB, G1.3)

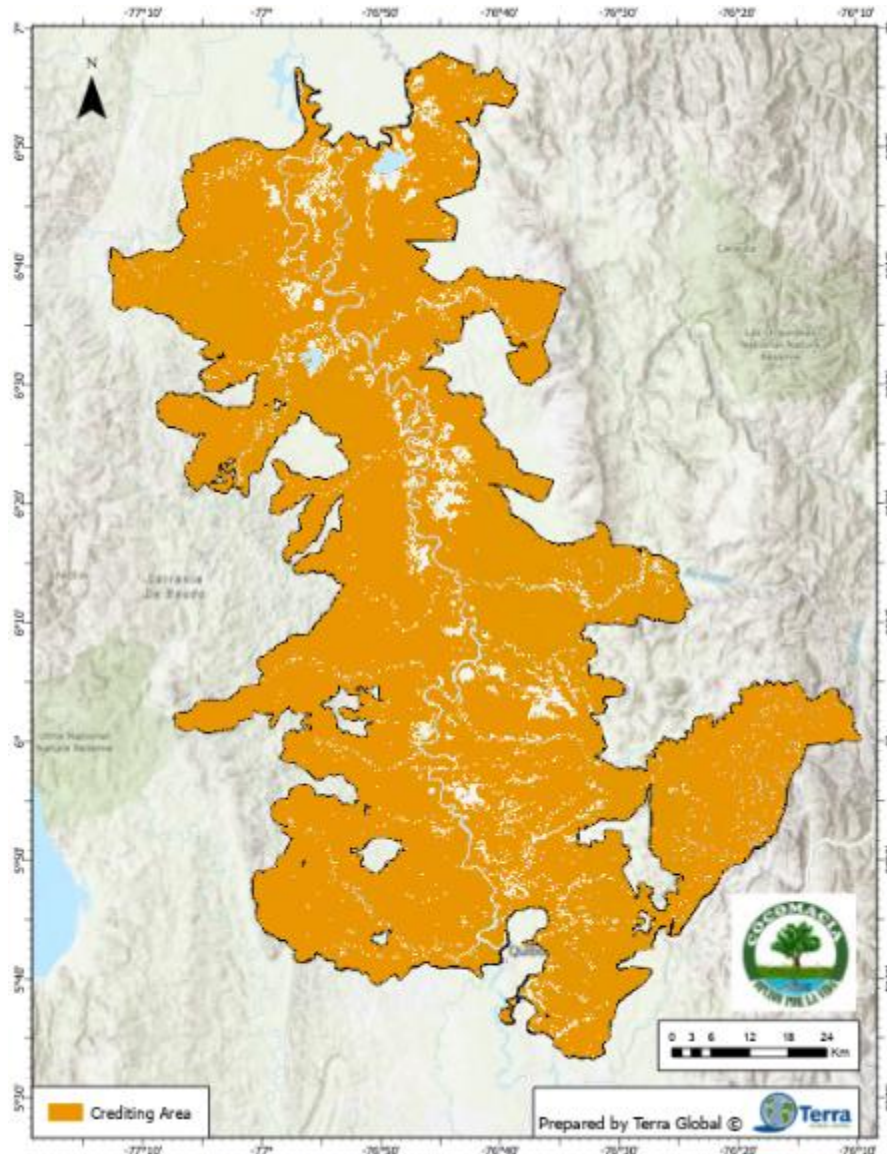
The COCOMACIA REDD+ Program is located in the departments of Chocó, with a small percentage of their territory extending into Antioquia of Colombia, at coordinates 6° 13' 41.8" N and 76° 44' 50.7" W, 6° 13' 42" N 76° 44' 51" W in the in the Colombian Pacific, also called Chocó Biogeographic (*Map 1*).



Map 1. First Project Activity Instance in the context of the Jurisdictional Area



Map 2. First Project Activity Instance by Departments Division



Map 3. Crediting Area of the Project Activity Instance at Project Start

2.1.9 Title and Reference of Methodology (VCS, 3.1)

The Program includes two spatially explicitly separated activities: 1) Avoided Unplanned Deforestation (UDef) and 2) Avoided unplanned degradation (UDeg), each activity uses a different set of methodologies, modules and tools from the VCS Standard. UDef is using a jurisdictional FREL for the Department of Choco (ID 5079) validated under the Jurisdictional and Nested REDD+ (JNR) Requirements v 3.4, using JNR Scenario 1 Requirements, v4.1 and issuing VCUs under the methodology “VM0048 Reducing Emissions from Deforestation and Forest Degradation, v1.0”. UDeg uses the VCS-Approved methodology “VM0006 Methodology for Carbon Accounting for Mosaic and Landscape-scale REDD Projects v2.1.”

The Program will apply the following VCS frameworks, methodologies, and tools listed in *Table 1* and *Table 2*.

Table 1. VCS Frameworks, Methodologies, and Tools used for UDef in this Program

Type (methodology, tool, module)	Reference ID (if applicable)	Title	Version
Framework	N/A	JNR Requirements Scenario 1	v4.1
Methodology	VM0048	VM0048 Reducing Emissions from Deforestation and Forest Degradation	v1.0
Module	VMD0055	VMD0055 Estimation of Emission Reductions from Avoiding Unplanned Deforestation	v1.0
Module	VMD0002	VMD0002 Estimation of Carbon Stocks in the Dead Wood Pool (CP-D)	v1.1
Module	VMD0003	VMD0003 Estimation of Carbon Stocks in the Litter Pool (CP-L)	v1.1
Module	VMD0004	VMD0004 Estimation of Carbon Stocks in the Soil Organic Carbon Pool (CP-S)	v1.1
Module	VMD0005	VMD0005 Estimation of Carbon Stocks in the Long-Term Wood Products Pool (CP-W).	v1.1
Module	VMD0016	VMD0016 Methods for Stratification of the Project Area (X-STR)	V1.3
Tool	VT0005	VT0005 Tool for measuring aboveground live forest biomass using remote sensing	V1.0
Tool	VT0007	VT0007, Unplanned Deforestation Allocation (UDef-A)	v1.0

Table 2. VCS Frameworks, Methodologies, and Tools used for UDeg in this Program

Type (methodology, tool, module)	Reference ID (if applicable)	Title	Version
Framework	N/A	JNR Requirements Scenario 1	v4.1
Methodology	VM0048	VM0048 Reducing Emissions from Deforestation and Forest Degradation	v1.0
Methodology	VM0006	Methodology for Carbon Accounting for Mosaic and Landscape-scale REDD Projects	v2.2
Module	VMD0002	VMD0002 Estimation of Carbon Stocks in the Dead Wood Pool (CP-D)	v1.1
Module	VMD0003	VMD0003 Estimation of Carbon Stocks in the Litter Pool (CP-L)	v1.1
Module	VMD0004	VMD0004 Estimation of Carbon Stocks in the Soil Organic Carbon Pool (CP-S)	v1.1
Module	VMD0005	VMD0005 Estimation of Carbon Stocks in the Long-Term Wood Products Pool (CP-W).	v1.1
Module	VMD0016	VMD0016 Methods for Stratification of the Project Area (X-STR)	v1.3
Module	VMD0055	Estimation of Emission Reductions from Avoiding Unplanned Deforestation	v1.1
Tool	VT0005	VT0005 Tool for measuring aboveground live forest biomass using remote sensing	v1.0
Tool	VT0007	VT0007, Unplanned Deforestation Allocation (UDef-A)	v1.0

2.1.10 Double Counting and Participation under Other GHG Programs (VCS, 3.23; CCB, G5.9)

2.1.10.1 No Double Issuance

Is the project receiving or seeking credit for reductions and removals from a project activity under another GHG program, or any other form of community, social, or biodiversity unit or credit?

- Yes No

2.1.10.2 Registration in Other GHG Programs

Was the project registered or seeking registration under any other GHG programs?

- Yes No

2.1.10.3 Projects Rejected by Other GHG Programs

Has the project been rejected by any other GHG programs?

- Yes No

2.1.11 Double Claiming, Other Forms of Credit, and Scope 3 Emissions (VCS, 3.24)

2.1.11.1 No Double Claiming with Emissions Trading Programs or Binding Emission Limits

Are project reductions and removals or project activities also included in an emissions trading program or binding emission limit? See the VCS Program Definitions for definitions of emissions trading program and binding emission limit.

- Yes No

2.1.11.2 No Double Claiming with Other Forms of Environmental Credit

Has the project activity sought, received, or is planning to receive credit from another GHG-related environmental credit system? See the VCS Program Definitions for definition of GHG-related environmental credit system.

- Yes No

2.1.11.3 Supply Chain (Scope 3) Emissions

Do the project activities affect the emissions footprint of any product(s) (goods or services) that are part of a supply chain?

- Yes No

¹² The requirement to provide the date of project inactivity only applies to projects which request registration or crediting period renewal under the VCS Program on or after 1 January 2025.

2.1.12 Sustainable Development Contributions (VCS, 3.17)

During the monitoring period, the program signed conservation agreements with COCOMACIA and the participating communities facilitated training sessions and stipends for participants. These activities contributed to SDG targets 1.1, 5.1 and 15.2 by supporting local communities to do forest conservation. The program aligns with national sustainable development priorities, with monitoring conducted through regular reporting. Contributions are documented in the appendices, highlighting quantifiable impacts such as increased fixed employment and greenhouse gas emissions removed, ensuring compliance with SDG indicators as outlined in Table 3.

Table 3: Sustainable Development Contributions

Row #	SDG target	SDG indicator	Net impact on SDG indicator	Current project contributions	Contributions over project lifetime
1)	1.1 Eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day.	1.1.1 Proportion of population below the international poverty line	Implemented activities to decrease	40% of community members living below the international poverty line	40% of community members living below the international poverty line
2)	2.3. By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment	2.3.2 Average income of small-scale food producers, by sex and indigenous status	Increased Income from sustainably produced cash crops	Average population: \$189.43 (USD) Women average: \$101.57 (USD)	Average population: \$189.43 (USD) Women average: \$101.57 (USD)
3)	5.1	5.5.2 Proportion of women in managerial positions	# staff members (# women) hired, # training sessions held on data collection methods, # of participants (# women)	2 women hired in the REDD+ Team 1 training of data collection, 12 participants (8 women)	2 women hired in the REDD+ Team 1 training of data collection, 12 participants (8 women)
4)	8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors	8.2.1 Annual growth rate of real GDP per employed person	Implemented activities to increase	0 increase in GDP of food crops	0 growth in GDP of food crops (first monitoring period)

Row #	SDG target	SDG indicator	Net impact on SDG indicator	Current project contributions	Contributions over project lifetime
5)	13 Tons of greenhouse gas emissions avoided or removed	13.2.2 Total greenhouse gas emissions per year	Implemented activities to decrease	Net estimated reductions from AUDef 2,863,992 tons of CO2e and from AUEg are 2,827,910 tons of CO2e during the reporting period through reduction of deforestation and degradation	5,691,902 tCO2e during the reporting period through reduction of deforestation and degradation
6)	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	15.1.1 Forest area as a proportion of total land area	Increased forest area under conservation	639,550 hectares of forest area under conservation	639,550 hectares of forest area under conservation
7)	17.3 Mobilize additional financial resources for developing countries from multiple sources	17.3.1 Additional financial resources mobilized for developing countries from multiple sources	Financial resources from the private sector mobilized to support sustainable forest use and conservation	USD \$3 million invested to support forest conservation	USD \$3 million invested to support forest conservation

2.2 Project Implementation Status

2.2.1 Implementation Schedule (VCS, 3.2; CCB, G1.9)

Date	Milestone(s) in the project's development and implementation
Project Start of Monitoring Period	01-Feb-2021
Start to Jun-2021	Establishment of the REDD+ project office, hiring and training of the Local Work Team
July -Nov, 2021	Community Meetings (Zonal Meetings): Socialization of the REDD+ project, update on the status of the project, next stages in the development of the activities
August 2021	Community Meetings (Trizonal Meetings): Socialization of the REDD+ project, update on the status of the project, next stages in the development of the activities
Nov 2021	COCOMACIA General Assembly with all community representatives
Dec 2021	Dedicated Project Trust Established
March 2022	COCOMACIA Internal controls updated
March 2022	COCOMACIA Fiscal management procedures for climate finance and carbon revenue developed and training provided
Jun-Oct-2022	Community Meetings (Zonal Meetings): Socialization of the REDD+ project, update on the status of the project, next stages in the development of the activities
July 2022	Distribution of equipment for environmental managers-start of forest patrolling activities
July to Sep 2022	Zonal Training to provide a clear understanding of a) their organizational process as a black community, b) environmental regulation, c) route and context of territorial security and d) socialization of the COCOMACIA REDD+ project
July -Sept, 2022	Social field data collection (HH Surveys and PRAs) and identification of Cultural HCVs
July -Sept, 2022	Biodiversity field data collection and identification of Biodiversity HCVs
Dec 2022	General assembly held and updates shared on the Program to board and community members
May 2023	REDD+ Agreement amended with input from new broad
April-June 2023	Zonal meetings held where the project activities and characteristics of the REDD+ Project were reviewed again to keep the community informed and motivated about the progress
Oct 2023	First reporting from environmental managers starting to be captured.
October-November - 2023	Biomass field data collection inside the Project Area
October-December 2024	LIDAR data being collected
July-Sept 2025	Dissemination of MR results
June -July, 2024	Biomass field data collection at the Jurisdiction
End of First Monitoring Period	31-Jan-2023
Jan-2024	Develop VCS/CCB PD, risk report, CCB monitoring plan
Jan-2024	Collaborative Forest Reference Emissions Level Agreement between COCOMACIA and Corporación Autónoma Regional Para el Desarrollo Sostenible del Chocó -(CODECHOCO) and Terra Global Capital, LLC signed
Feb 2024	FREL Agreement signed with CODECHOCO, COCOMACIA and Terra Global
October-2024	Draft 1 st VCS/CCB monitoring report 1
June-August 2025	Community Meetings: Dissemination of PD and MR1
Jan 2025	Conduct VVB audit

Date	Milestone(s) in the project's development and implementation
Feb-2025	Conduct VVB Site
April-2026	Target First VCUs issuance

2.2.2 Baseline Reassessment (VCS, 3.2.6, 3.2.7)

2.2.3 Methodology Deviations (VCS, 3.20)

This section outlines the following Deviations that were necessary for the COCOMCAICA AFOLU Project nested within the Choco JNR Program (VCS ID# 5079). In order to correctly apply AUDeg and AUDef to a REDD+ PAI following the JNR Standard 4.1 (VM0048) and the VCS Standard v4.7 (VM0006) several deviations were necessary and were defined at Validation. These deviations cover both the baseline construction and those applicable to ex-post monitoring in this monitoring period.

All the deviations below are specifically deviations from the criteria and procedures relating to monitoring and/or measurement set out in the methodology VM0006. Each of these deviations increase accuracy of quantification by creating quantification procedures or including data that is truly relevant to real land-use change dynamics. The deviations listed in this document were presented to Verra at Validation and during this verification. It is understood that these Verra-approved methodology deviations are not precedent setting but are needed to accurately account for true land-use change dynamics while Verra completes VM0048.

2.2.3.1 JNR Scenario 1 Deviations

For deviations related to VM0048 and VMD0055, please see the Choco Department, Colombia Nested JNR FREL (VCS ID# 5079).

2.2.3.2 Deviations to VM0006

As this Program is nested within a Jurisdictional Baseline FREL for the Choco Department, there have been deviations from VM0006 to create consistencies between the FREL (using VM0048, VMD0055) and VM0006 which are described below. These methodology deviations were defined at Validation in the PD and is still valid during this verification.

2.2.3.2.1 Reference Region Definition for UDeg

The VM0006 methodology, which is applied to areas classified under UDeg, provides clear guidance for defining the Reference Region. As stated in VM0006, Section 8.1.1.2: *“A reference region must be representative of the future trajectory of the project area in the absence of the project activities. For a reference region to be fully representative, and selected without any bias, the following necessary conditions must be met: The minimum size of the reference region excluding the project area and leakage area must be 250,000 hectares or the size of the project area at the start of the crediting period, whichever is greater ...”*

To ensure that the Reference Region for UDeg was fully aligned with the Jurisdictional Area defined for the JNR Program, its boundaries were defined the same as the area of JNR FREL in accordance with the guidelines of VM0055. Following VM0055 harmonizes with the spatial framework so that the Reference Region selected for UDeg remains consistent with the areas defined for UDef.

This alignment accomplishes several important objectives:

- **Methodological consistency** – both UDeg and UDef components operate within a single jurisdictional context, improving comparability and verification.
- **Accurate emissions accounting** – overlapping or mismatched regions are avoided, minimizing the risk of double counting or omission of forest carbon stocks.
- **Regulatory compliance** – projects can demonstrate adherence to both VM0006 and VM0055 requirements, strengthening the credibility of reported greenhouse-gas reductions.

By integrating the VM0006 requirements with the jurisdictional framework of VM0055, the project established a Reference Region that is not only representative and unbiased, but also spatially coherent with UDef activities, ensuring a unified and transparent approach to carbon accounting across different land-use dynamics.

2.2.3.2.2 UDeg LB Boundaries Demarcation

According to the guidelines in VM0006, Section 8.3.2.2, the delineation of the leakage belt is defined through a cost-of-transportation GIS analysis combined with social assessments. First, movement costs are assigned to each land-cover class, forest stratum, and road type using the inverse of the maximum travel speed for the relevant modes of transport, while inaccessible areas—such as protected zones—are given very high costs. A cost raster of the reference region is then created and used to generate a cost-distance map that shows the travel time from every pixel to the nearest point of the project area. Social surveys determine how much additional travel time local agents of deforestation are willing to accept to reach alternative forest areas. Finally, the leakage belt is delineated as all forest and non-forest land reachable within 1.5 times that maximum tolerated travel time, ensuring it lies within the reference region and expanding the region if necessary.

To maintain consistency with the leakage belt established for UDef areas and to avoid double counting of emissions, the UDeg leakage belt is therefore delineated in alignment with the guidelines set forth in VM0055, the process is described clearly in the Chco Department Baseline Description.

UDeg leakage areas are encompassed within the same belt as UDef. Baseline emissions for the UDeg leakage belt are defined by the portions of this belt identified as being at risk of degradation in the jurisdictional risk map. Actual leakage emissions are assessed ex post, with all land-use and land-cover (LULC) changes systematically accounted for within the UDef-LB, UDeg-LB, or the residual belt area. The leakage belt did not change between Validation and this first Verification.

2.2.3.2.3 Treatment of Litter Pool

The COCOMACIA REDD+ Program includes the Litter carbon pool, which according to VM0006 is Excluded as per VCS AFOLU Requirements. Following the Methodology Requirements, the litter carbon pool “does not have to be included, because it is not subject to significant changes or potential changes are transient in nature. The pool may be included in the project boundary because of positive impacts to reducing or removing emissions. Where the carbon pool is included in the project boundary, methodologies shall establish criteria and procedures to set out when a project proponent may include the pool.” As including this pool is much more accurate it does not negatively affect the conservativeness of the quantification of the emission reductions, and has not changed since Validation. As VM0006 does not establish criteria and procedures to include when to include the carbon pool, this REDD+ Program establishes the following criteria and procedures:

Criteria: the litter pool maybe included because it will be a carbon pool that is significantly affected by project activities. Litter in forest areas is significantly higher than that of non-forest areas.

Procedures: litter is measured systematically at each monitoring event. Litter must be fully dried to identify bone dry weight to not overestimate carbon content.

2.2.3.2.4 Leakage Calculated following VMD0055 to Avoid Double Counting

The COCOMACIA REDD+ Program follows procedures in VMD0055 to assess leakage and does not follow the leakage quantification procedures in VM0006. As both methodologies attempt to capture the same leakage following slightly different procedures, only VMD0055 is followed to avoid double counting. This deviation is more accurate will not negatively impact the conservativeness of the quantification of GHG emission reductions as VMD0055 has recently been developed and assess leakage in the following ways 1) Activity shifting by geographically constrained agents; 2) Activity shifting by geographically mobile agents; 3) Market-effects leakage; and 4) Leakage mitigation emissions. This deviation to use Leakage from VMD0055 relates only to the criteria and procedures for measurement and does not relate to any other part of the methodology and has not changed since Validation.

2.2.4 Minor Changes to Project Description (CCB Program Rules, 3.5.6)

There are no changes to Project Description.

2.2.5 Project Description Deviations (VCS, 3.21; CCB Program Rules, 3.5.7 – 3.5.10)

There are no Project Description deviations at this time.

2.2.6 Grouped Projects (VCS, 3.6; CCB, G1.13-G1.15, G4.1)

This is a grouped project. For this monitoring period there is only one Project Activity Instance, there are no new instances being added during the monitoring period, and therefore Sections 2.2.6.1 – 2.2.6.6. have been removed.

2.2.7 Risks to the Project (CCB, G1.10)

Identified Risk	Potential impact of risk on climate, community and/or biodiversity benefits	Actions needed and designed to mitigate the risk
<p>Potential physical effects of climate change, including increased frequency or severity of natural hazards</p>	<p>Floods in Chocó, driven by annual precipitation cycles and events like ENSO, are the region's most likely natural hazard. They are categorized as slow or fast—slow floods develop over time due to ground saturation, while fast floods occur suddenly from heavy rains. Both types have caused significant disasters, damaging crops, affecting soils, and leading to material damage and temporary displacement of families. Despite their ecological role, these floods pose serious risks to the region.</p>	<p>Program risk mitigation action: early Warning reports issued by IDEAM will be relayed through Program communication channels to reach communities and farmers.</p> <p>For promotion of new agricultural crops, the location will take into consideration risk of flooding.</p> <p>Mitigation Activities During Monitoring Period</p> <ul style="list-style-type: none"> • None taken
<p>Persistent or increasing deforestation and degradation rates due to the high opportunity costs of alternative land uses.</p>	<p>Persistent or increasing deforestation and degradation rates could undermine the financial sustainability of the project, leaving communities with fewer resources to manage their forests. This, in turn, would threaten the ecosystems and biodiversity that communities depend on, and pose a significant risk to already vulnerable species.</p>	<p>Training and incentives will be provided to illegal loggers to transition from logging as a productive activity to cultivation of high-value local crops. Economically viable local livelihoods that contribute to maintaining ecosystem services and forest integrity, such as agroforestry systems and the extraction of non-timber forest products (NTFPs), will be supported by the project. Logging, mining, and other land uses will be regulated and planned by COCOMACIA with support from the project. COCOMACIA's capacity to manage its natural resources and enforce regulations will be strengthened. This includes community monitoring, which enables the verification and tracking of incidents such as illegal logging or mining, allowing for prompt action to address these issues.</p> <p>Mitigation Activities During Monitoring Period</p> <ul style="list-style-type: none"> • Awareness meeting with all the communities to review opportunities that the Program can provide for livelihoods over time for forest conservation • Initial studies on different crop opportunities (Annato and Cacao) • Community members employed to conducting forest patrols • See details in Appendix 4 Program Activities Implemented During Monitoring Period

2.2.8 Benefit Permanence (CCB, G1.11)

In the Project Activity Instance, activities that support benefit permanence and those that have been begun implementation to maintain climate, community, and biodiversity benefits beyond the accreditation period are:

- Continued enforcement and enhanced governance in the Project Activity Instance for protection against deforestation and wildlife poaching.
- Ongoing support for the protection of community forests in community forest areas within the Project Activity Instance Leakage Zone
- Political will to promote policies that support forest conservation and ensure long-term protected status.
- The communities through their ongoing livelihood activities implemented and supported under the governance structure of the COCOMACIA will maintain the commitment with the to reduce deforestation.
- Establishment over time of a long-term community conservation trust to generate income to support the activities to maintain benefits after project lifetime.

Specific activities that continue beyond the accreditation period for the full 40-year longevity period are identified in the Project Implementation Plan.

2.3 Stakeholder Engagement & Safeguards

2.3.1 Stakeholder Identification (VCS, 3.18, 3.19; CCB, G1.5)

Where the stakeholder make up has changed since validation, or stakeholders were not identified at verification, describe the stakeholder identification process.

The stakeholder were fully identified in the Project Description and have not changed.

2.3.2 Stakeholder Access to Project Documents (VCS, 3.18, 3.19; CCB, G3.1)

The complete MR and the summary were translated into Spanish and provided to The COCOMACIA Project Management team and the members of the COCOMACIA Board of Directors for review. They were given the responsibility of keeping the complete printed document at the REDD+ Project office located at COCOMACIA headquarters in Quibdo. Other relevant documentation includes quarterly reports and contracts from the REDD+ Team, equipment inventory purchased by the project, the Project's policies and procedures and other project evidence.

The COCOMACIA REDD+ Team has created WhatsApp groups with the Zonal Conservation Committees and another for the environmental managers, as WhatsApp has proven to be an efficient communication channel, especially for sharing Project updates with those who do not have access to email.

Besides the public posting on the Verra website, COCOMACIA will be provided and maintain copies of the project documentation in their office which has regular working hours where any stakeholder may request to see the documents.

2.3.3 Dissemination of Summary Project Documents (VCS, 3.18, 3.19; CCB, G3.1)

The summaries of the PD and MR were provided to the REDD+ team who conducted a three-month dissemination process during June-August of 2025. This included meetings with the community members in each of the 124 Local Community Councils. In the months leading up to the start of the field dissemination, outreach materials and training resources were developed to promote the Project and present the Project Document (PD) and the First Monitoring Report (MR1).

The comprehensive dissemination process, conducted over 3 months, enabled communities to learn about the Program's objectives, review key documents (BD, PD, and MR1), raise concerns, provide feedback, and understand their responsibilities in the Project's implementation. The field dissemination also served as an opportunity to strengthen local capacities by training environmental patrol members and members of the Zonal Conservation Committees, while clarifying their roles within the Program. Communities emphasized the importance of consolidating these Zonal Committees as structures that complement the work of the technical team, ensure continuity of monitoring activities, and contribute meaningfully to community-based conservation governance.

Table 4. Dissemination Dates to Communities (listed by zone)

Zone	#	CCL (Local Community Council)	Dissemination Date
1	1	Boca de Nauritá	16-Aug-25
1	2	Boca de Nemota	17-Aug-25
1	3	Cabi (Guadalupe)	1-Aug-25
1	4	El Fuerte	14-Aug-25
1	5	La Equis	1-Aug-25
1	6	La Troje	22-Aug-25
1	7	Las Brisas (la sierpe)	20-Aug-25
1	8	Motoldo	27-Aug-25
1	9	Munguirri	exact date tbd
1	10	Pacurita	25-Aug-25
1	11	Real de Tanando	28-Aug-25
1	12	San Antonio de Icho (Puerto Murillo)	19-Aug-25
1	13	San Francisco de Icho	21-Aug-25
1	14	San Joaquin	exact date tbd
1	15	San José de Purre	30-Aug-25
1	16	San Martín de Purre	31-Aug-25
1	17	San Rafael de Negua	18-Aug-25
1	18	Santo Domingo Boca 2	exact date tbd
1	19	Santo Domingo Boca de Tanando	1-Aug-25
1	20	Tutunendo	exact date tbd
1	21	Villa del Rosario	15-Aug-25
2	22	Alta Gracia	24-Aug-25
2	23	Calahorra	23-Aug-25
2	24	Campobonito	14-Aug-25
2	25	El Jaguo	17-Aug-25
2	26	El tambo	exact date tbd
2	27	Gitrado (Pueblo Nuevo)	20-Aug-25
2	28	Guarando	exact date tbd

Zone	#	CCL (Local Comunity Council)	Disemination Date
2	29	La Comunidad (la Playa)	25-Aug-25
2	30	La Divisa	14-Aug-25
2	31	Puerto Aluma	exact date tbd
2	32	San Pedro Claver (Mojaudó)	22-Aug-25
2	33	Villa Nueva	18-Aug-25
2	34	Winando	21-Aug-25
3	35	Angostura	14-Aug-25
3	36	Barranco	23-Aug-25
3	37	Baudo Grande	17-Aug-25
3	38	Calle Quibdo	25-Aug-25
3	39	Campo Alegre (Tangui)	15-Aug-25
3	40	Curiquido	20-Aug-25
3	41	La Loma de Belen	22-Aug-25
3	42	Las Mercedes	19-Aug-25
3	43	Paina	18-Aug-25
3	44	Puldu	21-Aug-25
3	45	Sanceno	24-Aug-25
3	46	Tanguí	16-Aug-25
4	47	Auro Buey	16-Jul-25
4	48	Baudocito	29-Jul-25
4	49	Bete	25-Jul-25
4	50	Boca de Ame	24-Jul-25
4	51	Chibuga	21-Jul-25
4	52	Curichi	18-Jul-25
4	53	La Manza	22-Jul-25
4	54	La vuelta	19-Jul-25
4	55	Medio Bete	26-Jul-25
4	56	Puerto salazar	23-Jul-25
4	57	Pune	28-Jul-25
4	58	San antonio de Buey	17-Jul-25
4	59	San Jose de Buey	20-Jul-25
4	60	San Roque	27-Jul-25
5	61	Boca de Agua Clara	23-Jul-25
5	62	Boca de Bebara	25-Jul-25
5	63	Campo Alegre (Bebaramá)	1-Jul-25
5	64	El Llano Bebarama	20-Jul-25
5	65	El Playon	1-Jul-25
5	66	La Peña	28-Jul-25
5	67	La Platina	18-Jul-25
5	68	La Villa	29-Jul-25
5	69	Pueblo Viejo	27-Jul-25
5	70	San Francisco de Tauchigado	22-Jul-25
5	71	Tagachi	24-Jul-25
5	72	Tutumaco	exact date tbd
6	73	Belen	20-Jul-25
6	74	Boca de Luisa	exact date tbd
6	75	Boca de Vidri	23-Jul-25
6	76	El Tigre	27-Jul-25
6	77	Isleta	19-Jul-25
6	78	Palo Blanco	28-Jul-25

Zone	#	CCL (Local Comunity Council)	Disemination Date
6	79	Playita	exact date tbd
6	80	Puerto Medellín	25-Jul-25
6	81	Puerto Palacios	24-Jul-25
6	82	Punta de Ocaido	17-Jul-25
6	83	San Antonio de Padua	30-Jul-25
6	84	Santa Maria	29-Jul-25
6	85	Vegaez	exact date tbd
6	86	Polo Balnco	exact date tbd
7	87	Alfonso Lopez	exact date tbd
7	88	Arenal	exact date tbd
7	89	Buchado	exact date tbd
7	90	La Boba	exact date tbd
7	91	La Playa	5-Jun-25
7	92	Loma de Murri	4-Jun-25
7	93	Playa Murri	5-Jun-25
7	94	Pueblo Nuevo (murri)	exact date tbd
7	95	Puerto conto	8-Jun-25
7	96	San Jose de la Calle	exact date tbd
7	97	San Miguel	exact date tbd
7	98	Veracruz	exact date tbd
7	99	Vuelta Cortada	6-Jun-25
8	100	Caimanero	8-Jun-25
8	101	Corazón de Jesus	9-Jun-25
8	102	Cuia	6-Jun-25
8	103	Loma de Bojayá	7-Jun-25
8	104	Piedra Candela	5-Jun-25
8	105	Playa Cuia	6-Jun-25
8	106	Pogué	4-Jun-25
8	107	Sagrado Corazon de Jesús	exact date tbd
9	108	Amburivido	exact date tbd
9	109	Bebaramenio	15-Jun-25
9	110	Bella Luz	13-Jun-25
9	111	Boca de Opogado	6-Jun-25
9	112	Briseño	exact date tbd
9	113	Campo alegre - Tadia	14-Jun-25
9	114	Carrillo	exact date tbd
9	115	Guadualito (villa nueva)	exact date tbd
9	116	Isla de los Palacios	9-Jun-25
9	117	Isla de los Rojas	16-Jun-25
9	118	Mesopotamia	4-Jun-25
9	119	Napipí	exact date tbd
9	120	Pueblo Nuevo	10-Jun-25
9	121	Puerto Antioquia	7-Jun-25
9	122	San Alejandro	17-Jun-25
9	123	San Bernardo	12-Jun-25
9	124	Tadia (Campo Alegre)	14-Jun-25

2.3.4 Informational Meetings with Stakeholders (VCS, 3.18, 3.19; CCB, G3.1)

Most meetings were held face-to-face as informational, training and working sessions with the REDD+ Team, COCOMACIA Broad, and with zone and community representatives. Meeting pre-Program Start meetings/sessions resulted planning and preparation to meet the investment readiness requirements that support the climate finance and preparation for generating VCU under VCS and CCB. These included drafting or completing key requirements with input from communities including Long-Term Implementation Workplan, Carbon Development and Impact Monitoring Work Plan, Long-term Program Implementation Budget, Policies for Program Management, Trust Agreement, Benefit Allocation Plan or Benefit Sharing Principles, Program Operational Performance Monitoring Plan (based on work plan), “Investment Grade” Carbon projections, and Investment Model with Investee and Investor Returns. During the information sessions these were collaboratively developed and included in the REDD+ Agreement that formally started the Program.

For the Post-Program Start information meetings, these continued the engagement and information about the Program and started the process of implementation of Program activities on the ground, and on-going refinement of the Program management and monitoring of activities.

Table 5, Informational Meeting both Pre and Post Program Start

Stage in Consultation Process	Participating Stakeholders	Channels Used	Information Provided or generated	Date and place
Pre-Program Start				
Overview of Terra's Work Model	COCOMACIA Territory and Autonomy Area	In-Person Meeting at COCOMACIA's HQ.	Terra's work model, scope of a REDD+ Project, benefits, roles, Collaboration Agreement Draft.	July 11, 2018, Quibdó
Overview of Terra's Work Model	Board of Directors, Legal Representative and Community Leaders of COCOMACIA	In-Person Meeting at COCOMACIA's HQ.	Terra's work model, scope of a REDD+ Project, benefits, roles, Collaboration Agreement Draft.	Oct 17 - 21, 2018, Quibdó
Initial community consultation	COCOMACIA in full assembly	COCOMACIA'S General Assembly	Terra's work model, scope of a REDD+ Project, benefits, roles, Collaboration Agreement Draft	November 29, 2018. Tanguí - Choco
Involvement of Rice Producers within COCOMACIA REDD+ Project	COCOMACIA and ASPRODEMA (rice producers Association)	Field meetings and site visits to production areas	<ul style="list-style-type: none"> • Rice model built by TERRA • Field diagnostic on rice production • Signing of Collaboration Agreement 	April 22-25, 2019 – Puerto conto, Rio Murry, San Antonio de Padua, Tanguí, Choco
Definition of REDD+ ROADMAP and training	COCOMACIA'S leaders	Workshop	Participatory construction of REDD+ Project Roadmap.	October 15-17, 2019, Quibdó.
Reporting on results	COCOMACIA in full assembly	COCOMACIA'S General Assembly	<ul style="list-style-type: none"> • Terra's work model, scope of a REDD+ Project, benefits, roles, Collaboration Agreement Draft • Revision of REDD+ Roadmap • Revision of REDD+ Roadmap • Socialization of Project Listing • Presentation of Letter of Intent to Invest • Revision of Initial Budget 	December 11-15, 2019, Bebarama - Choco

Stage in Consultation Process	Participating Stakeholders	Channels Used	Information Provided or generated	Date and place
Presentation of the COCOMACIA REDD+ Project to CORPOURABÁ (Regional Environmental Authority)	CORPOURABÁ officials	In-Person Meeting at CORPOURABÁ HQ.	Terra's work model, scope of a REDD+ Project, benefits, roles	March 9 - 13, 2020, Apartadó - Antioquia
Presentation of the COCOMACIA REDD+ Project to CODECHOCO (Regional Environmental Authority)	CODECHOCÓ officials	In-Person Meeting at CODECHOCÓ HQ.	Terra's work model, scope of a REDD+ Project, benefits, roles.	March 9, 2020, Quibdó.
Investment Readiness phase	COCOMACIA	Virtual meetings in which each document is jointly addressed and adjusted	Investment Readiness Documents reviewed and jointly adjusted.	March 10 – 13, 2020
Post Program Start				
Induction of the REDD+ team to the project and its operational procedures	REDD+ local team	Capacity Building Workshop	Project Operational Procedures	July 12-16 ,2021, Quibdó
Presentation of the Trust contract and COCOMACIA's participation	Board of Directors, Legal Representative	In-Person Meeting at REDD+ Project Office	The Contract to establish the Trust was explained and signed, in addition to the formation of the Technical Committee as part of the Trust.	Oct 26-28 ,2021, Quibdó
Reporting on results	COCOMACIA in full assembly	COCOMACIA'S General Assembly	REDD+ Project progress to December 2021 and the planning for the year 2022.	December 9-13, 2021, Beté, Chocó.
Reporting on results	COCOMACIA in full assembly	COCOMACIA'S General Assembly	REDD+ Project progress up to December 2022 and the planning for the year 2023.	December 7-11, 2022, Buchadó, Chocó.

Stage in Consultation Process	Participating Stakeholders	Channels Used	Information Provided or generated	Date and place
Overview of Terra's Work Model with new COCOMACIA's Directive Board.	COCOMACIA's Directive Board	In-Person Meeting at COCOMACIA's HQ.	Terra's work model, scope of a REDD+ Project, benefits, roles, Collaboration Agreement Draft.	January 30-31, 2023 Quibdó.
Review of the REDD+ Agreement with the new Board of Directors	COCOMACIA'S Board of Directors	In-Person Meeting at COCOMACIA's HQ.	Dissemination of Project Document and Project Document Summary	Jan 20-30 and March 22- 24 , 2023
Jurisdictional Approach for the Project	COCOMACIA'S Directors, Director of Codechoco	In-Person Meeting at Codechoco's HQ.	Explanation of the Forest Reference Emission Level Collaboration Agreement	August 29 , 2023
Program field level community dissemination	Inhabitants of each of the 124 LCCs, including their boards.	In-person meetings were held at each Local Community Council, following a pre-established schedule. A workshop-and-local assembly format was used.	<p>Provided information: Program objectives, key aspects from BD, PD and MR1 documents; , roles and responsibilities, Benefit Allocation Plan proposals; Program governance structures, training on SMART for environmental managers.</p> <p>Generated information: Community Participatory Agreements; Community feedback, and confirmation of the role of Zonal Committees in monitoring and governance.</p>	<p>June-August of 2025.</p> <p>All LCCs that are part of the Project Activity Instance</p>

2.3.5 Risks from the Project and No Net Harm (VCS, 3.18, 3.19)

Project Risks table in Appendix 2: Project Risks Table identifies the key risks and the corresponding mitigation measures, which include strengthened forest governance, promotion of sustainable agroforestry, targeted inclusion and gender actions, and clear labor, anti-discrimination, and grievance procedures. There are no additional risks identified in this monitoring period

2.3.6 Community Costs, Risks, and Benefits (CCB, G3.2)

The Program's costs, as well as the associated benefits and risks have been clearly communicated to COCOMACIA and community representatives through the informative and participatory planning meetings as described in Section 2.3.4. These many discussions provided the foundation for jointly adjusting the Program's agreements, including the COCOMACIA REDD+ Benefit Allocation Plan.

The work planning process conducts initial and refined after Program start defined activities that could give rise to risk, and costs was undertaken in a participatory manner between COCOMACIA and Terra Global. This resulted in the first collaboratively developed Long-term Implementation Plan that is part of the REDD+ Agreement between COCOMACIA and Terra Global. The workplan and budget process was conducted for more than 2 years so that communities had time to understand and contribute to the process.

The Long-term Implementation Plan and budget is reviewed every 2 years between COCOMACIA and Terra Global, where adjustments are made to reflect learning and incorporate community input. Prior to signing the first definitive REDD+ Agreement in February 2021, the Program was presented at the 2018 General Assembly and later approved at the 2019 General Assembly. allowing sufficient time and ensuring a transparent process.

The COCOMACIA REDD+ Benefit Allocation Plan establishes the mechanisms, principles, and procedures for distributing benefits derived from carbon revenues within COCOMACIA's collective territory. Its overarching goal is to ensure fair and transparent benefit sharing that strengthens community governance, promotes sustainable land use, and incentivizes actions that reduce deforestation and forest degradation. The BAP plan was initially approved as part of the REDD+ Agreement in 2021 and is currently undergoing an update to better reflect the projected financials of the Program and to define more clearly the specific of eligibility, allocation, and distribution methods to the defined beneficiaries in the plan.

2.3.7 Information to Stakeholder on Verification Process (VCS, 3.18.6, 3.19; CCB, G3.3)

Communities and other interested groups are informed about the VCS and CCB validation and verification process primarily through the Terra Global with notification to COCOMACIA Board of Directors and the COCOMACIA REDD+ Management Team. Other information regarding the validation and verification process through WhatsApp groups, and the on-the-ground dissemination process carried out in June-August of 2025, as described on Sections 2.3.3 and 2.3.4 covered the VVB audit process. In addition, Project Presentations in the COCOMACIA General Assemblies (Section 2.3.4) , as well as personal communication

or including reminders via text messages, phone calls, and WhatsApp groups (Section 2.3.1) where used to communicate the process. A schematic design in Spanish that simplifies the validation and verification process has been used as part of the disseminations carried out in each LCC, and is commonly used in meetings with other stakeholders.

2.3.8 Site Visit Information and Opportunities to Communicate with Auditor (VCS, 3.18.6, 3.19; CCB, G3.3)

Communities and other interested groups will be informed of the visit to the auditor's site, by Terra Global through the Board of Directors and the COCOMACIA REDD+ Team who will notify the Zonal Committees, environmental managers and other community leaders, through personal communication or text messages, phone calls, WhatsApp groups and the local station.

During the group discussions for the Project Document Dissemination Process, the communities were informed that a VVB will visit the communities in late 2025. The communities were informed that the VVB is a neutral party and that they should feel free to communicate openly about their experience with the COCOMACIA REDD+. They were invited to contact the VVB directly and were informed that a translator would be present.

Auditors will speak Spanish or have a translator to facilitate direct any necessary independent communication with communities. The Program will provide the venue and transportation as needed for the VVB meetings with the communities the VVB selects to meet. Meetings will be scheduled in advance and respecting any commitments related to work, culture or religion (for example, meetings will not be scheduled during the time of local festivals or holidays).

2.3.9 Stakeholder Consultation (VCS, 3.18; CCB, G3.4)

The on-going stakeholder engagement, once the Program started, followed the same processes pre-program start. This includes regular communications and meetings between Terra Global and the REDD+ Team and Board. And the REDD+ Team and board have regular engagement with the zones and community councils. Figure 1 provides the schematic of the entities and methods for stakeholder engagement for the Program.

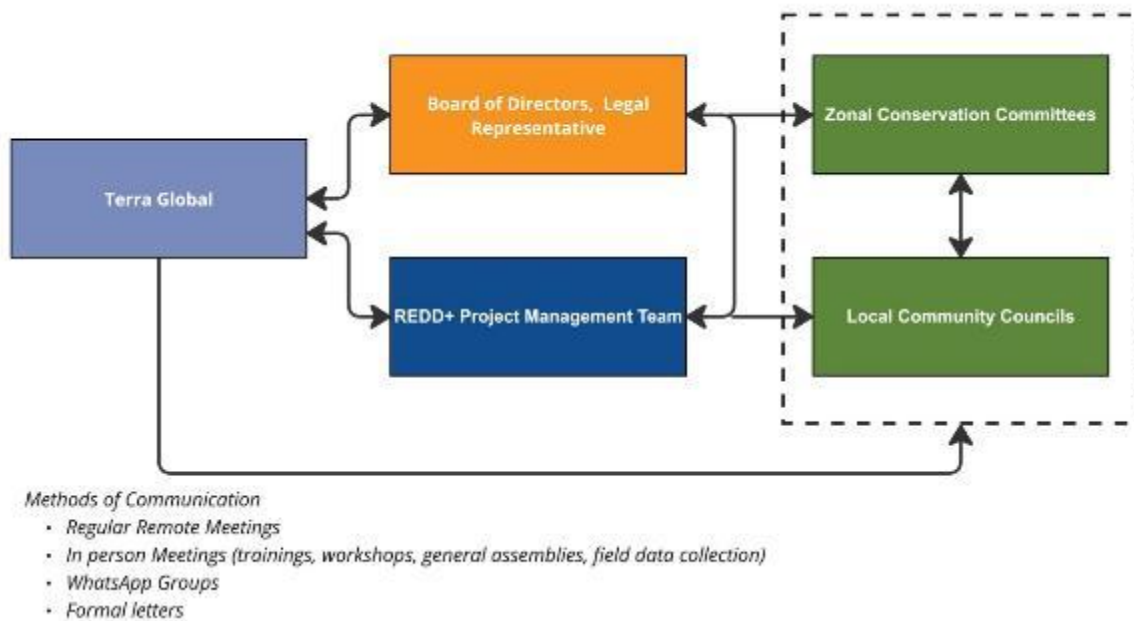


Figure 1. Stakeholder Engagement Structure

Project Work Plan was developed initial and during the monitoring period has been updated and expanded with guidance from the COCOMACIA’s Board of Directors and the REDD+ Project team, which is largely composed of community members. This process has ensured that decisions regarding project activities and strategies remain aligned with local priorities and with the leadership and governance structure of the Black communities in the territory.

The Workplan has also been presented and discussed during zonal meetings and COCOMACIA’s General Assembly, where feedback from community members has been received regarding progress and proposed adjustments for its implementation.

Evidence of the implementation of the stakeholder consultation is made available to the VVB.

Table 6. Presentation of the Project to the General Assembly (2018 & 2019)

<p>Date of Stakeholder Consultation</p>	<p>29-Noviembre-2018 (at Tanguí LCC) 11-Diciembre-2018 (at Llano de Bebaramá LLC)</p>
<p>Stakeholder Engagement Process</p>	<p>The stakeholder engagement process was conducted in a culturally appropriate manner, following COCOMACIA’s Internal Regulations and governance structure. Information about the REDD+ Program was shared through existing community channels and leadership structures, using clear language and ensuring the participation of women, youth, elders, and other community representatives. Formal presentations of the Program were made during two consecutive General Assemblies – in December 2018 at the Local Community Council of Tanguí and in December 2019 at the Local Community Council of Llano de Bebaramá, both of which are recognized decision-making spaces within COCOMACIA’s traditional governance system.</p> <p>The stakeholder engagement process was conducted in a culturally appropriate manner, following COCOMACIA’s Internal Regulations and governance structure. Information about the REDD+ Program was shared through existing community channels and leadership structures,</p>

	<p>using clear language and ensuring the participation of women, youth, elders, and other community representatives. Formal presentations of the Program were made during two consecutive General Assemblies – in December 2018 at the Local Community Council of Tanguí and in December 2019 at the Local Community Council of Llano de Beberamá, both of which are recognized decision-making spaces within COCOMACIA’s traditional governance system.</p> <p>During these assemblies, project objectives, activities, and safeguards were discussed in open sessions that allowed for dialogue and clarification of concerns. Approval to sign the agreements and initiate project implementation was granted through a majority vote of the General Assembly of 2019.</p>
Consultation Outcome	<p>The stakeholder engagement process was conducted in a culturally appropriate manner, following COCOMACIA’s Internal Regulations and governance structure. Information about the REDD+ Program was shared through existing community channels and leadership structures, using clear language and ensuring the participation of women, youth, elders, and other community representatives. Formal presentations of the Program were made during two consecutive General Assemblies – in December 2018 at the Local Community Council of Tanguí and in December 2019 at the Local Community Council of Llano de Beberamá, both of which are recognized decision-making spaces within COCOMACIA’s traditional governance system.</p> <p>The stakeholder engagement process was conducted in a culturally appropriate manner, following COCOMACIA’s Internal Regulations and governance structure. Information about the REDD+ Program was shared through existing community channels and leadership structures, using clear language and ensuring the participation of women, youth, elders, and other community representatives. Formal presentations of the Program were made during two consecutive General Assemblies – in December 2018 at the Local Community Council of Tanguí and in December 2019 at the Local Community Council of Llano de Beberamá, both of which are recognized decision-making spaces within COCOMACIA’s traditional governance system.</p> <p>During these assemblies, project objectives, activities, and safeguards were discussed in open sessions that allowed for dialogue and clarification of concerns. Approval to sign the agreements and initiate project implementation was granted through a majority vote of the General Assembly of 2019.</p>
Stakeholder Input	<p>The outcomes of the discussions during the Assemblies, including community consent and recommendations, were documented through meeting minutes and signed agreements</p> <p>The outcomes of the discussions during the Assemblies, including community consent and recommendations, were documented through meeting minutes and signed agreements</p>

Table 7. Working sessions with the local REDD+ team to design and adjust the Program Workplan and Budget

Date of stakeholder consultation	<p>Multiple session (details below)</p>
Stakeholder engagement process	<p>The development of the first Long-Term Implementation Work Plan and Budget began during the field visit held from October 15 to 17, 2019, where an initial draft was prepared with the participation of COCOMACIA community leaders. In the months that followed, Terra’s investment team incorporated the corresponding budget, frequently consulting COCOMACIA to ensure that local dynamics and price conditions were accurately reflected in cost estimates.</p> <p>The development of the first Long-Term Implementation Work Plan and Budget began during the field visit held from October 15 to 17, 2019, where an initial draft was prepared with the participation of COCOMACIA community leaders. In the months that followed, Terra’s investment team incorporated the corresponding budget, frequently consulting COCOMACIA to ensure that local dynamics and price conditions were accurately reflected in cost estimates.</p>

	<p>The Long-Term Implementation Work Plan and Budget were developed using Terra Global's standard template, drawing primarily on inputs from COCOMACIA's board and Community Leaders, as well as COCOMACIA's Territorial and Agricultural Land-Use Plan (POTA). Subsequent versions of the document were refined through a series of remote coordination meetings between Terra and the COCOMACIA REDD+ team.</p> <p>During the July 12–16, 2021 field visit, the Work Plan, then in version 1-53, was reviewed in detail by the team, resulting in adjustments and the completion of missing information. In the January 29 – February 2, 2024 field visit, version 1-66 of the Work Plan was revised with members of the Board after multiple iterations supported by the REDD+ team.</p> <p>From April 1 to 4, 2025, the draft Benefit Distribution Plan was presented to the Board of Directors, who provided several comments that were incorporated into the following revision. In February 2025, the Board formally reviewed and accepted the Work Plan.</p> <p>Later, during September 25, 29, and 30, 2025, the COCOMACIA REDD+ team and Terra Global jointly reviewed the entire Work Plan. Terra had previously introduced updates to better align the document with the theory of change and to address specific drivers of deforestation in accordance with standard requirements. Over several five-hour sessions, both teams examined each component and made final adjustments based on COCOMACIA's feedback.</p> <p>The Long-Term and Short-Term Work Plans and Budgets are scheduled to be presented again to the Board of Directors in November 2025 for final validation.</p>
<p>Consultation outcome</p>	<p>The process to obtain community consent for the project's design and implementation was conducted transparently and in alignment with COCOMACIA's internal governance structure. Information about the REDD+ Program was shared through community meetings, assemblies, and local councils, using clear and accessible language and favoring broad participation from women, youth, elders, and other community representatives. Discussions focused on the project's objectives, expected benefits, potential risks, and the commitments required for implementation.</p> <p>The process to obtain community consent for the project's design and implementation was conducted transparently and in alignment with COCOMACIA's internal governance structure. Information about the REDD+ Program was shared through community meetings, assemblies, and local councils, using clear and accessible language and favoring broad participation from women, youth, elders, and other community representatives. Discussions focused on the project's objectives, expected benefits, potential risks, and the commitments required for implementation.</p> <p>Community members and leaders examined how the project could strengthen forest governance, support sustainable land-use practices, and generate economic and social benefits, while recognizing possible administrative and operational challenges. The dialogue emphasized the need for transparency, equitable benefit distribution, and continuous communication between implementing partners and the communities.</p> <p>The process culminated in the General Assemblies of 2018 and 2019, where the project was formally presented, discussed, and approved through a majority vote. The decision and related commitments were documented in official minutes and agreements, ensuring that the project proceeded with informed community consent.</p>
<p>Stakeholder input</p>	<p>All inputs received during the consultation process were carefully reviewed and discussed by COCOMACIA's governance bodies and the REDD+ technical team. Some of the feedback from community members, leaders, and representatives was documented during meetings and assemblies and subsequently considered in the formulation and adjustment of the Project Work Plan and related documents.</p> <p>All inputs received during the consultation process were carefully reviewed and discussed by COCOMACIA's governance bodies and the REDD+ technical team. Some of the feedback from community members, leaders, and representatives was documented during meetings and assemblies and subsequently considered in the formulation and adjustment of the Project Work Plan and related documents.</p> <p>Several of the comments received resulted in concrete modifications to the project design. For example, following a direct request from COCOMACIA, a communications strategy was incorporated into the Work Plan in September of 2025 to as a means to help COCOMACIA</p>

position itself in the territories as ethnic authority, and to strengthen the flow of information between the implementing partners, community councils, and local leaders.. Likewise, recommendations highlighting the need to reinforce institutional capacities led to the inclusion of specific allocations within the Benefit Allocation Plan (Draft version) aimed at strengthening COCOMACIA's governance structures and management capabilities. Other inputs from the consultation process focused on clarifying roles, ensuring a degree of budget flexibility, and emphasizing transparency in benefit distribution. These were reflected in the inclusion of a contingency budget line and in clearer definitions of institutional and community responsibilities. However, most inputs were related to writing style, for COCOMACIA has always made sure that activities and obligations are unambiguous, and clearly understandable to them. Where updates were not deemed necessary, it was because the proposals were already addressed through ongoing implementation mechanisms or would be evaluated during future monitoring and adaptive management cycles.

Table 8. Zonal Meetings in the Territory of COCOMACIA

Date of stakeholder consultation	The zonal meetings are held annually, typically over a one- to two-month period between July and September. The COCOMACIA REDD+ team has accompanied the 2021-2025 Zonal meetings.
Stakeholder engagement process	<p>One of the means by which community engagement is carried out by the COCOMACIA REDD+ team is by accompanying COCOMACIA's annual zonal and trizonal meetings, which are part of the organization's traditional governance and decision-making structure. During these annual gatherings, specific sessions were scheduled to inform participants about the REDD+ project, its objectives, activities, and the long-term benefits for the communities. Meetings were announced in advance through customary channels, ensuring the participation of both men and women, and were conducted using clear and inclusive language appropriate to the local cultural context., which form part of the organization's traditional governance and decision-making structure. During these gatherings, specific sessions were scheduled to inform participants about the REDD+ project, its objectives, activities, and the long-term benefits for the communities. Meetings were announced in advance through customary channels, ensuring the participation of both men and women, and were conducted using clear and inclusive language appropriate to the local cultural context.</p> <p>One of the means by which community engagement is carried out by the COCOMACIA REDD+ team is by accompanying COCOMACIA's annual zonal and trizonal meetings, which are part of the organization's traditional governance and decision-making structure. During these annual gatherings, specific sessions were scheduled to inform participants about the REDD+ project, its objectives, activities, and the long-term benefits for the communities. Meetings were announced in advance through customary channels, ensuring the participation of both men and women, and were conducted using clear and inclusive language appropriate to the local cultural context., which form part of the organization's traditional governance and decision-making structure. During these gatherings, specific sessions were scheduled to inform participants about the REDD+ project, its objectives, activities, and the long-term benefits for the communities. Meetings were announced in advance through customary channels, ensuring the participation of both men and women, and were conducted using clear and inclusive language appropriate to the local cultural context.</p>
Consultation outcome	<p>The project was very well received by the communities, who see it as a source of income in the long term and as an opportunity to manage their community forests with a focus on conservation. There was general concern about the ownership of their territory, about the inability to continue with their customary livelihoods and the negative impact on their culture.</p> <p>The project was very well received by the communities, who see it as a source of income in the long term and as an opportunity to manage their community forests with a focus on conservation. There was general concern about the ownership of their territory, about the</p>

	inability to continue with their customary livelihoods and the negative impact on their culture.
Stakeholder input	The concerns raised during the meetings were addressed and considered in the development of the workplan containing all the activities to be implemented. Community dynamics, communication methods and the time required for decision-making were also considered. Language adjustments were made to ensure clear understanding. The concerns raised during the meetings were addressed and considered in the development of the workplan containing all the activities to be implemented. Community dynamics, communication methods and the time required for decision-making were also considered. Language adjustments were made to ensure clear understanding.

Table 9. Institutional meetings

Date of stakeholder consultation	9-March-2020 to 13-March-2020
Stakeholder engagement process	For government institutions, the engagement process was conducted through a series of formal meetings with entities such as regional environmental authorities and the Ministry of the Environment. These meetings focused on presenting the project's objectives, scope, and potential impacts on the communities within the project area. Discussions emphasized coordination with existing environmental and territorial management instruments to ensure institutional alignment. The process was conducted in a transparent and participatory manner, respecting each institution's mandate and decision-making procedures. For government institutions, the engagement process was conducted through a series of formal meetings with entities such as regional environmental authorities and the Ministry of the Environment. These meetings focused on presenting the project's objectives, scope, and potential impacts on the communities within the project area. Discussions emphasized coordination with existing environmental and territorial management instruments to ensure institutional alignment. The process was conducted in a transparent and participatory manner, respecting each institution's mandate and decision-making procedures.
Consultation outcome	The institutions carefully analyzed the project's legal, environmental, and social impacts, and expressed their willingness to collaborate for improving livelihoods and conservation activities The institutions carefully analyzed the project's legal, environmental, and social impacts, and expressed their willingness to collaborate for improving livelihoods and conservation activities
Stakeholder input	The concerns raised during the meetings were addressed and considered in the development of the project activities to be implemented. Language adjustments were made to ensure clear understanding. The concerns raised during the meetings were addressed and considered in the development of the project activities to be implemented. Language adjustments were made to ensure clear understanding.

2.3.10 Continued Consultation and Adaptive Management (VCS, 3.18; CCB, G3.4)

Continuous communication between COCOMACIA and Terra Global will be conducted in two main ways: through the community leaders that are part of the Board, the COCOMACIA REDD+ Team made up of community members, in addition to the Conservation Zone Committees that have permanent contact with the communities. These leaders will participate in the conservation action planning process each year. During the conservation action planning review, the results of the monitoring plan and stakeholder feedback will be incorporated to adapt the work plan to achieve further results.

An adaptive management plan has been developed for the project which sets the context of the program, defines the proposed design, identifies the risks (internal, external and natural), details the implementation

and monitoring plans, and defines how reviews will be conducted every verification period and how the results, learnings and emerging issues will be identified to come out with intervention strategies .

In addition, the agreements signed between COCOMACIA and Terra Global establish that every two years, based on lessons learned and monitored data, the long-term implementation plan and the project implementation budget will be adjusted

Table 10. Stakeholder Feedback Summary and Actions Taken

Summary of comment received	Actions taken
Concern that their territory will be expropriated	In the meetings, it was explained to the community members that their territorial ownership is not at risk, as it is protected by Colombian Law 70 of 1993. Furthermore, this type of project does not aim to affect their land rights.
If the project would prevent communities from using natural resources in their territory	It was explained that the project does not restrict the use of natural resources, it proposes to reduce deforestation and respects their ancestral practices. Activities that degrade the forest should be gradually reduced to achieve the project's goals
How will the benefits from the project will be distributed?	At the general assembly, it was explained that the benefits will be distributed based on the activity performance on each zone (or community) in the territory and will be agreed upon with the council board. It was also clarified that the less the forest is deforested and degraded, the greater the share of benefits will be, and that benefits includes both the funding that goes to pay for the Program costs and management, .as well as any additional net profits that could be distributed under the BAP.
Who will manage the project financial resources?	Communities were informed that a trust will be established to ensure transparency in the project's resource management, as funds cannot be used without the authorization of all parties. This was also discussed at the board level, when the REDD+ agreement and the investment agreement we developed and sign.
Will the money be distributed to each person in the community?	In meetings held in the project areas, it was explained that the resources from the sale of VCUs will be invested in collectively agreed activities aimed at implementing the Program activities as defined in the long-term workplan and for improving the overall communities' livelihoods.
What employment opportunities would the project bring?	The REDD+ team, composed of community members involved in the project, was introduced, along with the environmental managers responsible for monitoring activities in the territories. It was also explained that the project will create additional employment opportunities by advancing community strengthening initiatives

2.3.11 Stakeholder Consultation Channels (CCB, G3.5)

Community consultations and participatory processes are embedded in COCOMACIA's formal governance structure (Figure 1). The REDD+ Project Management Team, primarily made up of members of COCOMACIA works with Terra Global to co-design the activities to be implemented under the Program: some of these activities, especially those requiring significant local knowledge, are consulted with community leaders in the zonal meetings that take place every year. Draft activities workplans and budgets are routinely submitted to the Board of Directors and the Legal Representative for review and validation,.. In this way, and depending on whether decisions pertain to strategic planning, operational adjustments, or community-level activities they are consulted through the legitimate representative bodies recognized in COCOMACIA's bylaws (Board of Directors, Zonal Committees and Local Community Councils).

The General Assembly (Level 1), as the supreme authority of COCOMACIA, is the main space where the Program presents its annual progress, challenges and planned activities and receives feedback from community members. Key decisions—such as the approval and signing of the REDD+ Agreement and the

Benefit Allocation Plan—are first reviewed by the Board of Directors and then presented to the General Assembly for discussion and endorsement.

Adequate information sharing is ensured through multiple, complementary channels. These include face-to-face information meetings at zonal and community level; meetings for monitoring, planning and document review; and the COCOMACIA General Assembly, where project progress and upcoming stages are presented and discussed. Information is also disseminated via WhatsApp groups with community leaders, environmental managers and Zonal Committees, who share project updates and materials with their constituencies. Minutes, attendance lists and presentation materials from these spaces provide evidence that communities and their legitimate representatives have been regularly informed and consulted throughout the Program.



Figure 2. Governance Structure of COCOMACIA

2.3.12 Stakeholder Participation in Decision-Making and Implementation (VCS, 3.18, 3.19; CCB, G3.6)

The Project information and outreach meetings with communities and local stakeholders were announced via WhatsApp, phone calls and text messages. COCOMACIA Board members and the COCOMACIA REDD+ Project team are responsible for informing community leaders of each of the 9 zones as well as community representatives to attend the information and outreach meetings. COCOMACIA, as described in Sections 2.3.4 and 2.3.9, led to effective participation in decision-making and implementation of the Project strategies.

Meetings and workshops are usually organized in the evenings and weekends to ensure the participation of as many people as possible. Participation of women and youth is encouraged, respecting the communities' decision on who would represent them.

As part of the on-going governance and fiscal management of the Program a patrimonio autónomo (Trust) was established and is overseen by an independent trustee. As terms of the patrimonio autónomo a Technical Committee oversee at a high level, program activities and fiscal management through reports it receives from the Trustee and from Terra Global. The Technical Committee has five members, with 2 members of COCOMACIA and 2 from Terra, and one independent member, who review expenditures made every 6 months and make final approvals of the LTIP and budget once developed by the COCOMACIA REDD+ Team with input from communities, and support from Terra Global.

Further, the implementation of Program Activities is led by COCOMACIA, managed by the REDD+ Team

2.3.13 Anti-Discrimination Assurance (VCS, 3.19; CCB, G3.7)

The COCOMACIA Community Council adheres to national labor and anti-discrimination laws, as well as to the Project's Operations Manual. Any instance of discrimination or harassment, whether sexual or work-related, should be reported and addressed through the designated grievance and complaint mechanism, which has been specifically set up for this purpose.

The Program activities provide opportunities for all genders to participate and a gender action plan with defined indicators has been developed for the Program. Thus far, we see participation in Program activities, including those typically supported by men like biomass sampling, by women in the communities.

2.3.14 Grievances (VCS, 3.18.4; CCB, G3.8)

No grievances were raised during the monitoring period. To ensure accessibility from the outset, the project adopted the well-established COCOMACIA Grievance Mechanism, which is recognized at the local level. This approach is intended to facilitate community engagement by building on a familiar system, allowing for smoother implementation and more effective communication with stakeholders.

2.3.15 Worker Training (VCS, 3.19; CCB, G3.9)

In COCOMACIA, the REDD+ Team, made up of community leaders and other local people, is supervised and guided by the COCOMACIA Board of Directors and support by Terra Global through the Project Managers and technical specialists. The latter are responsible for both their orientation and the identification of training needs. Ongoing staff training is an important part of REDD+ Project Activities. In addition, the REDD+ team participates in the identification of training needs in their weekly meetings.

During the monitoring period numerous trainings were undertaken following the support provided by Terra Global. The training areas that were covered in the first monitoring period for both REDD+ Team staff and communities included Program management, monitoring, field data collection, environmental patrolling using the SMART app, conducting community patrols and documenting illegal activities and strengthening of local sustainable livelihoods.

The following is a summary of the training courses provided to during the monitoring period, where details on the trainings is included in Appendix 4 Program Activities Implemented During Monitoring Period.

Because the implementers are the actual communities supported by the internal REDD+ Team that is staffed by the communities, thus capacity will remain with the communities.

REDD+ Team: The team targets a staff of 11 members, with some turnover every 3 years, coinciding with each Board rotation. REDD+ Team members work extensively with Terra Global who provides support and training on numerous activities including climate finance, market standards requirements, Program design and work planning, budgeting, operational performance monitoring, field data collection, MRV, operational management and fiscal management.

Environmental Managers (community patrollers): Each of the 124 communities has 3 designated environmental managers. Each of these as they are officially designated to support the patrolling is provided training and equipment, as were the patrollers in this monitoring period.

Zonal Conservation Committees: There are 9 Zonal Conservation Committees, each comprising 3 members. The members of the zone conservation committees receive training from the REDD+ Team and directly from Terra Global on key topics including program activities, audit process and supporting on-going implementation and monitoring.

Community Participants in Field Data Collection: The Program includes community members in the collection of field data. In the first year, 20 people have received training in collection of biodiversity baselines, 80 in the application of social surveys, and 176 in biomass measurements. The community teams for biomass included women and men.

Board training sessions: The 11 board members receive REDD+ Program training covering all the key topics including climate finance, market standards requirements, Program design and work planning, budgeting, operational performance monitoring, field data collection, MRV, operational management and fiscal management. This is done when the board is elected each year and throughout their term.

[2.3.16 Community Employment Opportunities \(VCS, 3.19.13; CCB, G3.10\)](#)

[2.3.16.1.1 REDD+ Team](#)

All jobs required for the COCOMACIA REDD+ Team were hired based on established job descriptions, desired skills and experience, and qualifications which are then posted on the billboard at the COCOMACIA Administrative Headquarters, and disseminated largely through social networks: LinkedIn and Facebook. The preference is to hire local communities' members that are part of COCOMACIA, if applicants from these areas have the desired skills, experience and profile. These hires followed the requirements set out in the Appendix K - Operations Manual v4-0, of the REDD+ Agreement.

[2.3.16.2 Environmental Managers](#)

The selection of Environmental Managers is carried out through an open and participatory process at the community level, through each local community's general assembly. Prior to the selection, COCOMACIA explains to the Local Board the roles, responsibilities, and expected profile of the Environmental Managers,

ensuring that all community members clearly understand the scope of the position, the level of commitment required, and the importance of the role for territorial environmental management.

Once this information has been shared, the community itself, exercising its autonomous governance structures, nominates and selects the individuals who will assume the role during the local assembly. As part of the Program's gender equity approach, communities are explicitly encouraged to ensure that at least one woman is included among the selected Environmental Managers. However, the final decision always remains with the community, in full respect of its autonomy and self-governance mechanisms. All Environmental Managers are engaged under the same conditions, without differentiation based on gender. Following their selection, they receive training and ongoing technical support to strengthen their capacities in environmental monitoring, territorial governance, and community-based management. The number of female Environmental Managers who participated in this monitoring period is 21 (14%).

2.3.16.3 Zonal Conservation Committee Leaders

The selection of the three members of the Zonal Conservation Committees per zone was conducted by the COCOMACIA board based on its long-standing, in-depth knowledge of the leadership dynamics, technical profiles, and community trajectories within each Local Community Council. Given that COCOMACIA has worked continuously with these communities for decades, it possesses a detailed understanding of which individuals have demonstrated experience and commitment in environmental management, sustainable productive activities, territorial governance, and community organization. This allowed the organization to identify suitable candidates who met the technical and social requirements of the role. Although the selection was not conducted through an open public call, the process was guided by objective technical criteria related to experience in agricultural or environmental activities, leadership capacity, territorial knowledge, and community trust. Equal opportunity principles were applied in the sense that all community members with the relevant background were considered eligible in practice, and a gender approach was actively taken into account during the selection to ensure that women were also represented whenever possible. The roles are compensated under the same conditions and pay scale, regardless of gender. The Program foresees future opportunities for additional community members, including women and vulnerable or marginalized persons, to access similar roles through gradual capacity-building within the project's broader implementation framework.

2.3.17 Occupational Safety Assessment (VCS, 3.19; CCB, G3.12)

Both COCOMACIA REDD+ Team staff and communities participate in daily field activities where they are exposed to various risks. Some of these risks include boat accidents due to travel to Project sites, risks associated with field activities such as forest patrols, biomass measurements and forest management. Field personnel may also be at risk of exposure to dangerous wildlife, or difficult forest conditions, etc. To mitigate these risks, the project has implemented and disseminated a COCOMACIA REDD+ Operations Manual, which outlines best practices for staff, contractors, and community leaders involved in project

activities. Furthermore, the Project includes safety training, especially around wildlife and encountering poachers. Generally, the Project will encourage patrolling in the forest to be carried out with at least two people; and that anyone who goes to the forest carries a machete and a telephone for communication /emergency purposes. Additionally, community members participating in forest patrol, have received first aid and safety training.

2.4 Management Capacity

2.4.1 Required Technical Skills (VCS, 3.19; CCB, G4.2)

Key technical skills are required to implement the Project successfully including experience in developing and implementing carbon development projects that have a positive impact on the biodiversity and social elements of critical forest ecosystems.

COCOMACIA, in the exercise of its governance and governability in its territory, has been advancing in the implementation of the Environmental Land Management Plan - POTA, 2016-2027 with the purpose of articulating actions with the competent institutions for territorial and environmental development.

This POTA shows that COCOMACIA has strategically prioritized initiatives for sustainable development and conservation of its ecosystems in its environmental management plan. With the support and collaboration of Terra and COCOMACIA, the REDD+ Team has been formed. The following positions are part of the REDD+ Team: Project Director, Agronomist, Conservation and land use, Monitoring and Evaluation, Environmental Legal Coordinator, Socio-Organizational Coordinator, Interinstitutional Relationship Liaison, Accounting Assistant. This Program team is responsible for making the necessary decisions for the implementation of REDD+ activities, through knowledge of the dynamics of its territory, its uses and customs, the daily living in the community and the appropriate language to transmit the information clearly and effectively, all of the above allows the risk to be controlled and the probability of success is greater, uncertainty is reduced to a minimum.

The Program team has the ability to apply its knowledge, skills, perseverance, tools and techniques to the development of Program Activities to satisfy requirements. Among their responsibilities is 1) executing the Program Activities in the expected time, 2) adhering to the planning, 3) Complying with the processes and procedures, 4) Having full knowledge of the tools that will be used in the development of the Program and continuously train to stay informed, 5) Execute corrective actions when any of the activities is not carried out properly.

Terra Global Capital contributes key technical skills in greenhouse gas quantification, carbon measurement and monitoring that support projects implementation and evaluation. Terra Global Capital and COCOMACIA work together to achieve and secure climate finance for conservation.

Table 11. Technical Skills Delivered by Project Implementers and Partners

Core Project Component	COCOMACIA	TGC
Project authorization, design oversight and financing	√√	
Project design and planning	√√	√
Overall Project implementation management and partner coordination	√√	√

Core Project Component	COCOMACIA	TGC
Community forest management	√√	
Community engagement and support for implementation of community Project	√√	
Field data collection and on-going monitoring	√√	√
VCS/CCB Program development and GHG quantification	√	√√
Design and oversight of Program's institutional arrangements (fiscal, legal and contractual)	√	√√
Coordination with National REDD+ efforts and other government agencies	√√	√
On-going management and REDD+ activities	√√	√

√√ = Technical Lead

√ = Technical Support

2.4.2 Management Team Experience (VCS, 3.19; CCB, G4.2)

2.4.2.1 COCOMACIA

COCOMACIA has had the opportunity to develop, implement and execute projects in its collective territory that have been aimed at strengthening its governance structure, the use and usufruct of natural resources, have strengthened the dynamics around the victims of the armed conflict. Among other topics, they have given priority to the role of women and youth, in their different scenarios. These projects have been financed by the national government, by different NGOs around the world and some educational institutions (USAID, ONF ANDINA, ART- *Agencia de Restauración de tierras*, DAPR – *Departamento Administrativo de la Presidencia de la Republica*, MISEREOR, ICBF. Instituto Colombiano de Bienestar Familiar, PMA- Programa Mundial de Alimentos, Secretariado Nacional de Pastoral Social, DIAKONIA, FAO, UNODC, TICCA, OIM, PNUD, WWF, Fondo Acción, CORDAID, MERCYCORPS, ACDIVOCA. All of the above has provided COCOMACIA sufficient administrative and organizational capacity and strength for project management.

2.4.2.1.1 Willinton Murillo Quinto

A Teleinformatics Engineer, with over sixteen years of experience, Mr. Murillo currently serves as the Director of the COCOMACIA REDD+ Program. He has specialized in the design and implementation of participatory and community-based environmental planning processes within collective territories of ethnic communities. His work has focused on integrating environmental policies, regulations, and legal frameworks to ensure the effective participation of institutions, local and regional governments, civil society organizations, and ethnic-territorial authorities. This experience has allowed him to build strong and lasting relationships within Afro-descendant and Indigenous governance structures across Chocó and Colombia's Pacific region.

Mr. Murillo has extensive experience working in transdisciplinary teams and incorporating ethnic, gender, and generational perspectives into territorial and environmental planning. His approach combines legal and regulatory instruments with strategies for climate change adaptation and mitigation. He has collaborated with local organizations, national and international NGOs, universities, and research institutes. He is proficient in office software, social media communication, and the use of GIS and remote sensing

tools to support decision-making. In addition, he has experience applying security measures in conflict-affected areas and possesses excellent communication skills for engaging with diverse audiences and institutional settings.

2.4.2.1.2 Darío José Córdoba Moreno

Mr Moreno is an agricultural technician and professional in agronomy with over 19 years of experience in community-based rural development, sustainable production, and institutional strengthening processes in the Chocó region. He currently serves as Agricultural specialist for the COCOMACIA REDD+ Program. Mr Moreno has worked extensively with local governments, community councils, and national and international cooperation agencies to promote sustainable agricultural practices, environmental restoration, and local governance.

He has served in key technical and coordination roles with institutions such as COCOMACIA, the Municipality of Atrato (UMATA), the *Fundación para el Desarrollo Integral del Pacífico* (FUNDEPA), the Ministry of Agriculture of Colombia, and *Fondo Acción*, among others. His work includes leading productive restoration initiatives, strengthening producer associations, and supporting agroecological value chains in partnership with organizations such as WWF, FPD, and COLCIENCIAS. Darío is recognized for his ability to integrate technical expertise with participatory approaches, empowering local communities and advancing sustainable land-use management in Afro-Colombian collective territories.

2.4.2.1.3 Roque Rentería Cuesta

Mr. Rentería is a Colombian lawyer with over 22 years of professional experience in the public and private sectors, particularly in legal advisory roles related to environmental management, territorial governance, and community rights. He holds a Law degree, a Diploma in Labor Law, and a Specialization in Environmental Law, providing him with a strong academic foundation that bridges legal, environmental, and social dimensions. He currently serves as Legal Advisor for COCOMACIA and for the COCOMACIA Community REDD+ Program, where he provides guidance on matters related to environmental regulation, land tenure, and collective rights. His experience includes serving as Mayor of the Municipality of Medio Atrato, Legal Advisor to the Government of Chocó, and as Legal and Environmental Advisor to COCOMACIA, contributing to institutional strengthening and the defense of Afro-Colombian collective territories. Throughout his career, he has been recognized for his commitment to the protection of ethnic and environmental rights, his expertise in navigating complex legal frameworks, and his continued support for community-based governance and sustainable territorial management in Colombia's Pacific region.

2.4.2.2 Terra Global Capital

Terra Global is the global leader in forest and land-use carbon advisory and finance. Terra was founded in 2006 to provide governments, NGOs and private companies with support for market and payment-for performance-based approaches that benefit rural communities. As proven innovators, Terra provides both technical advisory in the measurement and commercialization of emissions reductions and carbon finance

through our dedicated Terra Bella Investment Fund and separately managed investment vehicles. Terra has established itself as a valued partner to a global client base by supporting the sustainable management of natural resources and through the development of rural livelihoods.

2.4.2.2.1 Leslie L. Durschinger, Founder, CEO

Leveraging 20 years of experience and a proven track record in the financial services industry, Ms. Durschinger founded Terra Global Capital in 2006 to promote results-based approaches to sustainable landscape management through climate smart agricultural and reducing deforestation. Ms Durschinger is recognized as a pioneer and innovator in alignment of development values and financially viable approaches to sustainable landscape management. Terra is now the leader in forest and agriculture program development, GHG analytics and business model development, providing technical expertise their global client base of governments, NGOs, and private companies in a collaborative and participatory manner. Under Durschinger's leadership Terra has structured risk mitigation instruments, trust funds and private equity funds to drive investment capital to sustainable agricultural production and forest management. Prior to Terra, Ms. Durschinger held senior management positions in the areas of derivatives trading, investment management, algorithmic trading, risk management, and securities lending. She the co-chair of the International Emission Trading Associations Natural Capital Solutions working group, and is a member of the Verified Carbon Standard (VCS) AFOLU Steering Committee, REDD+ Social & Environmental Standards Committee, VCS JNR Permanence Work Group, Coalition on Agricultural Greenhouse (C-AGG) Advisory Committee and W+ Standard Advisory Council. Ms. Durschinger and her family make small production olive oil on their farm in Mendocino County. Among her previous employers are JP Morgan, Merrill Lynch, Barclays Global Investors and Charles Schwab.

2.4.2.2.2 Erica Meta Smith, M.F., RPF, Managing Director

Ms. Smith, M.F., RPF. Forest Carbon Field Development Specialist, Joined Terra Global Capital in 2009. Ms. Smith provides technical forestry knowledge, on-ground carbon quantification expertise, and specializes in forest mensuration programs. She has firsthand knowledge of a forestry-based income the experience of depending on natural resources as a livelihood. Before working with Terra Global Capital Ms. Smith worked in forest policy and on forestry technical operations. She received her undergraduate degree in forestry and Master of Forestry from University of California-Berkeley in 2005 and 2007. Her master's work reviewed California Climate Action Registry's Forestry Protocols and implications of carbon markets in California. Ms. Smith is a Certified Ecologist through the Ecological Society of America and a Registered Professional Forester in the State of California. Ms. Smith has worked extensively in the REDD+ sector training communities and working with in-country experts for excellence in MRV across Africa and Asia.

2.4.2.2.3 David Montoya González, Director GIS/RS, Team Lead

Mr. Montoya has a widely experience in remote sensing and GIS. He holds a bachelor's degree in Forest Engineer from the National University of Colombia (UNAL) and a master's degree in remote sensing from Federal University of Rio Grande do Sul (UFRGS) – Brazil. Mr. Montoya has worked with multiple Colombian

government entities, such as the national department of statistics (DANE), supporting the 3rd National Agricultural Census, the National University of Colombia in research projects in the Andean Region, and with indigenous communities analyzing the land cover changes and natural resources sustainability. In addition, Mr. Montoya has also professional experience closely related with Nature Based Solutions by managing REDD+ projects and developing GHG and LULC assessments in Colombia, Belize, Malawi, Myanmar, among other countries, under the international standard VSC and CCB.

2.4.2.2.4 Carolina Oleas, Managing Director, Agronomy, NRM, Rural Development

Mrs. Oleas provides technical agricultural knowledge, community development expertise, and specializes in participatory project management. She has firsthand field experience working with farmers in different countries of Latin America (Guatemala, Ecuador, Costa Rica, Bolivia, Haiti, El Salvador, others) building capacity with rural communities in sustainable development and climate-smart agricultural practices. Before joining Terra, Mrs. Oleas worked on designing, managing, monitoring, and evaluating projects and programs to promote sustainable production and the application of agricultural adaptation and mitigation practices at the field level with farmers' organizations. She received her undergraduate degree in agricultural engineering from EARTH University in Costa Rica, and later received a Master's in International Agricultural Development from Texas A&M University.

2.4.2.2.5 Holver Arango, Principal, GHG Quantification, Team Lead, Technical Program Manager

Holver Arango has more than 10 years' experience as a forestry engineer and is skilled in project formulation and management. At Terra Global, Holver is focused on GHG quantification for conservation and sustainable forest management projects. He has experience working with rural communities and environmental and agrarian institutions. Holver also has experience in multiple Colombian government entities (research institutes, environmental institutes, municipalities), international cooperation projects, and private companies in Colombia. He is knowledgeable in forest community management, land use planning, environmental and agrarian law, and official institutions. His work has focused on projects that aim to improve rural people's life, especially those that focus on human rights and sustainability as the anchor of forest conservation and restoration initiatives. Holver has a Bachelor of Science in Forest Engineering from the National University of Colombia.

2.4.2.2.6 Juan David Dueñas Ramirez, Principal, Investment Program Manager

Mr. Dueñas brings 14 years of expertise in community capacity building, market strengthening, and livelihood diversification to Terra Bella, specializing in community development using an ethnic and Nature-Based Solutions approach. At Terra Global, Juan David plays a strategic role in the COCOMACIA REDD+ Project, helping to bridge financial modeling, project design, community engagement, activity implementation, fiscal management and technical documentation, while ensuring that the project aligns with Verra's VCS and CCB standards as well as Colombian regulatory frameworks. Juan David also supports the development process of numerous community-based investments in Colombia and Latin America. Juan David holds an undergraduate degree in Government and International Relations from the Universidad

Externado de Colombia and a master's degree in environmental management from the Universidad de los Andes in Colombia.

2.4.3 Project Management Partnerships/Team Development (VCS, 3.19; CCB, G4.2)

The Program has all the partnerships needed to implement activities. When new activities require new technical expertise or partners, the Project will source them.

2.4.4 Financial Health of Implementing Organization(s) (CCB, G4.3)

The implementing organization, COCOMACIA does not itself have the financial resources to support the Program. In 2021, with the support of Terra Global, COCOMACIA secured a private sector Climate Finance investment to implement the Program which designed to cover costs until first issuance where the carbon revenue could cover the on-going Program funding needs. Given the delay in verification, an additional investment was agreed in 2024 for the funding needed to the expected date of verification by April 2026. Additional funds will be provided in the month of verification to cover the issuance costs. The Program is expected to be commercially viable through the sale of carbon credits.

The income from the sale of emission reductions is projected to be sufficient to cover the costs of implementing the REDD+ Program in the long term.

2.4.5 Avoidance of Corruption and Other Unethical Behavior (VCS, 3.19; CCB, G4.3)

2.4.5.1 COCOMACIA

The Code of Ethics of COCOMACIA establishes the ethical foundations and behavioral guidelines for its 124 Local Community Councils, the General Board, the Disciplinary Committee, and the technical team implementing the COCOMACIA Community REDD+ Program. It promotes integrity, responsibility, respect, teamwork, and transparency in all community and institutional relations. The Code emphasizes values such as good faith, equality, impartiality, efficiency, and accountability, ensuring that all actions within the organization and project are guided by honesty, diligence, and respect for the community's collective principles.

The Policy on Conflict of Interest and Anti-Corruption provides clear guidance to all members of COCOMACIA and the technical team of the REDD+ Program to prevent, identify, and address situations that could compromise organizational integrity. It strictly prohibits bribery, extortion, and any form of corruption, mandating transparency in financial records and the obligation to report any irregularities. The policy defines real, potential, and apparent conflicts of interest, requiring all staff to act with independence and impartiality and to disclose any personal or professional interest that might interfere with their duties. Oversight of the policy lies with the Disciplinary Committee, the General Board, and the Project Director

2.4.5.2 Terra Global

Terra Global Capital, LLC, and its subsidiaries are committed to upholding the highest legal and ethical standards in their business operations. To ensure compliance with the Foreign Corrupt Practices Act (FCPA), the company has implemented a comprehensive FCPA Policy. As a Green Climate Fund accredited entity, Terra Global's policies including anti-corruption, anti-trafficking, and ethics, have undergone comprehensive reviews and met the highest standards.

This anti-corruption policy applies to all personnel, including directors, officers, employees, contractors, and third-party representatives. The FCPA is the key legislation governing interactions between U.S. businesses and foreign officials. It prohibits bribery of foreign officials and mandates accurate financial record-keeping and internal accounting controls. The company's policy emphasizes compliance with the FCPA, and any failure to adhere to it may result in severe consequences, including civil and criminal liabilities. The policy outlines anti-bribery provisions, defining what constitutes illegal practices, including payments to third parties that are intended for corrupt purposes. The definition of "foreign official" is broad, encompassing employees, agents, or instrumentalities of foreign governments, political parties, and international organizations. Specific guidelines are provided regarding meals, entertainment, and gifts, emphasizing that any such offerings to foreign officials must be of nominal value, lawful, and in line with local customs. Advance authorization from the Founder and Managing Director is required for such expenditures, with exceptions based on monetary thresholds. The full policy can be consulted in Terra Global Anticorruption Policy Appendix 4: Commercially Sensitive Information.

Terra Global's anti-corruption policy and specifically the requirements under FCPA extend to COCOMACIA through the REDD+ Agreement and the follow-on Project Investment Agreement.

2.4.6 Commercially Sensitive Information (VCS, 3.5.2-3.5.4; CCB Program Rules, 3.5.13 – 3.5.14)

The commercial sensitive items included are:

- The Patrimonio Autónomo trust contract
- REDD+ Agreement
- Investment Agreement – Payment in Kind Loan Agreement (first investor)
- Project Investment Agreement (from TB-NBS Pool, follow-on investment)
- Terra Global Anti-corruption, Anti-trafficking, and Ethics Policies.

The commercially sensitive information, which has been prepared and provided to the VVB, is listed in Appendix 3: Commercially Sensitive Information.

2.5 Legal Status and Property Rights

2.5.1 National and Local Laws (VCS, 3.1, 3.6, 3.7, 3.14, 3.18, 3.19; CCB, G5.6)

The Project proponents are committed to complying with all applicable laws, statutes, property rights and other regulatory frameworks. Listed below are laws and sections of laws that are applicable to the Project

Activity Instance and are recognized by the national and regional government that pertain to the land management, territory rights and security of the members of the Black communities as well as those that of the Department of Chocó and Antioquia Colombia.

2.5.1.1 Afro-Colombia Legal and Tenure Rights

The Colombia laws covering Afro-Colombians, define COCOMACIA's legal rights to land, their prescribed governance structure and the authorization to operate the Project Activities. Below is a summary of those laws.

2.5.1.1.1 Summary of Laws Impacting Afro-Colombians

Law 21 of 1992. Colombia constitutionally recognized the Black communities and was recognized as a multi-ethnic and pluricultural country.

The following summarizes the rights under the Colombian constitution (Ng'weno, 2000):

Law 21 of 1991 "Through which Convention No. 169 on indigenous and tribal peoples in independent countries, adopted by the 76th, is approved. meeting of the General Conference of the O.I.T., Geneva 1989".

Decree Law 4635 of 2011 "By which measures of assistance, care, comprehensive reparation and land restitution are issued to victims belonging to Black, Afro-Colombian, Raizales and Palenqueras Communities".

Decree 1320 of 1998 "By which prior consultation with indigenous and Black communities is regulated for the exploitation of natural resources within their territory".

Decree 1745 of 1995 "By which Chapter III of Law 70 of 1993 is regulated, the procedure for the recognition of the right to collective property of the" Lands of the Black Communities "is adopted and other provisions are issued".

Decree 3770 of 2008 "by which the High-Level Consultative Commission of Black, Afro-Colombian, Raizales and Palenqueras Communities is regulated; the requirements for the Registration of Community Councils and Organizations of these communities are established and other provisions are issued".

Articles 63 and 330 of the Colombian Constitution recognize the "*Consejos Comunitarios*," the "Recognition of the Right of Black Colombians to Collectively Own and Occupy their Ancestral Lands" and addressed land ownership, specifically communal lands of ethnic groups.

2.5.1.1.2 Black Communities Tenure, Natural Resource Use and Governance

Law 2 of 1959 - "Whereby norms are dictated regarding the nation's forest economy and the conservation of renewable natural resources" (Por el cual se dictan normas sobre economía forestal de la Nación y conservación de recursos naturales renovables) establishes a classification and management regime for the lands that fall under its purview including public lands, *Resguardos* and Black communities' lands; this is separate from the National Parks system and does not represent property rights of the state (Gómez, 2019).

Law 99 of 1993 – “General Environmental Law of Colombia” (Ley General Ambiental), Article 76 states that the exploitation of natural resources should be done without detriment to the cultural, social, and economic characteristics of Indigenous or Afro-Colombian communities referred to Law 70 of 1993 and Article 330 of the National Constitution and the decisions of the matter shall be made after consultation with representatives of such communities.

Law 70 1993, “Law of Black Communities” (Ley de Comunidades Negras) of the In Recognition of the Right of Black Colombians to Collectively Own and Occupy their Ancestral Lands (1993), Article 5, introduces the *Consejos Comunitarios de las Comunidades Negras*, gives the right to lands to the Afro-Colombian communities, the internal management of property lands collective agreement, ensures conservation and protection of the rights of collective property, as well as the use and conservation of natural resources. Article 7, states that in each community, the part of the lands of the Black communities destined collective use is inalienable, unpredictable, and unattached; only those areas that are assigned to a family group may be alienated due to the exercise of the preferential right of occupation or acquisition may only fall on other members of the community and on its defect in another member of the ethnic group, with the purpose of preserving the integrity of the lands of the Black communities and the cultural identity. Article 15 states that occupations that are carried out by people not belonging to the Black ethnic group on the lands adjudicated in collective property to the Black communities that thus law deals with, will not entitle the interested party to obtain the title or recognition of improvements and for all legal purposes will be considered as possessors of bad faith.

Decree 1745 of 1994 acknowledges the rights to the Black communities in Colombia, and their rights to titled lands, and sets procedures and guidance for setting Community Councils.

Regulatory Decree 1745 of 1995. Article 3 acquires for there to be high authority of internal administration within the lands of Black communities; Afro-Colombians were exempt from the property tax payment but there has been no rule that has compensated for municipalities.

In order to receive the titled lands, the communities in proposed areas need to form ‘*Consejos Comunitarios*’, or Community Councils, in accordance with the regulations of the National Government. The Community Council is made up of the general assembly, the community council board, and the participation of one legal representative of the communities. All members of the council must be a part of the Afro-Colombian community and a native to the specified land areas. Members are selected through a direct, democratic election every three years, having their terms end on the 31st of December in the third year. Collectively, the council has an annual meeting. The general assembly consists of representatives from each village and is responsible for drafting and approving internal regulation. The board is made up of members selected by the general assembly, and the legal representatives are there to represent the community members. (Guerrero Pino, 2017).

Compliance with these laws may be evidenced by the following:

- COCOMACIA's election and assembly records, which document the democratic renewal of its leadership in accordance with Law 70 of 1993 and Decree 1745 of 1995.
- The Collective Land Title Resolution issued by the Instituto Colombiano de la Reforma Agraria (INCORA) through Resolution No. 04566 of December 29, 1997, recognizing COCOMACIA's collective ownership.
- The registration of its Community Council and Legal Representative before the Ministry of the Interior and the High-Level Consultative Commission of Black, Afro-Colombian, Raizal and Palenquero Communities.

2.5.1.2 Colombian Carbon Laws

2.5.1.2.1 Law 1819 of December 29, 2016

PART IX. Article 221 and Article 222 Carbon Tax imposes a national tax that is levied on the carbon content of all fossil fuels, including all petroleum derivatives and all types of fossil gas that are used for energy purposes, as long as they are used for combustion.

2.5.1.2.2 Decree 926 of June 1, 2017, Title 5

This decree defines the ability for a taxed entity to be “carbon neutral” as neutralizing or mitigating the GHG emissions associated with the use of fuel under the national carbon fuel tax (Law 1819 of December 29, 2016). Eligible mitigation activities include programs, projects, actions, or activities carried out at a national, regional or local level aimed at reducing, avoiding, removing or capturing GHGs. This is achieved through the voluntary retirement of qualifying verified emission reductions/removals (VERs) in the name of the taxable entity. Parties that are most interested in offsetting the carbon tax are fuel wholesalers, airlines and cargo and passenger transport companies. The GHG standards accepted for mitigation under the law are broadly defined and require that their GHG Validation and Verification Bodies (OVV) must meet one of the following criteria: be accredited by the National Accreditation Agency of Colombia (ONAC), be a signatory to the International Accreditation Forum (IAF), and/or the program must be accredited under the requirements of ISO 14065 or the UNFCCC.

2.5.1.2.3 Resolution 1447, 2018

Resolution 1447 of May 2018 covers the process for registrations and approvals under the Minister of the Environment and Sustainable Development for people and entities seeking results-based payments or similar compensation.

2.5.1.2.3.1 Articles 1 and 2 of 1447

ARTICLE 1. OBJECT. The purpose of this resolution is to regulate the Monitoring, Reporting and Verification System of mitigation actions at the national level, in relation to the Accounting System for the Reduction and Removal of Greenhouse Gas Emissions and the National Registry for the Reduction of Greenhouse Gas Emissions (GHG), which includes the National Registry of Action Programs and Projects for the Reduction of Emissions due to Deforestation and Forest Degradation of Colombia (REDD+).ARTICLE 2. AREA OF

APPLICATION. This resolution applies to any natural or legal person, public or private, who intends to register their GHG mitigation initiative to qualify for results-based payments or similar compensation as a result of actions that generate emission reductions and removals of Greenhouse Gases, and the one that intends to register its GHG mitigation initiative to demonstrate its mitigation results within the framework of compliance with the national climate change goals established under the UNFCCC, as a consequence of the implementation of said actions.

Resolution 1447 states that any project or program that intends to register a GHG mitigation initiative, and seeks to receive payment for results and emission reduction/removal activities must monitor, report, and verify their actions in accordance with guidelines managed by the IDEAM. It regulates the Monitoring, Reporting and Verification System of mitigation actions at the national level, in relation to the Accounting System for the Reduction and Removal of Greenhouse Gas Emissions and the National Registry for the Reduction of Greenhouse Gases. Greenhouse Gas Emissions (GHG), which includes the National Registry of Programs and Projects of actions for the Reduction of Emissions due to Deforestation and Forest Degradation of Colombia (REDD+).

According to Resolution 1447, all GHG mitigation initiatives are to be registered in RENARE (MADS, 2018). The COCOMACIA Community REDD+ Program was registered in RENARE on September of 2020.

2.5.1.2.3.2 Article 20 1447

Resolution 1447 has requirements which define the maximize potential for GHG mitigation in REDD+ projects (Article 20 Law 1447 May 2018). This applies the same for REDD+ Projects and REDD+ Programs (as defined under 1447).

2.5.1.2.4 Article 41 of 1447

A translation of the law states: “The holder of the REDD+ Project must establish its baseline using the most up-to-date FREL that has been formally submitted by Colombia and evaluated by the UNFCCC. This FREL must include the project's geographic area, as well as REDD+ activities, periods, and carbon stocks in which the initiative is to be implemented. Establishing the baseline from the FREL involves the methodological reconstruction of the FREL over the project area, demonstrating consistency with it. This methodological reconstruction involves calculating the expected GHG emissions in the REDD+ Project area, consistently using the variables employed in the FREL. This is done using information provided by the Forest and Carbon Monitoring System (SMBYC), including the definition of forest, global warming potentials, emission factors by forest type, historical deforestation data for the project area, and its method of estimating and projecting emissions over time”.

2.5.1.2.5 Legal Implications for the Maximum VCUs for Nested Project Issuance

As this FREL is initially developed to support REDD+ Projects under Scenario 1, each REDD+ Project seeking to nest under this FREL is required to adhere to the requirements under Law 1447. Projects using the Choco FREL are required by the Resolution 1447 to be register under RENARE and apply a “methodological reconstruction” to determine the maximum mitigation potential (MMP), which limits the number of carbon

credits that a project can issue, to ensure transparency, methodological consistency, and preventing double counting with the National Level accounting system. For some vintages, rather than apply methodological reconstruction the nested projects will be subject to a maximum mitigation as determined in accordance with 1447.

Prior to issuance of VCUs each nested project shall demonstrate that it is registered under RENARE and provide in the Monitoring Report, the maximum mitigation potential from the government or demonstration of the application of a methodological reconstruction, which will be checked against the ex-post monitored results before issuance. The total number of VCUs that may be issued during any monitoring period, shall not exceed the sum of the maximum mitigation potential provided by the government measured the same vintage years as the monitoring period or the result of the methodological reconstruction.

The UNFCCC FREL submitted by the government covering 2018 to 2022, has completed its Technical Review under UNFCCC, projects seeking issuing during this period are required to have a Maximal Mitigation Potential assigned by IDEAM or the Ministry of Environment. Colombia submitted its third National Forest Emission Reference Level (NREF/FREL) to the UNFCCC in January 2024 for the 2023–2027 period; the submission completed UNFCCC technical assessment, and the assessment report was published on August 21, 2025. In line with Resolution 1447 of 2018 projects seeking issuance for vintages within this NREF period will need estimate their maximal mitigation potential with the assessed NREF (i.e., undertake the “reconstrucción metodológica” once the Ministry issues detailed guidance); as of today, that specific guidance has not yet been released.

2.5.1.2.5.1 Application of MMP for First Nested Project

For the first two years of the baseline validity period (2021, 2022), the government has provided the MMP for the COCOMACIA Community REDD+ Program. However, for the other years in the baseline validity period (2023-2026), the regulation is unclear and there was no detailed guidance provided by the Colombian government on how to actually do a “methodological reconstruction” of the FREL to projects. This is particularly unclear given that much of the area inside of the Choco FREL are not included in the Colombia’s UNFCCC FREL as it specifically excludes protected areas, areas under Afrocolombia tenure and Resguardos tenure. Terra Global requested to the national government (Ministry of Environment and Sustainable Development) clarification on this issue and how to perform the methodological reconstruction or whether it is required.

For the first two years of the baseline validity period which correspond with the first two vintages of the COCOMACIA Community REDD+ Program, through meetings, direct emails to government offices and through the process of a “derecho petición” Terra Global has secured responses on this issue as it relates to the first nested project, COCOMACIA Community REDD+ Program to apply this baseline.

For the COCOMACIA REDD+ Program, the first vintage of issuance is 2021 (start of the Choco FREL Baseline Validity Period), and the first monitoring period for the COCOMACIA Project is 2021 to 2023. On November 7, 2024, for the second time, a request was made to Ministry of Environment and Sustainable Development

for the maximum mitigation potential for the COCOMACIA Community REDD+ Program. In January 2025, the answer was provided by Ministry of Environment and Sustainable Development, which included an attachment from IDEAM who conducted the technical process to estimate that potential for the Maximum Mitigation Potential for the COCOMACIA REDD+ Area for the period of 2018-2022, of which only 2021 and 2022 are relative for the COCOMACIA Community REDD+ Program.

La **Tabla 3** presenta la estimación del Potencial Máximo de Mitigación (PMM) para el periodo 2018-2022 basada en el NREF y los parámetros específicos del proyecto REDD+.

Año	NREF Nacional (t CO2 eq)	Potencial Máximo de Mitigación (t CO2 eq)
2018	120770431,4	442.107,57
2019	127011963,2	464.956,12
2020	132520275,3	485.120,54
2021	137130393,5	501.996,93
2022	140732334,7	515.182,65

The IDEAM states the following: "La proporción que representa el área del proyecto REDD+ en relación con el Nivel de Referencia de Emisiones Forestales (NREF) nacional es de 0,00366072 lo que equivale a un 0,3661 % del total establecido en el NREF nacional", translated to English: "The proportion that the REDD+ project area represents in relation to the national Forest Reference Emission Level (FREL) is 0.00366072, which is equivalent to 0.3661% of the total established in the national NREF."

As provided in the table above, this maximum mitigation potential (MMP) covers only deforestation as the UNFCCC FREL for this period only includes deforestation, not degradation. Meaning the ex-post verified credits from degradation can be recognized as quantified with any limitation. This MMP for reducing deforestation, covers the monitoring years 2021 and 2022, but not 2023 which is part of the first monitoring period.

At the time that Terra Global requested the MMP for 2023 from the government, it received a response that since the technical review under UNFCCC of the FREL for years 2023 to 2028 had not been completed, that it was not provided. Noting, that this next version of the UNFCCC FREL includes both deforestation and degradation, but still excludes protected areas, areas under Afrocolombia tenure and Resguardos tenure. In January 2025, the responsibility for establishment of the MMP and providing guidance on the methodological reconstruction moved from IDEAM to the Ministry of Environment and Sustainable Development. Terra Global and COCOMACIA met in person with Ministry of Environment and Sustainable Development, to get guidance on how (or whether) to apply the methodological reconstruction of Colombia's UNFCCC FREL for the COCOMACIA Community REDD+ Program for vintages 2023 and beyond to complete the issuance of 2023 vintages. During the meeting, Ministry staff indicated they are preparing detailed guidance stating that projects seeking issuance after 2022 will not receive an MMP allocation. Instead, each project will be required to conduct a methodological reconstruction based on the UNFCCC

2023–2027 FREL, to obtain the maximum credits that Project could claim for AUDef and AUDeg. Despite several formal requests submitted, the Ministry has not yet published the guidance; therefore, the reconstruction cannot be completed at this time. Accordingly, for 2023 the MMP for Avoided Deforestation was calculated by applying the same fraction (0.3661%) of the UNFCCC deforestation FREL, and no MMP was applied to emission reductions from Avoided Degradation.

2.5.1.2.6 Decree 446 of March 2020

Indicates that, until December 31, 2020, OVs that are accredited by the Executive Board of the Clean Development Mechanism may be verifiers and validators as Designated Operating Entity, after that date they must be accredited by ONAC.

2.5.1.2.7 Law 1844 of 2018

“by which the “Paris Agreement” is approved, adopted on December 12, 2015, in Paris, France. The Government of Colombia welcomed the Reinforced Transparency Framework and committed through its Contribution Nationally Determined (NDC) to reduce 20% of its Greenhouse Gas emissions with respect to the projected emissions of the year 2030 and up to 30% conditional on international support. Likewise, it committed to periodically provide a report on the inventory of emissions and the information necessary to track the progress made in the implementation and compliance of its NDC through the use of common methodologies and metrics, ensuring methodological consistency, including for the baselines, between the communication and the implementation of the NDC, and seeking completeness and exhaustiveness in the monitoring of the NDC.

2.5.1.2.8 Article 175 of Law 1753 of 2015

Creates "the National Registry for the Reduction of Greenhouse Gas Emissions (GHG) is created, of which the National Registry of Programs and Projects of actions for the Reduction of Emissions due to Deforestation and Forest Degradation of Colombia -REDD+. These will be regulated and administered by the Ministry of Environment and Sustainable Development.

2.5.1.2.9 Law 164 of 1994

The Congress of the Republic of Colombia approved the United Nations Framework Convention on Climate Change, whose objective is the stabilization of concentrations of greenhouse gases - GHG in the atmosphere, at a level that prevents dangerous anthropogenic interference in the climate system.

2.5.1.2.10 Law 629 of 2000

Fulfill the quantified obligations to reduce GHG emissions for developed countries and provides flexibility mechanisms that will serve, in a complementary manner, to achieve the established reductions, which allow the exchange of allowable emission quotas of the countries. Kyoto Protocol, approved by the Congress of the Republic of Colombia.

2.5.2 Relevant Laws and Regulations Related to Worker's Rights (VCS, 3.18.2; CCB, G3.11)

COCOMACIA complies with the laws that protect the rights of its employees and contractors. During the onboarding process, new employees receive orientation about their rights as workers and the laws that protect employees from harassment (sexual). As required by law, all employees are enrolled in the social security system, which allows them to have access to health services, disability and retirement.

Table 12 provides a list and brief description of all relevant labor laws in Colombia.

Table 12. Labor Laws, Decrees, Resolutions and Circulars

Laws, Decrees, Resolutions and Circulars	Description
Law 9 de 1979	For which sanitary measures are issued. Title III talks about the provisions of Occupational Health and these are applicable to all places and types of work.
Law 776 de 2012	Rules on the organization, administration and benefits of the General System of Professional Risks.
Law 1010 de 2006	By which measures are adopted to prevent, correct and punish workplace harassment and other harassment in the framework of labor relations, Amended by Law 1622 of 2013, 'through which the youth citizenship statute is issued and dictate other provisions', published in the Official Gazette No. 48,776 of April 29, 2013; Article 74. Modify numeral 3 of article 2 of Law 1010 of 2006, by means of which measures are adopted to prevent, correct and punish workplace harassment and other harassment within the framework of labor relations.
Law 1122 de 2007	Modifications in the general social health security system
Law 1562 de 2012	By which the Occupational Hazards System is modified and other provisions on Occupational Health are issued.
Law 1616 de 2013	By means of which the Mental Health Law is issued, and other Provisions are issued.
Decree 614 de 1984	By which the bases for the organization and administration of Occupational Health are determined.
Decree Law 1295 de 1994	By which the organization and administration of the General System of Professional Risks is determined, modified in some articles by Law 1562 of 2012 (by which the system of occupational risks is modified and other provisions are issued in matters of occupational health.
Decree 1607 de 2002	By which the classification table of economic activities is established for the General System of Professional Risks
Decree 2923 de 2011	By which the Quality Assurance System of the General System of Professional Risks is adopted
Decree 0723 DE 2013	By which the affiliation to the General System of Occupational Risks of people linked through a formal contract for the provision of services with public or private entities or institutions and of independent workers who work in high-risk activities and other dictates is regulated. provisions
Decree 1477 de 2014	For which the table of diseases is issued.
Decree 055 de 2015	By which the affiliation of students to the General System of Occupational Hazards is regulated and other provisions are issued
Single regulatory Decree 1072 de 2015	By means of which the single regulatory decree of the labor sector is issued
Resolution 2400 de 1979	By which the Industrial Safety Statute is established.
Resolution 2013 de 1986	By which regulates the organization and operation of the Medicine, Hygiene and Industrial Safety Committees, today JOINT Committee of Occupational Health
Resolution 1016 de 1989	By which the legal obligation and permanent execution of the programs is determined, it regulates the organization, operation and form of the Occupational Health Programs that

	employers must develop. This regulation contemplates the content of the Occupational Health Programs, which must contain: Preventive and Occupational Medicine Subprogram. Industrial Hygiene Subprogram. Industrial Security Subprogram. Occupational Health Joint Committee.
Resolution 1075 de 1992	By which Occupational Health Activities are regulated, in the Preventive Medicine subprogram. Actions to control drug dependence, alcoholism and smoking are established
Resolution 2346 de 2007	By which the practice of occupational medical evaluations and the management and content of occupational medical records are regulated.
Resolution 1401 de 2007	By which the investigation of incidents and accidents at work is regulated.
Resolution 1956 de 2008	By which measures are adopted in relation to the consumption of cigarettes or tobacco.
Resolution 1013 de 2008	By which the Comprehensive Occupational Health Care Guides based on evidence are adopted.
Resolution 2646 de 2008	By which provisions are established and responsibilities are established for the identification, evaluation, prevention, intervention and permanent monitoring of the exposure of the psychosocial risk factor at work and for the determination of the origin of pathologies caused by occupational stress
Resolution 1918 de 2009	By which the practice of occupational medical evaluations and the management and content of occupational medical records is regulated, it modifies article 11 and 17 of resolution 2346 of 2007 and other provisions are issued.
Resolution 1918 de 2009	By which Resolution 2346 of 2007 on the practice of occupational medical evaluations is modified.
Resolution 1409 de 2012	By which the Safety Regulation for protection against falls in work at heights is established and repeals Resolutions numbers 3673 of 2008, 0736 of 2009 and 2291 of 2010, as well as Circular number 0070 of 2009, issued by the Ministry of Social Protection.
Resolution 3368 de 2014	By which it partially modifies Resolution 1409 of 2012
Resolution 0312 de 2019	Minimum standards of the Health and Safety System
Unified circular 2004	Which unifies the instructions for the surveillance, control and administration of the General System of Professional Risks

2.5.3 Human Rights (VCS, 3.19)

The Program demonstrates a commitment to recognizing, respecting, and promoting the protection of the Local Communities (LCs), and customary rights holders in accordance with international human rights law, including the United Nations Declaration on the Rights of Indigenous People's, as well as the ILO's indigenous and Tribal Peoples Convention.

This commitment is evidenced by the Program before Program Start and throughout the monitoring period. through various aspects of the Program, including:

1. **Program Implementation and VCU Ownership:** The Program is being implemented by a legally recognized Afro-Colombians which is a distinct ethnic group, not indigenous peoples, under Colombia's Law 70 of 1993, granting them collective territorial and cultural rights. And the VCUs remain as their VCUs within the Program's institutional arrangements.
2. **Stakeholder Engagement:** As shown in See Section 2.3, The Program engages IPs, LCs, and customary rights holders in a participatory manner, ensuring their active involvement in decision-making processes regarding Program design, implementation, and monitoring. The engagement process respects their autonomy, cultural practices, and traditional knowledge.
3. **Free, Prior, and Informed Consent (FPIC):** The Program follows the principles of FPIC as outlined in international human rights instruments. Before undertaking any activities that may affect LCs,

or customary rights holders, the Program seeks their consent in a culturally appropriate manner, as well as following established governance schemes, ensuring they have access to relevant information and are empowered to make informed decisions. PIC was carried out through the General Assemblies of 2018 and 2019. During the 2019 Assembly, project objectives, activities, and safeguards were presented and discussed in open sessions that allowed for dialogue and clarification of concerns. Approval to sign the agreements and initiate project implementation was granted through a majority vote of the 2019 General Assembly. For more information See Section 2.5.7.

4. **Respect for Land Tenure Rights:** The Program respects the land tenure rights of LCs, and customary rights holders, recognizing their rights to own, use, and manage their lands, territories, and resources. It ensures that Program Activities do not infringe upon these rights and, where applicable, seeks to strengthen and support their tenure systems.
5. **Protection of Cultural Heritage:** The Program acknowledges and respects the cultural heritage of LCs, and customary rights holders, including their languages, traditions, and customary laws. The Program incorporates measures to safeguard and promote cultural diversity, ensuring that Project Activities do not undermine their cultural identity or integrity.

In line with COCOMACIA's longstanding practice of privileging local leadership, local technical specialists are hired directly from within the communities or regions, drawing on their deep knowledge of local ecosystems, cultural practices, and territorial dynamics. Their involvement ensures that program implementation reinforces—rather than displaces—traditional ways of managing forests, rivers, and agricultural landscapes.

The Program also places its main agricultural strengthening efforts on the continuity and enhancement of COCOMACIA's culturally rooted agroforestry systems, which have historically combined cacao, plantain, fruit trees, medicinal species, and timber in diversified plots that reflect Afro-descendant stewardship traditions. These systems are strengthened through technical assistance that helps improve productivity, ecological resilience, and climate adaptation, but always in ways that complement existing cultural practices. The Program explicitly avoids promoting agricultural models or land-use practices that are not culturally embedded, that could erode traditional knowledge systems, or that contradict the community's collective vision for territorial management.

6. **Conflict Resolution Mechanisms:** The Program established a grievance redress mechanism that is accessible, transparent, and culturally appropriate for LCs, and customary rights holders. This mechanism enables them to raise concerns, seeks mediation or remediation in case of adverse impacts, and resolves disputes in accordance with their customary practices and legal frameworks.
7. **Alignment with Territorial Laws and Governance:** The Program seeks to build upon existing community institutions through the update and application of community internal regulations that have traditionally allowed LCs to facilitate the sustainable usage of natural resources and ensure social order within their territory. In COCOMACIA's case, these governance systems are grounded in the collective land rights recognized under Law 70 of 1993 and formalized through

the organization's Internal Regulations, the Zonal Committees, and the network of 124 Local Community Councils. The Program aligns fully with these structures by ensuring that all activities—forest management, monitoring, agricultural strengthening, and community governance processes—are reviewed, validated, and implemented through the bodies legally recognized in COCOMACIA's statutes.

The REDD+ Program reinforces these territorial governance mechanisms by strengthening the operational role of Zonal Conservation Committees, supporting the revision and updating of Internal Regulations, and enabling communities to exercise their regulatory authority over land-use decisions, forest protection, and dispute resolution. Program activities are therefore implemented not as external interventions, but as extensions of COCOMACIA's own governance framework, respecting their customary norms, enhancing institutional capacity, and ensuring that conservation and development actions remain consistent with rules defined by the community and long-term territorial planning.

By adhering to these principles and incorporating them into the program's policies, procedures, and practices, it demonstrates its commitment to upholding the rights of IPs, LCs, and customary rights holders in alignment with international human rights standards and relevant conventions.

2.5.4 Indigenous Peoples and Cultural Heritage (VCS, 3.18, 3.19)

The Program's commitment to preserving and protecting cultural heritage is ingrained in its activities; by leveraging the rich cultural tapestry of the communities, the Project not only fosters sustainable development but also ensures the preservation of cultural traditions and knowledge for future generations. These activities are undertaken to preserve and protect cultural heritage.

1. Organizing meetings to engage with communities' members, to understand their cultural values, and integrate them into program planning processes.
2. Ensuring cultural inclusivity and respect by fostering an open and inviting environment where all voices are heard through participatory decision-making processes.
3. Integrating traditional knowledge and practices into Program Activities to enhance economic opportunities and preserve community knowledge systems. For example, promoting the sustainable use of natural resources for survival such as hunting and sustainable wood harvesting, while understanding reasons and patterns for why it is done.
4. Implementing community-led territorial ordering and risk policies within the communities, considering local cultural practices and environmental knowledge for effective risk management while preserving cultural heritage.
5. Incorporate clear and inclusive language ensuring that information is accessible to all members of the communities.
6. Respect and support the sustainable extraction of wood from the forest on a small scale for the self-construction of homes, as well as the collection of dry wood on the ground for the preparation of traditional foods.

2.5.5 Recognition of Property Rights (VCS, 3.7, 3.18, 3.19; CCB, G5.1)

The Project Activity Instance is legally recognized according to INCORA resolution 04566 of December 29, 1997, by which COCOMACIA receives the collective title, its extension is 706,145 hectares. COCOMACIA, one of the Project proponents, has explicit and undisputed legal ownership of the entire Project Activity Instance including the rights to benefit from income-generating activities, including carbon finance, and to oversee the distribution of benefits available from carbon finance.

Program Activities have not and will not involve the resettlement of any community or household. Areas of agricultural expansion oriented toward consumption have been identified, mainly because the limits of community forests are unknown. Furthermore, the Program objectives involve maintaining and improving the livelihoods of the communities currently living within the Project Activity Instance. Resettlement is not a component of the Project design, nor would it be acceptable to the COCOMACIA community.

None of the Program Activities require relocation, whether voluntary or involuntary. During implementation, Household Surveys and Participatory Rural Assessments (PRA) have been conducted to better understand migration patterns and factors in the Project Activity Instance. The benefits of the Project are directed to the 124 local communities that are part of the community council, thus ensuring that there are incentives to stabilize and guide land use and land use change in the case of the Project Activity Instance. and the leakage area, if applicable.

2.5.6 Benefit Sharing Mechanism (VCS, 3.18, 3.19)

2.5.6.1 Summary of Benefits Allocation

Table 13. Summary of Benefits Allocation

Process used to design the benefit sharing plan	Demonstrate that the benefit-sharing agreement was agreed up on by the affected stakeholder groups, and that the agreement was shared in a culturally appropriate manner. Demonstrate that the agreement is readily accessible should stakeholders wish to review the agreement.
	The design process of the Benefits Sharing Plan for the COCOMACIA REDD+ Project involved a comprehensive and participatory approach to ensure the full and effective participation of community leaders in decision-making regarding benefit sharing. Here's a breakdown of the process:
	Stakeholder Identification: The beneficiaries of the Benefit-Sharing Plan have been identified as all members of the communities that make up COCOMACIA, because the development of this Project is community-based and the activities are implemented throughout the territory, meaning that the 124 communities and the total number of people who are part of the community council have been recognized as direct beneficiaries of the Project.
	Facilitated Discussions: During the dissemination process each of the 124 Local Community Councils, but also in other meetings with community leaders, the Plan was presented and received community feedback. Throughout these sessions, it was emphasized that benefits are allocated through a performance-based payment plan and through community projects that benefit the collective, not individuals. Feedback on possible allocation mechanism was also received and incorporated in the updates to the Plan This ensured that the benefit-sharing plan accurately reflected the views and feedback of impacted communities.

	Iterative Refinement: The benefit-sharing plan was fine-tuned in several versions, in order to incorporate feedback received and make adjustments to address concerns or suggestions raised during the construction process.
Summary of the benefit sharing plan	The COCOMACIA REDD+ Benefit Allocation Plan establishes the mechanisms, principles, and procedures for distributing benefits derived from carbon revenues within COCOMACIA’s collective territory. Its overarching goal is to ensure fair and transparent benefit sharing that strengthens community governance, promotes sustainable land use, and incentivizes actions that reduce deforestation and forest degradation. For more information see Table 14
Approval and dissemination of benefit sharing plan	The benefit allocation plan was presented, discussed and approved by the COCOMACIA Board of Directors and other leaders in 2021, but has since been updated to better reflect the operational dynamics observed during project implementation and to align benefit distribution with actual community participation and performance. This update, which has already been presented to the Board and the REDD+ team to gather their input, is expected to be submitted for approval to the COCOMACIA Board of Directors by the end of 2025. The refinement of the BAP has been conducted as the carbon projections have become more known as validation and verification progress, additional discussions are underway to review the carbon revenue, net income and repayment obligations to investors and any changes to the plan will be with mutual consent of COCOMACIA and Terra Global.

2.5.6.2 Components of Benefit Sharing Plan

The different components of the benefits sharing plan are detailed in Table 14.

Table 14. Components of the Benefit Sharing Plan

Component of ER Benefits	Description	Beneficiaries and Method of Distribution
Budgeted Benefits – Base	Funded through climate investment and carbon revenues to implement core activities addressing deforestation drivers, improving livelihoods, and covering MRV costs.	Managed jointly by COCOMACIA and Terra Global. Funds allocated based on the Long-Term Implementation Plan. Benefit distribution supports institutional and operational strengthening of COCOMACIA and on-the-ground activities.
Budgeted Benefits – Expanded	Additional benefits activated when carbon revenues or VER issuance exceed expectations, or when project scale-up is required.	Planned and approved jointly by COCOMACIA and Terra Global. Funds increase scale of activities, support new productive initiatives, and finance zonal and General Assembly meetings.
Operational Costs and Performance Reserve	Annual reserve (16% of net revenues) to cover cost increases or shortfalls in VER generation.	Deposited annually into a trust reserve account until reaching the target amount (USD 1.2 million). Used if the project has budget overruns
Social Investment Projects	Financing for territorial-scale projects that strengthen resilience, improve quality of life, and promote sustainable development.	Projects selected jointly by COCOMACIA and Terra. percentage of net income allocated after loan repayment. Benefits distributed through high-impact infrastructure or environmental initiatives benefiting multiple communities.
Board of Directors and REDD+ Team Allocation	Recognition of leadership, governance, and management of project implementation.	Percentage of net income allocated after loan repayment – Percentage to COCOMACIA Board (distributed equally) and Percentage to REDD+ Team (distributed by role).
Operational Performance-Based Allocation	Rewards communities that effectively implement REDD+ activities and demonstrate strong operational performance.	Percentage of net revenues allocated to the top 50% of communities achieving highest operational performance scores.

Component of ER Benefits	Description	Beneficiaries and Method of Distribution
VERR Performance-Based Allocation	Rewards communities that achieve measurable reductions in deforestation and degradation.	Percentage of net revenues allocated to the top 50% of communities with the highest verified carbon performance (VERRs).
Community Conservation Trust Fund	Long-term fund to secure the sustainability of conservation efforts.	Financed through a percentage of annual net income once established. Supports ongoing community-based conservation and emergency interventions.

2.5.7 Free, Prior, and Informed Consent (VCS, 3.18, 3.19; CCB, G5.2)

Table below describes the outcome of the FPIC process.

Table 15. Consent and FPIC Process

Consent	<p>Stakeholder Identification: In early 2018, one of COCOMACIA's community leaders was contacted in order to find out what communication path or guidelines their community requires. Subsequently, the first meeting was held and the project and the joint work path were presented. Once this first stage was approved, the project was shared with the Board of Directors and the Legal Representative. Once this initial process of dissemination was completed, more face-to-face meetings were scheduled to identify the stakeholders in this project.</p> <p>Information Dissemination: A process of socialization of the project development proposal and the activities to be developed was initiated in several of the local community councils of COCOMACIA. These approaches to the communities were made with the accompaniment of a member of the Board of Directors. Full information on the objectives, scope, potential impacts and benefits surrounding the development of the project was provided through informational dialogues arranged in the local language (Spanish). This information was shared through community meetings and printed materials, which ensured that all stakeholders were well informed.</p> <p>Consultation and Dialogue: Several consultations and disseminations of the project were carried out with previously identified stakeholders. These meetings were held at different points in time, in order to keep the community informed and to receive their comments at different stages of the process. These consultations provided opportunities for stakeholders to express their concerns and ask questions. Concerns were heard and resolved, opting for very simple language that allows for understanding of the technical components of the project and greater ownership of the activities being developed. Through these collaborative dynamics, the integration of communities and stakeholders to the objective of the project is achieved.</p> <p>Consensus Building: During several meetings held throughout this monitoring period, the communities explained how their decision-making processes function — including the time they require for internal discussion, the use of their own language, and their autonomous spaces for consultation. Through this exchange, the project team was able to better understand the community's internal dynamics and the way information is shared and discussed among members, including those who were not present at the meetings. Having gone through this process, agreements were reached on how to work collaboratively, on the signing of required documents, and on the development of community dynamics that enrich the project and enable its continued progress. The relationship has been guided by mutual respect and a deep understanding of the communities' customs and governance structures.</p> <p>Documentation of Consent: The approval obtained from stakeholders was carried out in accordance with COCOMACIA's Internal Regulations. The body with the highest decision-making power is the General Assembly, and following its governance structure, a presentation of the REDD+ Program was made for 2 consecutive years, in December 2018 at the Local Community Council of Tanguí, and in December 2019 at the Local Community Council of Llano de Bebaramá. Through the majority vote of the Assembly, approval was obtained to sign the Agreements and start the project. The approval decision was documented through the Minutes that record the meeting, in order to guarantee transparency and accountability. A transparent agreement outlining the terms and conditions of the</p>
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	<p>consent, including safeguards against potential risks and impacts, was developed and signed by all parties involved.</p>
Outcome of FPIC	<p>The project will not encroach on land or relocate people without consent, and force physical or economic displacement.</p> <p>The Project has been socialized to the COCOMACIA communities, following their governance structure for decision making. In that sense, the General Assembly is responsible for approving whether or not a project is developed within the collective territory of COCOMACIA, the design of the Project Activities, the acceptance of upfront climate finance, and the development of a comprehensive set of investment readiness requirements:</p> <ul style="list-style-type: none"> • The REDD+ Program was socialized through a number of meetings and for the overall approval this was voted on in two general assemblies: • The proposal was adjusted and socialized in the General Assembly of COCOMACIA held in December 2018 in the Local Community Council of Tanguí. • The proposal was later approved at the General Assembly of COCOMACIA in December 2019 in the Llano de Bebaramá Local Community Council. • There were no interested parties who opposed the development of the Project. <p>The outcome of the FPIC process was a transparent agreement that reflects the collective consent and commitment of all concerned stakeholders. This agreement encompasses the following key elements:</p> <ul style="list-style-type: none"> • Non-Encroachment on Land: The agreement unequivocally states that the Project will not encroach on any land or territories. All Project Activities will respect the territorial rights and land tenure systems of IPs, LCs, • No Relocation: It is guaranteed in the agreement that no people or communities will be relocated or displaced. • Protection Against Forced Displacement: The agreement includes provisions to prevent any form of forced physical or economic displacement resulting from the Project Activities. Measures will be implemented to mitigate and address any adverse impacts on livelihoods, cultural practices, and community well-being. • Compensation: Appropriate measures for compensation have been allocated to parties whose lands, territories, or resources have been or will be impacted by the Project. Fair and equitable compensation mechanisms have been established through consultations with the community, ensuring that their rights and interests are upheld.

2.5.8 Property Right Protection (VCS, 3.18, 3.19; CCB, G5.3)

As described in Section 2.4.2.1, the planning, governance, and implementation of the Program have been developed jointly with the legitimate ethnic authorities of COCOMACIA, who are officially recognized by the Colombian State as the legal representatives and rightful owners of their collective territory under Law 70 of 1993 and Decree 1745 of 1995. These authorities exercise governance and decision-making power over the use, management, and protection of their ancestral lands. The Program fully respects and operates within these collective property rights, ensuring that all activities are aligned with COCOMACIA's internal regulations. Through this collaborative structure, the Project safeguards the territorial rights of the Afro-descendant communities, prevents any form of external appropriation or restriction of their land, and guarantees that benefits derived from carbon activities remain under the control of the legitimate collective owners.

None of the Program Activities require the relocation, whether voluntary or involuntary, of the owners of their lands or territories.

2.5.9 Identification of Illegal Activity (VCS, 3.19, CCB, G5.4)

2.5.9.1 Activities to Reduce Illegal Deforestation and Degradation

The Program is designed to mitigate illegal activities within the Project Activity Instance through increased protection of community forests and wildlife, as well as improved livelihoods and sustainable development. The most common illegal activities include illegal commercial logging, small and medium-scale mining, clearing for small-scale agriculture, wildlife poaching, and illegal clearing for timber production.

As stated in section 2.1.17, several project activities are being implemented to reduce the impacts of these illegal activities on the climate, community and biodiversity benefits in the Project Activity Instance. Specifically, Project proponents will strengthen land use across the 124 Community Council communities and forest governance, improve forest protection through forest boundary demarcation, and implement numerous Project Activities that allow the transition to productive activities that generate income and will reduce deforestation and degradation and at the same time improve the communities' livelihoods.

The Program reduces this risk through activities that include facilitating training and equipment for community members to effectively patrol the forest areas to address illegal activities in the Project Activity Instance. Other activities are encouraged and developed alternative economic opportunities to strengthen local productive systems which will reduce the pressure on the forest areas towards other sources of income. Patrolling field crews will be instructed to alert and patrol for illegal activities, particularly near and around community forests to report any incidents or evidence. Data will be collected, maintained through patrolling records and regularly analyzed to determine where vulnerable areas are for illegal activities. The concentration of patrols will then be directed to these areas.

2.5.9.2 Protections Against Human Trafficking, Forced labor, and Child labor.

The Program explicitly prohibits the use of victims of human trafficking, forced labor, and child labor. These prohibitions are formally incorporated into the COCOMACIA REDD+ Program Operations Manual, Section 9, Relevant Policies, which includes:

- A Policy against Human Trafficking, framed under Law 985 of 2005 of Colombia; and
- A Policy for the Prevention and Eradication of Child Labor and the Comprehensive Protection of Adolescents, aligned with Resolution 3597 of 2013 of the Ministry of Labor.

In addition, Terra Global, as developer, has adopted an Anti-Trafficking of Persons Policy, available in both English and Spanish, which it extends to all partners and subcontractors through formal agreements and contractual clauses. These combined instruments ensure that all individuals engaged in Program implementation - whether directly employed or participating through community structures—are protected from exploitation and that all work is carried out voluntarily, under fair and lawful. The Program also operates a Grievance and Redress Mechanism, accessible to all stakeholders, including workers, community members, and external actors. This mechanism provides safe, confidential, and non-retaliatory channels (e.g., in-person reports, written submissions, WhatsApp) to report any concerns related to abuse,

coercion, or irregularities. All grievances are documented, reviewed, and addressed by COCOMACIA's REDD+ Management Team.

2.5.10 Ongoing Disputes (VCS, 3.18, 3.19; CCB, G5.5)

The collective territory of the Consejo Comunitario Mayor de la Asociación Campesina Integral del Atrato – COCOMACIA was formally titled in 1997 by the Instituto Colombiano de la Reforma Agraria (INCORA) under the framework of Law 70 of 1993 and Decree 1745 of 1995, covering approximately 700,000 ha in Chocó and 150,000 hectares in Antioquia

The adjudication process included public notifications and opportunities for objections, ensuring that all legitimate claims or private rights were properly addressed. Therefore, the collective title issued to COCOMACIA ensures clear legal certainty, as no private ownership claims can legally exist within a collective title granted by the State. The following categories describe the different types of conflicts that have occurred over the years and been addressed by COCOMACIA.

2.5.10.1 Intra-ethnic Conflicts

Over the past decade, some internal disputes have arisen among members of local community councils concerning the recognition of private rights over lands within the collective territory. These intra-ethnic territorial conflicts involve claims for individual titles, inheritance rights, or rights of possession and usufruct over specific areas

Such conflicts are regulated by Law 70 of 1993 and Decree 1745 of 1995, which provide procedures for equitable territorial distribution, recognition of ancestral possession, and allocation of individual or family usufruct rights. COCOMACIA has ongoing actions to implement these internal regulatory processes, in accordance with Resolution 04566 of 1997.

2.5.10.2 Inter-ethnic Conflicts

COCOMACIA has also reported inter-ethnic territorial conflicts with neighboring indigenous communities that inhabit portions of its titled territory and seek to expand or formalize their occupation. These conflicts stem from overlapping cultural practices and territorial claims but are being addressed through an inter-ethnic commission, which develops coexistence and conflict-resolution mechanisms within the collective territory

2.5.10.3 Third-Party Occupants

Some non-ethnic third-party occupants remain within the titled area. The law distinguishes between:

- Good-faith occupants, whose presence predates the collective title and who may retain use rights until COCOMACIA or the competent authority acquires their improvements; and
- Bad-faith occupants, who entered after 1997 and therefore have no legal claim or right to compensation

In recent years, about 30 territorial claims have been filed through rights-of-petition and resolved satisfactorily; roughly 10 have been handled through judicial tutelas, all decided in favor of COCOMACIA, and one conciliation case remains pending before the Procuraduría Agraria y Ambiental

Based on these precedents, no ongoing or unresolved dispute jeopardizes the collective title or could prejudice the implementation of REDD+ activities. COCOMACIA's governance framework and legal standing guarantee that all project actions respect existing rights and are undertaken within areas of undisputed collective ownership. Conflict-resolution mechanisms—including internal regulations, inter-ethnic commissions, and coordination with oversight entities—ensure that any emerging dispute can be addressed through lawful and participatory means.

3 CLIMATE

3.1 Monitoring GHG Emission Reductions and Removals

3.1.1 Data and Parameters Available at Validation (VCS, 3.16)

3.1.1.1 Data and Parameters specific to UDef (VM0048-VMD0055)

Data / Parameter	$A_{PA-UDef}$
Data unit	ha
Description	Area of project where activities aimed at avoiding unplanned deforestation will take place
Source of data	Calculated within a GIS see Appendix 6
Value Applied	4,873 ha
Justification of choice of data or description of measurement methods and procedures applied	Data was allocated by Jurisdictional proponent from the Choco JNR FREL (ID VCS 5079) see Appendix 6 Allocation Report
Purpose of Data	Calculation of project emissions
Comments	None

Data / Parameter	DLF
Data unit	%
Description	Displacement leakage factor
Source of data	Activity-shifting leakage cancellation rates were estimated based on expert knowledge and social assessments
Value Applied	Yearly value presented in Figure 4 of the PD
Justification of choice of data or description of measurement methods and procedures applied	Estimating based on the extent of implementation of deforestation mitigation activities and the expected impact of activities on leakage.
Purpose of Data	Calculation of leakage
Comments	None

Data / Parameter	$EA_{EF,t}$
Data unit	%
Description	Ex ante effectiveness of halting baseline emissions in year t
Source of data	Estimated based on expert knowledge and social assessments.
Value Applied	Yearly value presented in Figure 3 of the PD
Justification of choice of data or description of measurement methods and procedures applied	Estimation based on the annual level of implementation of the workplan, relative contribution of each driver and relative reduction of each driver of UDef and UDeg.
Purpose of Data	Calculation of project emissions
Comments	None

Data / Parameter	$t_{\alpha=10\%}$
Data unit	unitless

Description	Value of the Student's t distribution for a two-sided 90 percent confidence interval of project where activities aimed at avoiding unplanned deforestation will take place
Source of data	Common statistical tables or software
Value Applied	The t value corresponds to the number of degrees of freedom (sample size) and a probability of 0.05
Justification of choice of data or description of measurement methods and procedures applied	Based on the central limit theorem, sample estimates are assumed to approach a normal distribution, from which a confidence interval may be constructed. The Student's t distribution is used to allow for small sample sizes. was allocated by Jurisdictional proponent from the Choco JNR FREL (ID VCS 5079) see Appendix 6 Allocation Report
Purpose of Data	Calculation of baseline emissions and project emissions
Comments	None

Data / Parameter	<i>CFSOC</i>
Data unit	[Mg C (Mg DM)-1]
Description	Carbon fraction of soil organic matter
Source of data	
Value Applied	0.58
Justification of choice of data or description of measurement methods and procedures applied	2006 IPCC Guidelines for National Greenhouse Gas Inventories default value
Purpose of Data	Partitions carbon from biomass data. Used in calculations of carbon stock density from OM pools (VM0006 Section 8.1.4.4, EQ 24. This data is used for: Calculation of baseline emissions
Comments	

Data / Parameter	<i>CF_j</i>
Data unit	t C t d.m.-1
Description	Carbon fraction of dry matter in wood
Source of data	Values from the literature (e.g. IPCC 2006 INV GLs AFOLU Chapter 4 Table 4.3) shall be used if available, otherwise default value of 0.47 t C t-1 d.m. can be used
Value Applied	0.47
Justification of choice of data or description of measurement methods and procedures applied	default value
Purpose of Data	Calculation of baseline and project emissions
Comments	Where new species are encountered in the course of monitoring, new carbon fraction values must be sourced from the literature or otherwise use the default value.

Data / Parameter	<i>f_j(X,Y)</i>				
Data unit	t d.m. tree-1				
Description	Allometric equation for species j linking measured tree variable(s) to aboveground biomass of living trees, expressed as t d.m. tree-1				
Source of data	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>Vegetation</td> <td>Source</td> </tr> <tr> <td>Mangroves</td> <td>(Chave et al., 2005)</td> </tr> </table>	Vegetation	Source	Mangroves	(Chave et al., 2005)
Vegetation	Source				
Mangroves	(Chave et al., 2005)				

	<table border="1"> <tr> <td>Palms</td> <td>(Duque, et al., 2017)</td> </tr> <tr> <td>Tropical Wet</td> <td>(Alvarez, et al., 2012)</td> </tr> </table>	Palms	(Duque, et al., 2017)	Tropical Wet	(Alvarez, et al., 2012)				
Palms	(Duque, et al., 2017)								
Tropical Wet	(Alvarez, et al., 2012)								
Value applied	<table border="1"> <thead> <tr> <th>Vegetation</th> <th>Allometric equation</th> </tr> </thead> <tbody> <tr> <td>Mangroves</td> <td>$AGB = 0.0509 \times WD \times DBH^2 \times H$</td> </tr> <tr> <td>Palms</td> <td>$AGB = 0.334 \times (DBH^2 \times H \times DMF)^{0.803}$</td> </tr> <tr> <td>Tropical Wet</td> <td>$Ln(AGB) = -2.857 + 2.081 \times Ln(DBH) + 0.587 \times Ln(H) + 0.453 \times Ln(WD)$</td> </tr> </tbody> </table>	Vegetation	Allometric equation	Mangroves	$AGB = 0.0509 \times WD \times DBH^2 \times H$	Palms	$AGB = 0.334 \times (DBH^2 \times H \times DMF)^{0.803}$	Tropical Wet	$Ln(AGB) = -2.857 + 2.081 \times Ln(DBH) + 0.587 \times Ln(H) + 0.453 \times Ln(WD)$
Vegetation	Allometric equation								
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Tropical Wet	$Ln(AGB) = -2.857 + 2.081 \times Ln(DBH) + 0.587 \times Ln(H) + 0.453 \times Ln(WD)$								
Justification of choice of data or description of measurement methods and procedures applied	Procedures for field measurements are described in the VCS Monitoring Plan and the Biomass SOP								
Purpose of Data	Calculation of baseline and project emissions								
Comments	Where new species are encountered in the course of monitoring, new carbon fraction values must be sourced from the literature or otherwise use the default value.								

Data / Parameter	R						
Data unit	t root d.m. t ⁻¹ shoot d.m.						
Description	Root to shoot ratio appropriate to species or forest type / biome; note that as defined here, root to shoot ratio is applied as belowground biomass per unit area: aboveground biomass per unit area (not on a per stem basis)						
Source of data	<table border="1"> <thead> <tr> <th>Species Group</th> <th>Source</th> </tr> </thead> <tbody> <tr> <td>Tropical Forest</td> <td>(Mosquera & Moreno, 2017)</td> </tr> <tr> <td>Mangroves</td> <td>(Santos et al., 2017)</td> </tr> </tbody> </table>	Species Group	Source	Tropical Forest	(Mosquera & Moreno, 2017)	Mangroves	(Santos et al., 2017)
Species Group	Source						
Tropical Forest	(Mosquera & Moreno, 2017)						
Mangroves	(Santos et al., 2017)						
Value applied	<table border="1"> <thead> <tr> <th>Species Group</th> <th>Root to Shoot Ratio</th> </tr> </thead> <tbody> <tr> <td>Tropical Forest</td> <td>0.21</td> </tr> <tr> <td>Mangroves</td> <td>1.14</td> </tr> </tbody> </table>	Species Group	Root to Shoot Ratio	Tropical Forest	0.21	Mangroves	1.14
Species Group	Root to Shoot Ratio						
Tropical Forest	0.21						
Mangroves	1.14						
Justification of choice of data or description of measurement methods and procedures applied	Procedures for field measurements are described in the VCS Monitoring Plan and the Biomass SOP						
Purpose of Data	Calculation of baseline and project emissions						
Comments	Where new species are encountered in the course of monitoring, new carbon fraction values must be sourced from the literature or otherwise use the default value.						

Data / Parameter	DDWdc								
Data unit	t d.m. m ⁻³								
Description	Mean wood density of dead wood in the density class (dc) – sound (1), intermediate (2), and rotten (3); t d.m. m ⁻³								
Source of data	Research publications relevant to the project area: (Duque, et al., 2017)								
Value applied	<table border="1"> <thead> <tr> <th>Decomposition Class</th> <th>Mean Wood density</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.89</td> </tr> <tr> <td>2</td> <td>0.53</td> </tr> <tr> <td>3</td> <td>0.28</td> </tr> </tbody> </table>	Decomposition Class	Mean Wood density	1	0.89	2	0.53	3	0.28
Decomposition Class	Mean Wood density								
1	0.89								
2	0.53								
3	0.28								

Justification of choice of data or description of measurement methods and procedures applied	Regionally appropriate study
Purpose of Data	Calculation of baseline and project emissions
Comments	-

Data / Parameter	Depsample
Data unit	cm.
Description	Depth in cm to which soil sample is collected
Source of data	Core dimensions recorded in the field
Value applied	30 cm
Justification of choice of data or description of measurement methods and procedures applied	Depth of sampling for soil organic carbon is centered on the upper soil horizons where root biomass and organic matter inputs are concentrated. Depth of soil sampling employed in inventories is held constant for the duration of the project.
Purpose of Data	Calculation of baseline and project emissions
Comments	-

Data / Parameter	FLU
Data unit	Dimensionless
Description	Land use factor before or after conversion
Source of data	Stock Change Factors are provided in Tables 5.5, 5.10, and 6.2 of the IPCC 2006GL Volume 4
Value applied	0.48
Justification of choice of data or description of measurement methods and procedures applied	The selected value corresponds to areas that have been continuously managed for more than twenty years, mainly under annual crop farming systems. To estimate changes in carbon stocks, input levels and tillage practices associated with this type of land use were considered. The land use factor was determined based on a representative scenario of full tillage and average carbon input levels, in accordance with the categories and conditions defined by the IPCC guidelines.
Purpose of Data	Calculation of baseline and project emissions
Comments	- Stock Change Factors as defined in IPCC 2006GL are equal to the carbon stock in the altered condition as a proportion of the reference carbon stock. Stock Change Factors must be selected to reflect the circumstances most closely matching those of the project area and baseline scenario, especially regarding climate and post-conversion land-use, taking into account management practices and carbon inputs (e.g. manure).

Data / Parameter	FMG
Data unit	Dimensionless
Description	Management factor before or after conversion

Source of data	Stock Change Factors are provided in Tables 5.5, 5.10, and 6.2 of the IPCC 2006GL Volume 4
Value applied	1.15
Justification of choice of data or description of measurement methods and procedures applied	The selected value corresponds to a management practice that includes primary or secondary tillage, but with reduced soil disturbance. This type of management is characterised by shallow interventions that do not completely invert the surface horizons and maintain plant residue cover of more than thirty per cent at the time of sowing.
Purpose of Data	Calculation of baseline and project emissions
Comments	Stock Change Factors as defined in IPCC 2006 GL are equal to the carbon stock in the altered condition as a proportion of the reference carbon stock. Stock Change Factors must be selected to reflect the circumstances most closely matching those of the project area and baseline scenario, especially regarding climate and post-conversion land-use, taking into account management practices and carbon inputs (e.g. manure).

Data / Parameter	FI
Data unit	Dimensionless
Description	Input factor before or after conversion
Source of data	Stock Change Factors are provided in Tables 5.5, 5.10, and 6.2 of the IPCC 2006GL Volume 4
Value applied	0.92
Justification of choice of data or description of measurement methods and procedures applied	The selected value corresponds to conditions of low return of residues to the soil, a situation that occurs when residues are removed by harvesting or burning, when there are frequent periods of bare fallow, or when species that generate reduced amounts of residues are cultivated, such as vegetables, tobacco, or cotton. It also reflects scenarios without mineral fertilization and without nitrogen-fixing crops.
Purpose of Data	Calculation of baseline and project emissions
Comments	Stock Change Factors as defined in IPCC 2006GL are equal to the carbon stock in the altered condition as a proportion of the reference carbon stock. Stock Change Factors must be selected to reflect the circumstances most closely matching those of the project area and baseline scenario, especially regarding climate and post-conversion land-use, taking into account management practices and carbon inputs (e.g. manure).

3.1.1.2 Data and Parameters specific to UDeg (VM0006)

Data / Parameter	<i>CFSOC</i>
Data unit	[Mg C (Mg DM) ⁻¹]
Description	Carbon fraction of soil organic matter
Source of data:	
Value Applied:	0.58
Justification of choice of data or description of measurement methods and procedures applied	2006 IPCC Guidelines for National Greenhouse Gas Inventories default value
Purpose of Data	Partitions carbon from biomass data. Used in calculations of carbon stock density from OM pools (VM0006 Section 8.1.4.4, EQ 24. This data is used for: Calculation of baseline emissions

Comments	
Data / Parameter	<i>E</i>
Data unit	[-]
Description	Average combustion efficiency of the aboveground tree biomass
Source of data	Project-specific measurements Regionally valid estimates Estimates from Table 3.A.14 of IPCC GPG LULUCF If no appropriate combustion efficiency can be used, use the IPCC default of 0.5
Value Applied	0.47
Justification of choice of data or description of measurement methods and procedures applied	IPCC default of 0.47.
Purpose of Data	Used in calculations of carbon loss from biomass burning. In VM0006 this parameter is used in the deforestation drivers' analysis to account carbon loss from forest fires (Section 8.1.3.2 EQ 10). This data is used for: Calculation of baseline emissions Calculation of project emissions Calculation of leakage
Comments	This default value is assigned by Terra Global.
Data / Parameter	<i>P</i>
Data unit	[-]
Description	Average proportion of mass burned from the aboveground tree biomass.
Source of data	GPG-LULUCF Table 3A.1.13
Value Applied	100%
Justification of choice of data or description of measurement methods and procedures applied	GPG-LULUCF Table 3A.1.13, default value.
Purpose of Data	Used in calculations of carbon loss from biomass burning. In VM0006 used to account carbon loss from forest fires in the deforestation drivers' analysis to (Section 8.1.3.2 EQ 10).
Comments	This default value is assigned by Terra Global.
Data/parameter	GWP_{CH_4}
Data unit	[-]
Description	Global Warming Potential for CH4
Source of data	IPCC default value of 25
Value Applied	25
Justification of choice of data or description of measurement methods and procedures applied	IPCC default value.
Purpose of Data	Used to convert CH4 emissions to CO2 emissions. Methane accounted in calculations that include prescribed burning for firebreaks (VM0006 Section 8.2.3 EQ 70) prescribed burning for

	ANR (VM0006 Section 8.2.4.5 EQ77) and flooded rice agriculture (VM0006 Section 8.3.4.2.2 EQ 100. This data is used for: Calculation of project emissions Calculation of leakage
Comments	This will be used if increased rice production becomes a project activity in the future. This default value is assigned by Terra Global.

Data / Parameter	ER_{CH_4}
Data unit	Proportion
Description	Emission ratios for CH ₄
Source of data	Table 3A.1.15 in IPCC GPG-LULUCF 2003
Value Applied	IPCC default value of 0.012
Justification of choice of data or description of measurement methods and procedures applied	Used in CH ₄ calculations that include prescribed burning for firebreaks (VM0006 Section 8.2.3 EQ 70) and ANR (VM0006 Section 8.2.4.5 EQ77).
Purpose of Data	This data is used for: Calculation of project emissions Calculation of leakage
Comments	This will be used if increased rice production becomes a project activity in the future. This default value is assigned by Terra Global.

Data / Parameter	sc_1
Data unit	[-]
Description	First shape factor for the forest scarcity equation; steepness of the decrease in deforestation rate (greater is steeper).
Source of data	Statistical fitting procedure. Using remotely sensed forest cover data in heavily deforested areas close to the Project Area such as neighboring provinces, states or countries
Value Applied	20
Justification of choice of data or description of measurement methods and procedures applied	Used model-fitting procedures described in VM0006 Section 8.1.5.
Purpose of Data	Used in calculation of class/stratum transition rates. One of two parameters that determine the shape of the forest scarcity factor curve (VM0006 Section 8.1.5.4, EQ 40). This data is used for: Determination of baseline scenario Calculation of baseline emissions Calculation of project emissions Calculation of leakage
Comments	This parameter is calculated by Terra Global.

Data / Parameter	sc_2
Data unit	[-]
Description	Second shape factor for the forest scarcity equation; relative deforested area at which the deforestation rate will be 50% of the initial deforestation rate.
Source of data	Statistical fitting procedure. Using remotely sensed forest cover data in heavily deforested areas close to the Project Area such as neighboring provinces, states or countries
Value Applied	0.7

Justification of choice of data or description of measurement methods and procedures applied	Used procedure from Methodology VM0006 section 8.1.5.4
Purpose of Data	Used in calculation of class/stratum transition rates. One of two parameters that determine the shape of the forest scarcity factor curve (VM0006 Section 8.1.5.4, EQ 40). This data is used for: Determination of baseline scenario Calculation of baseline emissions Calculation of project emissions Calculation of leakage
Comments	Higher values of sc2 result in lower deforestation and are therefore conservative. This parameter is calculated by Terra Global.

Data/Parameter	$\rho_{wood,j}$
Data unit	[Mg DM m ⁻³]
Description	Average basic wood density of species or species group <i>j</i>
Source of data	(Duque, et al., 2017)
Value Applied	0.56
Justification of choice of data or description of measurement methods and procedures applied	When no species-specific or species-group specific densities are available, an average representative density may be used for all species or species groups.
Purpose of Data	Used to calculate total tree carbon stock (VM0006 Section 8.4.1.1, EQ 101). This data is used for: Calculation of baseline emissions Calculation of project emissions Calculation of leakage
Comments	Average density value of Asian tree species. This parameter is calculated by Terra Global.

Data/parameter	BEF_2
Data unit	[-]
Description	Biomass expansion factor for converting volumes of extracted round wood to total aboveground biomass (including bark).
Source of data	IPCC GPG LULUCF Table 3A.1.10 or published data from scientific peer reviewed literature.
Value Applied	3.4
Justification of choice of data or description of measurement methods and procedures applied	IPCC GPG LULUCF default value 3.4 from IPCC GPG LULUCF Table 3A.1.10 for tropical, broadleaf forest for trees >10cm DBH.
Purpose of Data	Converts wood volume to biomass. Used in calculations of annual carbon loss per deforestation driver for logging, wood collecting and fuelwood collecting (VM0006 Section 8.1.3.2, EQ 4,5,6,7). This data is used for: Calculation of project emissions Calculation of leakage
Comments	To be used if found that extracted round wood is found to be significant in the future. This parameter is calculated by Terra Global.

Data/parameter	$NCV_{biomass}$
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Data unit	[TJ (Mg DM) -1]
Description	Net calorific value of non-renewable biomass that is substituted.
Source of data	0.015 TJ (Mg DM) -1 IPCC default value.
Value Applied	N/A
Justification of choice of data or description of measurement methods and procedures applied	Used for cookstove efficiency.
Purpose of Data	Parameter used to quantify emissions from CFE activities (VM0006 Section 8.2.5, WE 108)
Comments	Cookstove efficiency is not assessed at Validation but will be assessed in future verification periods when sufficient data is collected. This parameter is calculated by Terra Global from data from the FD or their contractors.

Data/parameter	$Bias(nh)$
Data unit	ha
Description	Bias correction for each land use transition
Source of data	LULC classification
Value Applied	See section 3.2.1.1.1. of the PD.
Justification of choice of data or description of measurement methods and procedures applied	Calculated based on the directions of the GOFI Methods and Guidance v.2.0 Box 24 and Box 25
Purpose of Data	Parameter required by the JNR Allocation Tool
Comments	N/A

Data/parameter	$s_{h,j}^2$
Data unit	ha
Description	Standard error for each land use transition
Source of data	LULC classification
Value Applied	See Section 3.2.1.1.1. of the PD
Justification of choice of data or description of measurement methods and procedures applied	Calculated based on the directions of the GOFI Methods and Guidance v.2.0 Box 24 and Box 25
Purpose of Data	Parameter required by the JNR Allocation Tool
Comments	N/A

3.1.2 Data and Parameters Monitored (VCS, 3.16)

3.1.2.1 Data and Parameters specific to UDef (VM0048-VMD0055)

Data/Parameter	A_i
Data unit	ha
Description	Area of stratum i
Source of data	Determined during spatial analysis
Description of measurement methods and procedures to be applied	N/A

Frequency of monitoring/recording	Prior to each verification event.
Value monitored	
Monitoring equipment	GIS software
QA/QC procedures to be applied	See Appendix 7 of the PD - VCS Monitoring Plan
Purpose of data	Calculation of project emissions
Calculation method	In GIS
Comments	None

Data/Parameter	A_{PSF}
Data unit	ha
Description	Area of project sampling frame
Source of data	Determined during spatial analysis
Description of measurement methods and procedures to be applied	N/A
Frequency of monitoring/recording	Prior to each verification event.
Value monitored	See the Allocation Report
Monitoring equipment	GIS software
QA/QC procedures to be applied	See Appendix 7 of the PD - VCS Monitoring Plan
Purpose of data	Calculation of project emissions
Calculation method	In GIS
Comments	None

Data/Parameter	$AD_{LB-UDef}$
Data unit	ha
Description	Unplanned deforestation activity data allocated to the UDef LB
Source of data	Allocation Report see Appendix 7 of the PD - VCS Monitoring Plan
Description of measurement methods and procedures to be applied	VT0007 and Appendix 1
Frequency of monitoring/recording	Every six years at baseline renewal. Note that a project's initial BVP may be shorter than six years, as provided for in Section 5.3.1; subsequent baselines will be renewed every six years.
Value monitored	See Allocation Report
Monitoring equipment	GIS software
QA/QC procedures to be applied	N/A
Purpose of data	Calculation of leakage emissions
Calculation method	Application of Appendix 1 and VT0007 by jurisdictional proponent
Comments	None

Data/Parameter	$AD_{PA-UDef}$
Data unit	ha
Description	Unplanned deforestation activity data allocated to the UDef PA in the jurisdiction

Source of data	Jurisdictional Proponent (through the AD Baseline Allocation Report and VT0007)
Description of measurement methods and procedures to be applied	see Appendix 6 of the PD - Allocation Report
Frequency of monitoring/recording	Every six years at baseline renewal. Note that a project's initial BVP may be shorter than six years, as provided for in Section 5.3.1; subsequent baselines will be renewed every six years.
Value monitored	See Allocation Report
Monitoring equipment	GIS software
QA/QC procedures to be applied	N/A
Purpose of data	Calculation of baseline emissions
Calculation method	Application of VM0048 Appendix 1 by Jurisdictional Proponent
Comments	None

Data/Parameter	Buffer%
Data unit	%
Description	Buffer withholding percentage
Source of data	VCS AFOLU Non-Permanence Risk Tool
Description of measurement methods and procedures to be applied	See VCS AFOLU Non-Permanence Risk Tool
Frequency of monitoring/recording	Every verification event
Value monitored	12%
Monitoring equipment	N/A
QA/QC procedures to be applied	N/A
Purpose of data	Calculation of VCUs
Calculation method	See VCS AFOLU Non-Permanence Risk Tool
Comments	None

Data/Parameter	$C_{p,i}$
Data unit	t CO ₂ e/ha
Description	t CO ₂ e/ha
Source of data	Field biomass measurements and estimations following: VMD0001, VMD0002, VMD0003, VMD0004, VMD0005
Description of measurement methods and procedures to be applied	See Appendix 7 of the PD - VCS Monitoring Plan
Frequency of monitoring/recording	Every verification event
Value monitored	See section 3.2.1
Monitoring equipment	
QA/QC procedures to be applied	N/A
Purpose of data	Calculation of baseline emissions, project emissions and leakage emissions
Calculation method	See VMD0001, VMD0002, VMD0003, VMD0004, VMD0005

Comments	None
Data/Parameter	$C_{p,post,i}$
Data unit	t CO2e/ha
Description	Estimated carbon stock in post-deforestation pool p in forest stratum i
Source of data	Carbon stocks densities and IPCC default values for FLU, FMG, FIN
Description of measurement methods and procedures to be applied	Section 3.2.1.1.3.2 of the PD.
Frequency of monitoring/recording	Every verification event
Value monitored	See section 3.2.1
Monitoring equipment	N/A
QA/QC procedures to be applied	N/A
Purpose of data	Estimated carbon stock in post-deforestation pool p in forest stratum i
Calculation method	VMD0055 section 5.3.2.3
Comments	None
Data/Parameter	$C_{AB_{nontree},i}$
Data unit	t CO2e/ha
Description	Forest carbon stock in aboveground non-tree woody vegetation in stratum i
Source of data	Field biomass measurements
Description of measurement methods and procedures to be applied	<p>The estimation of carbon in non-tree above-ground biomass for stratum i is carried out following the procedures of module VMD0001 – Estimation of Carbon Stocks in Above- and Belowground Biomass in Live Tree and Non-tree Pools (CP-AB).</p> <p>Field measurements consist of setting up plots within the corresponding forest stratum, where the biomass of non-tree woody vegetation (shrubs, advanced regeneration, sub-tree individuals) is quantified. The variables required by the models or conversion factors defined in VMD0001 are recorded, and the resulting biomass is converted to carbon using the applicable carbon fraction, in accordance with the module and the IPCC.</p>
Frequency of monitoring/recording	At each monitoring event
Value monitored	See section 3.2.1
Monitoring equipment	DBH tapes, measuring tapes, calipers, GPS units, sub-plots for non-tree vegetation, and any additional field equipment required for the SOP
QA/QC procedures to be applied	see Appendix 7 of the PD - VCS Monitoring Plan
Purpose of data	Calculation of baseline emissions, project emissions, and leakage emissions
Calculation method	See VMD0001
Comments	None
Data/Parameter	$C_{AB_{tree},i}$
Data unit	t CO2e/ha
Description	Forest carbon stock in aboveground tree biomass in stratum i
Source of data	Field biomass measurements paired with LiDAR data

Description of measurement methods and procedures to be applied	See VT0005
Frequency of monitoring/recording	Every six years at baseline renewal.
Value monitored	See section 3.2.1
Monitoring equipment	DBH tapes, measuring tapes, calipers, GPS units, sub-plots for non-tree vegetation, and any additional field equipment required for the SOP
QA/QC procedures to be applied	Choco JNR FREL (VCS ID 5079) section 2.5.7.3.
Purpose of data	Calculation of baseline emissions, project emissions, and leakage emissions
Calculation method	See VT0005
Comments	None

Data/Parameter	$C_{BB,tree,i}$
Data unit	t CO2e/ha
Description	Forest carbon stock in aboveground tree biomass in stratum i
Source of data	Field biomass measurements paired with LiDAR data and species group appropriate root to shoot ratios
Description of measurement methods and procedures to be applied	See VT0005
Frequency of monitoring/recording	Every six years at baseline renewal.
Value monitored	See section 3.2.1
Monitoring equipment	DBH tapes, measuring tapes, calipers, GPS units, sub-plots for non-tree vegetation, and any additional field equipment required for the SOP
QA/QC procedures to be applied	Choco JNR FREL (VCS ID 5079) Section 2.5.7.3
Purpose of data	Calculation of baseline emissions, project emissions, and leakage emissions
Calculation method	See VT0005
Comments	None

Data/Parameter	$C_{DW,i}$
Data unit	t CO2e/ha
Description	Forest carbon stock in the dead wood pool in stratum i
Source of data	Field biomass measurements in biomass plots
Description of measurement methods and procedures to be applied	See VMD0002
Frequency of monitoring/recording	At every monitoring event.
Value monitored	See section 3.2.1
Monitoring equipment	DBH tapes, measuring tapes, calipers, GPS units, sub-plots for non-tree vegetation, and any additional field equipment required for the SOP
QA/QC procedures to be applied	See Appendix 7 of the PD - VCS Monitoring Plan

Purpose of data	Calculation of baseline emissions, project emissions, and leakage emissions
Calculation method	See VMD0002
Comments	None

Data/Parameter	$C_{LI,i}$
Data unit	t CO ₂ e/ha
Description	Forest carbon stock in the litter pool in stratum i
Source of data	Field biomass measurements in biomass plots
Description of measurement methods and procedures to be applied	See VMD0003
Frequency of monitoring/recording	At every monitoring event.
Value monitored	See section 3.2.1
Monitoring equipment	DBH tapes, measuring tapes, calipers, GPS units, sub-plots for non-tree vegetation, and any additional field equipment required for the SOP
QA/QC procedures to be applied	See Appendix 7 of the PD - VCS Monitoring Plan
Purpose of data	Calculation of baseline emissions, project emissions, and leakage emissions
Calculation method	See VMD0003
Comments	None

Data/Parameter	$C_{SOC,i}$
Data unit	t CO ₂ e/ha
Description	Forest carbon stock in the soil organic carbon pool in stratum i
Source of data	Field biomass measurements in biomass plots
Description of measurement methods and procedures to be applied	See VMD0004
Frequency of monitoring/recording	At every monitoring event.
Value monitored	See section 3.2.1
Monitoring equipment	DBH tapes, measuring tapes, calipers, GPS units, sub-plots for non-tree vegetation, and any additional field equipment required for the SOP
QA/QC procedures to be applied	See Appendix 7 of the PD - VCS Monitoring Plan
Purpose of data	Calculation of baseline emissions, project emissions, and leakage emissions
Calculation method	See VMD0004
Comments	None

Data/Parameter	MPL
Data unit	years
Description	Length of monitoring period
Source of data	Metadata of imagery used for project monitoring

Description of measurement methods and procedures to be applied	N/A
Frequency of monitoring/recording	At every monitoring event.
QA/QC procedures to be applied	N/A
Value monitored	
Monitoring equipment	
Purpose of data	Calculation of project emissions
Calculation method	Calculated as the difference between the average dates of imagery used to assess sample plots at the start and end of the monitored period.
Comments	None

Data/Parameter	$\Delta C_{LK-ME,t}$
Data unit	t CO2e
Description	Cumulative net GHG emissions due to market-effects leakage in year t
Source of data	(CODECHOCO, 2013)
Description of measurement methods and procedures to be applied	The estimation of net emissions associated with leakage due to market effects is carried out following the procedures in module VMD0011 – Estimation of Emissions from Market Effects (LK-ME). This module provides the steps required to assess how reducing deforestation within the project may influence the supply and demand for forest products or land, potentially causing indirect displacement of deforestation pressure outside the project area.
Frequency of monitoring/recording	At every monitoring event.
Value monitored	See section 3.2.3
Monitoring equipment	N/A
QA/QC procedures to be applied	N/A
Purpose of data	Calculation of leakage
Calculation method	See VMD0011
Comments	None

Data/Parameter	$\Delta C_{OLB,t}$
Data unit	t CO2e/ha
Description	Emissions from carbon stock change due to land cover transition in areas available for activity shifting outside the UDef LB, as calculated for year t
Source of data	Choco JNR FREL (VCS ID 5079) and results of household surveys
Description of measurement methods and procedures to be applied	Emissions resulting from changes in carbon stocks in areas outside the Leakage Belt susceptible to shifting activity are estimated following the procedures described in Section 8.3 of VM0006. The determination of this parameter combines spatial information from the jurisdictional FREL of Chocó with socioeconomic data collected through household surveys, which allow for the identification of land use patterns that could shift as a result of activities implemented within the project area.
Frequency of monitoring/recording	At every monitoring event.
Value monitored	See section 3.2.3

Monitoring equipment	Remote sensing imagery, GIS software, and survey instruments used for household-level data collection.
QA/QC procedures to be applied	N/A
Purpose of data	Calculation of leakage
Calculation method	$\Delta C_{OLB,t}$ is calculated by combining: The area subject to land use transition outside the Leakage Belt, The carbon factors per transition from the Chocó FREL, and The intensity of use and productive practices identified in the surveys.
Comments	None

Data/Parameter	$E_{Cstocks,LMZ,t}$
Data unit	t CO2e
Description	Net CO2e emissions from carbon stock changes due to the implementation of leakage mitigation measures in the leakage management zone in year t
Source of data	Long-Term Implementation Workplan
Description of measurement methods and procedures to be applied	Emissions from changes in carbon stocks associated with the implementation of leakage mitigation measures in the Leakage Management Zone are estimated following the procedures in Section 8.3 of methodology VM0006. Quantification is based on spatial data derived from remote sensing combined with field information on activities implemented within the leakage management zone.
Frequency of monitoring/recording	At every monitoring event.
Value monitored	0
Monitoring equipment	Remote sensing imagery, GIS software
QA/QC procedures to be applied	N/A
Purpose of data	Calculation of leakage
Calculation method	N/A
Comments	None

Data/Parameter	$PROP_{MIG}$
Data unit	Proportion
Description	Proportion of households living in the project activities region that are recent migrants and are engaging in land use activities identified as a baseline driver of unplanned deforestation
Source of data	Household surveys
Description of measurement methods and procedures to be applied	CDM Guideline: Sampling and surveys for CDM project activities and programmes of activities
Frequency of monitoring/recording	At every monitoring event.
Value monitored	
Monitoring equipment	Survey forms
QA/QC procedures to be applied	N/A
Purpose of data	Calculation of leakage

Calculation method	Survey
Comments	None

3.1.2.2 Data and Parameters specific to UDeg (VM0006)

3.1.2.3 Sizes, Areas and Transitions

Data/parameter	$size_{projectArea}$, $size_{leakageArea}$, $size_{referenceregion}$, $size_{referenceForest}$
Data unit	[ha]
Description	Size of Project Activity Instance, Instance Leakage Area, Reference Region, Project Area and forest area in the Reference Region
Source of data	Project design
Description of measurement methods and procedures to be applied	GIS delineation of protected area boundaries based on official records, RS analysis of forest cover.
Frequency of monitoring/Recording	$size_{projectArea}$ and $size_{leakageArea}$ may be adjusted during crediting period per the rules for grouped projects and updated at verification, but only for the additional instances that were added after the project start date, and may be adjusted during crediting period per the rules for grouped projects and updated at verification, but only for the additional instances that were added after the project start date.
Value applied	See Section 2.1.16.2 of the PD.
Monitoring equipment	GIS Software
QA/QC procedures to be applied	Visual evaluation and comparison to Google Earth
Purpose of data	$size_{leakageArea}$ and $size_{projectArea}$ used to calculate the Forest Strata-specific Deforestation and Degradation Rates in the Leakage Area (VM0006 Section 8.3.2.3, EQ 94, 95) $size_{projectArea}$ used to calculate forest scarcity factor (VM0006 Section 8.1.4.4, EQ 40). $size_{referenceForest}$ and $size_{projectArea}$ used to calculate baseline total deforestation and degradation rates (VM0006 Section 8.1.4.1, EQ 37, 38). $size_{referenceregion}$ used to test applicability conditions for the Reference Region. This data is used for: Calculation of baseline emissions Calculation of project emissions Calculation of leakage
Calculation method	GIS delineation of boundaries
Comments	This parameter is calculated by Terra Global.

Data/parameter	$\Delta area_{projectAreaEAH,projectScenario}(t, i)$
Data unit	[ha yr ⁻¹]
Description	Hectares undergoing transition i within the Project Activity Instance, excluding ANR and harvest areas, under the Project scenario during year t . [ha yr ⁻¹].
Source of data	Land-use change modelling (ex-ante) Remote sensing analysis (ex-post)

Description of measurement methods and procedures to be applied	Calculated based on the LULC classification.
Frequency of monitoring/recording	At least once before verification
Value applied	For the ex-ante predictions see table relating to expected land transitions under the project scenario.
Monitoring equipment	Land-use classification
QA/QC procedures to be applied	
Purpose of data	Used to predict LULC transitions in the baseline scenario. This data is used for: Calculation of baseline emissions Calculation of project emissions
Calculation method	Follow the procedures described in Section 8.1.5 of the methodology VM0006 to calculate a land use change transition matrix, which summarizes all predicted LULC transitions
Comment	This parameter is calculated by Terra Global.

Data/parameter	$\Delta area_{projectAreaEAH,baselineScenario}(t, i)$
Data unit	[ha yr-1]
Description	Hectares undergoing transition i within the Project Activity Instance, excluding the ANR area, and harvest areas, under the baseline scenario for year t .
Sources of data	Historical LULC classification and land-use change modelling
Description of measurement methods and procedures to be applied	Calculate based on the LULC classification
Frequency of monitoring/recording	At least once before every baseline. For added instances, may be recalculated at verification. This data is used for: Calculation of baseline emissions Calculation of project emissions
Value applied	See the land-use change transition matrix.
Monitoring equipment	GIS
QA/QC procedures to be applied	n/a
Purpose of data	Used to establish LULC transitions in the baseline scenario. This data is used for: Calculation of baseline emissions
Calculation method	Follow the procedures described in Section 8.1.5 of the methodology VM0006 to calculate a land-use change transition matrix, which summarizes all predicted LULC transitions.
Comments	This parameter is calculated by Terra Global.

Data/parameter	$\Delta area_{projectAreaWithANR,baselineScenario}(t, i)$
Data unit	[ha yr-1]
Description	Hectares undergoing transition i within the Instance leakage area under the Project scenario for year t .
Source of data	Land-use change modeling

Description of measurement methods and procedures to be applied	Calculate based on the LULC classification, summarized in the transition rates analysis described in the PD.
Frequency of monitoring/recording	At least once before every baseline update. For added instances, may be recalculated at verification.
Value applied	n/a
Monitoring equipment	GIS
QA/QC procedures to be applied	n/a
Purpose of data	Used to predict LULC transitions in the baseline scenario. This data is used for: Calculation of leakage
Calculation method	Follow the procedures described in Section 8.1.5 of the methodology VM0006 to calculate a land use change transition matrix, which summarizes all predicted LULC transitions.
Comments	This parameter is calculated by Terra Global.

Data/parameter	$\Delta area_{leakageArea,projectScenario}(t, i)$
Data unit	[ha yr-1]
Description	Hectares undergoing transition i within the leakage area under the Project scenario for year t
Source of data	Remote sensing analysis
Description of measurement methods and procedures to be applied	Follow the procedures described in Section 8.1.2.4 of the methodology VM0006. In case emissions reductions/removals from avoided degradation are included, this parameter will provide the data required to calculate the activity data to estimate the emissions from both deforestation and forest degradation.
Frequency of monitoring/recording	At least once before verification
Value applied	For the ex-ante predictions see table relating to land-use transitions in the Instance leakage area.
Monitoring equipment	n/a
QA/QC procedures to be applied	QA/QC procedures for RS analysis.
Purpose of data	Used to predict LULC transitions in the Instance Leakage Area under the project scenario. This data is used for: Calculation of leakage
Calculation method	Follow the procedures described in Section 8.1.5 of the methodology VM0006 to calculate a land use change transition matrix, which summarizes all predicted LULC transitions.
Comments	This parameter is calculated by Terra Global.

Data/parameter	$\Delta area_{leakageArea,baselineScenario}(t, i)$
Data unit	[ha yr-1]
Description	Hectares undergoing transition i within the Instance leakage area under the baseline scenario during year t
Sources of data	Land-use change modeling

Description of measurement methods and procedures to be applied	Calculate based on the LULC classification, summarized in the transition rates analysis described in this PD.
Frequency of monitoring/recording	Once every baseline update. May also be updated at the time of instance inclusion that requires new Instance Leakage Area.
Value applied	For the ex-ante predictions see table relating to land-use transitions in the Instance leakage area.
Monitoring equipment	GIS
QA/QC procedures to be applied	QA/QC procedures for RS analysis.
Purpose of data	Used to predict LULC transitions in the Instance Leakage Area under the baseline scenario. This data is used for: Calculation of leakage
Calculation method	Follow the procedures described in Section 8.1.5 of the methodology to calculate a land use change transition matrix, which summarizes all predicted LULC transitions.
Comments	This parameter is calculated by Terra Global.

Data/parameter	$\Delta area_{historical}(CS_1 \rightarrow CS_2, t_1 \rightarrow t_2)$
Data unit	[ha yr ⁻¹]
Description	Area of transition from LULC class or forest stratum 1 to 2 from time 1 to 2 during the historical reference period.
Source of data	Remote sensing analysis
Description of measurement methods and procedures to be applied	Calculate based on the LULC classification, summarized in the transition rates analysis described in Section VCS PD Section 3.1.5.
Frequency of monitoring/recording	At least once before every baseline update
Value applied	See Gross Emission Workbooks sheet “2a. RR - Transition rates”
Monitoring equipment	GIS
QA/QC procedures to be applied	QA/QC procedures for RS analysis.
Purpose of data	To calculate the baseline annualize deforestation rate. This data is used for: Calculation of baseline emissions
Calculation method	Follow the procedures described in Section 8.1.5 of the methodology VM0006 to calculate a land use change transition matrix, which summarizes all predicted LULC transitions.
Comments	This parameter is calculated by Terra Global.

Data/parameter	$RFRGrate(CS_1 \rightarrow CS_2)$
Data unit	[yr ⁻¹]
Description	Relative annual forest cover increase and regeneration factor for the transition from class or stratum 1 to 2.
Sources of data	Remote sensing analysis
Description of measurement methods and procedures to be applied	Calculate based on the remote sensing-based classification and stratification procedures detailed in section. Multiply with 100 to obtain a forest cover increase and regeneration rate in percentage per year.

Frequency of monitoring/recording	At least once before every baseline update
Value applied	See Gross Emission Workbooks sheet “2a. RR - Transition rates”
Monitoring equipment	GIS
QA/QC procedures to be applied	QA/QC procedures for RS analysis.
Purpose of data	To calculate the baseline annualized reforestation rate. This data is used for: Calculation of baseline emissions
Calculation method	Follow the procedures described in Section 8.1.5 of the methodology VM0006 to calculate a land use change transition matrix, which summarizes all predicted LULC transitions.
Comments	This parameter is calculated by Terra Global.

Data/parameter	$area_{historical}(CS_1, t_1)$
Data unit	[ha]
Description	Total area of LULC class or forest stratum 1 at time 1
Sources of data	Remote sensing analysis
Description of measurement methods and procedures to be applied	Calculate based on the remote sensing-based classification and stratification procedures detailed in this PD.
Frequency of monitoring/recording	At least once before every baseline update
Value applied	See worksheet 2c. RR - DF, RF, DG, RG in GER workbook for values.
Monitoring equipment	GIS
QA/QC procedures to be applied	n/a
Purpose of data	This data is used for: Calculation of baseline emissions
Calculation method	
Comments	This parameter is calculated by Terra Global.

Data/parameter	$area_{projectAreaWithANR,projectScenario}(t, i)$
Data unit	[ha]
Description	Amount of land on which ANR activities are planned under the Project scenario for year t and in stratum i
Sources of data	Records of implemented activities
Description of measurement methods and procedures to be applied	Only to be included if ANR activities are implemented.
Frequency of monitoring/recording	At least once before verification
Value applied	n/a
Monitoring equipment	n/a
QA/QC procedures to be applied	n/a
Purpose of data	This data is used for: Calculation of project emissions
Calculation method	n/a

Comments	Not assessed at validation, to be verified at future verifications. This parameter is calculated by Terra Global.
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Data/parameter	$area_{projectAreaWithHarvest,projectScenario}(t, i)$
Data unit	[ha yr-1]
Description	Size of strata i within the Project Area with harvest activities during year t under the Project scenario.
Sources of data	Remote sensing analysis
Description of measurement methods and procedures to be applied	It was not monitored during this monitoring period.
Frequency of monitoring/recording	At least once before verification if harvesting is determined in the baseline or as a project activity.
Value applied	n/a
Monitoring equipment	n/a
QA/QC procedures to be applied	n/a
Purpose of data	This data is used for: Calculation of project emissions
Calculation method	
Comments	This parameter is calculated by Terra Global.

Data/parameter	$BetaReg_{DF}(t)$ and $BetaReg_{DG}(t)$
Data unit	[ha yr-1]
Description	Beta regression model describing the relationship between time and deforestation/degradation rate in the reference region during the historical reference period.
Sources of data	Historic forest degradation and deforestation modeling
Description of measurement methods and procedures to be applied	Procedure described in Section 4 or similar approach from peer-reviewed scientific literature.
Frequency of monitoring/recording	At least once every baseline update
Value applied	See regression model
Monitoring equipment	GIS/Regression model
QA/QC procedures to be applied	N/A
Purpose of data	This data is used for: Calculation of baseline emissions Calculation of project emissions Calculation of leakage
Calculation method	
Comments	This parameter is calculated by Terra Global.

3.1.2.4 Locations, Descriptions, Qualitative, and Social Data

Data/parameter	Area under agricultural intensification
Data unit	[ha]

Description	Size of the area of agricultural intensification separated for each agricultural intensification measure if found to be a significant emission due to project activities.
Sources of data	Participatory Rural Appraisals
Description of measurement methods and procedures to be applied	Calculate based on areas of cropland in the leakage and Project Areas. Only to be included if agricultural intensification activities are implemented.
Frequency of monitoring/recording	At least once before verification
Value applied	n/a
Monitoring equipment	Participatory Rural Appraisals
QA/QC procedures to be applied	See QA/QC Procedures on Social Assessments
Purpose of data	To estimate amount of non-CO2 emissions from increased crop intensification if a significant source of emissions. Qualitatively indicate the economic benefits to the local communities in ha are not used.
Calculation method	
Comments	If crop intensification activities do not result in additional GHG emissions, there is no need in demarcating agricultural intensification activities. This parameter is calculated by Terra Global with input from FD or their contractors.

Data/parameter	Yields under agricultural intensification
Data unit	[Mg ha-1]
Description	Harvested yield for agricultural intensification practices
Sources of data	Participatory rural appraisals
Description of measurement methods and procedures to be applied	Only to be included if agricultural intensification activities are implemented.
Frequency of monitoring/recording	At least once before verification.
Value applied	n/a
Monitoring equipment	Field studies.
QA/QC procedures to be applied	See QA/QC Procedures on Social Assessments
Purpose of data	To estimate of the reduction of drivers impact on deforestation.
Calculation method	
Comments	If crop intensification activities do not result in additional GHG emissions, there is no need in quantifying agricultural intensification activities.

Data/parameter	NTFP harvest rate
Data unit	[m3 yr-1] or [kg yr-1]
Description	Annual volumes of non-timber forest products extracted
Sources of data	Participatory rural appraisals

Description of measurement methods and procedures to be applied	Participatory rural appraisal SOP. Estimated among participating communities and communities living in the leakage area.								
Frequency of monitoring/recording	At least once before verification								
Value applied	Absolute values can be substituted with qualitative data								
Monitoring equipment	HH Survey and/or PRA								
QA/QC procedures to be applied	See QA/QC Procedures on Social Assessments								
Purpose of data	Indicator of the role of NTFP in reducing the deforestation drivers' impact.								
Calculation method									
Any comment	<p>The PRA survey did not result in exact quantity of the NTFPs harvest rate. The survey reported that many NTFPs are becoming harder to find, and therefore are overexploited. NTFPs are an important livelihood activity and project will continue to support such activities and help them remain a sustainable supply. This parameter is calculated by Terra Global, with data from the FD or their contractors.</p> <table border="1" data-bbox="769 821 1125 953"> <thead> <tr> <th>NTFP Status</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Declined</td> <td>74%</td> </tr> <tr> <td>Stayed the Same</td> <td>21%</td> </tr> <tr> <td>Increased</td> <td>6%</td> </tr> </tbody> </table> <p>(source PRA)</p>	NTFP Status	Percent	Declined	74%	Stayed the Same	21%	Increased	6%
NTFP Status	Percent								
Declined	74%								
Stayed the Same	21%								
Increased	6%								
Data/parameter [MN1]	Local NTFP price								
Data unit	Local currency								
Description	Price of non-timber forest products on local markets								
Sources of data	Participatory rural appraisals.								
Description of measurement methods and procedures to be applied	Participatory rural appraisal SOP. Estimated among participating communities and communities living in the leakage area.								
Frequency of monitoring/recording	At least once before verification								
Value applied	See PRA results workbook.								
Monitoring equipment	Field surveys								
QA/QC procedures to be applied	See QA/QC Procedures on Social Assessments								
Purpose of data	Indicator of the role of NTFP in reducing the deforestation drivers' impact.								
Calculation method									
Comments	<p>Our PRA survey did not ask the specific prices of NTFPs. We used scarcity as a proxy for increases in price. The survey reported that many NTFPs are becoming harder to find (decreased supply), and therefore more costly. NTFPs are an important livelihood activity and project will continue to support such activities and help them remain a sustainable supply. This parameter is calculated by Terra Global, with data from the FD or their contractors.</p>								

		NTFP Status	Percent
		Declined	74%
		Stayed the Same	21%
		Increased	6%

(source PRA)

Data on Drivers and Actions

Data/parameter	$CFW_{baseline}$
Data unit	[m3 yr-1]
Description	Annual volume of fuelwood gathering for commercial sale and charcoal production in the baseline scenario
Sources of data (*)	Participatory rural appraisals
Description of measurement methods and procedures to be applied	If emission reductions from avoided degradation were excluded due to insufficient accuracy, in which case $u_{classification} = 0$, and emission reductions from fuel-efficient woodstoves are included, $CFW_{baseline}$ may only be measured using the first option, social assessments.
Frequency of monitoring/recording	At least once before every baseline update
Value applied	6,316 t C Yr-1 for charcoal
Monitoring equipment	Household survey SOP
QA/QC procedures to be applied	See QA/QC Procedures on Social Assessments
Purpose of data	Es
Calculation method	The HH survey was used to determine the amount of charcoal use per HH per year.
Comments	1. GER Workbook sheet "0. Drivers and parameters". Value is estimated in Mg DM per year. This parameter is calculated by Terra Global, with data from the FD or their contractors.

Data/parameter	$DFW_{baseline}$
Data unit	[m3 yr-1]
Description	Annual volume of fuelwood gathered for domestic and local energy in the baseline scenario
Sources of data (*)	Participatory rural appraisals
Description of measurement methods and procedures to be applied	If emission reductions from avoided degradation were excluded due to insufficient accuracy, in which case $u_{classification} = 0$, and emission reductions from fuel-efficient woodstoves are included, $DFW_{baseline}$ may only be measured using the first option, social assessments.
Frequency of monitoring/recording	At least once before every baseline update
Value applied	4,087 t C Yr-1 for fuelwood
Monitoring equipment	
QA/QC procedures to be applied	See QA/QC Procedures on Social Assessments
Purpose of data	To estimate amount of GHG emissions from driver – fuelwood gathering.
Calculation method	
Comments	See GER Workbook sheet "0. Drivers and parameters". This parameter is calculated by Terra Global, with data from the FD or their contractors.

Data/parameter	$DFW_{project}$
Data unit	[m3 yr-1]
Description	Biomass (dry matter) of fuelwood collected by Project participants under the project scenario.
Sources of data (*)	Participatory rural appraisals Recent (<10 yr) literature in the reference region Recent (<10 yr) literature in an area similar to the reference region
Description of measurement methods and procedures to be applied	If emission reductions from avoided degradation were excluded due to insufficient accuracy, in which case $u_{classification} = 0$, and emission reductions from fuel-efficient woodstoves are included, $DFW_{baseline}$ may only be measured using the first option, social assessments.
Frequency of monitoring/recording	At least once before verification
Value applied	0
Monitoring equipment	N/A
QA/QC procedures to be applied	See QA/QC Procedures on Social Assessments
Purpose of data	N/A
Calculation method	N/A
Comments	No emission reductions are estimated from cookstoves at this time. When cookstove efficiency, wood energy statistics, and monitoring data becomes available then emission reductions from cookstoves will be assessed. This parameter is calculated by Terra Global, with data from the FD or their contractors.

Data/parameter	$DFW_{allowed}$
Data unit	[m3 yr-1]
Description	Biomass (dry matter) of allowed fuelwood collection in the Project Area under the project scenario. This amount is typically fixed in a management plan. [m3 yr-1]
Sources of data (*)	Forest management plan
Description of measurement methods and procedures to be applied	Local communities are not permitted to collect fuelwood.
Frequency of monitoring/recording	At least once before every baseline update
Value applied	Equivalent to $DFW_{project}$
Monitoring equipment	N/A
QA/QC procedures to be applied	N/A
Purpose of data	Used if Community Forestry Agreements include allowable fuelwood collection.
Calculation method	N/A
Comments	This parameter is calculated by Terra Global, with data from the FD or their contractors.

Data/parameter	$contribution_{DF}(d)$ and $contribution_{DG}(d)$
Data unit	[-]

Description	Relative contribution of driver i respectively to total deforestation and forest degradation.			
Sources of data	Calculated using procedure described in 8.1.3 of the methodology, following.			
Description of measurement methods and procedures to be applied	Social Assessments, and expert opinion.			
Frequency of monitoring/recording	At least once before baseline update.			
Value applied	Driver of Deforestation	Contribution		
		DF	DG	Total
	Illegal Logging for Timber	3.5%	74.6%	78.1%
	Shifting agriculture for subsistence	0.8%	0.2%	1.0%
	Illicit crops	6.6%	1.7%	8.4%
	Illegal Mining	57.1%	15.0%	72.1%
	Conversion of Forestland to Grassland for Grazing	17.0%	4.5%	21.5%
	Unplanned Wildfires	15.0%	4.0%	19.0%
Monitoring equipment	N/A			
QA/QC procedures to be applied	See QA/QC Procedures on Social Assessments			
Purpose of data	Used for Ex-ante Calculations for Project emissions.			
Calculation method				
Comments	This parameter is calculated by Terra Global, with data from the FD or their contractors.			
Data/parameter	$RelativeDriverImpact_{DF}(t, d)$ and $RelativeDriverImpact_{DG}(t, d)$			
Data unit	[-]			
Description	Relative impact of the geographically unconstrained driver d at time t of the crediting period respectively on deforestation and forest degradation.			
Sources of data	Calculated using procedure described in Section 8.2.2 of the methodology			
Description of measurement methods and procedures to be applied	Social Assessments, and expert opinion.			
Frequency of monitoring/recording	At least once before baseline update.			
Value applied	See section relating to leakage from geographically unconstrained drivers.			
Monitoring equipment				
QA/QC procedures to be applied	See QA/QC Procedures on Social Assessments			
Purpose of data	Used for Ex-anti Calculations for Project emissions.			
Calculation method				
Any comment	There is no geographically unconstrained driver applicable in the Project Area.			
Data/parameter	$leakage_{unconstrained}(d)$			

Data unit	[-]
Description	Leakage cancellation rate for avoiding deforestation/degradation from geographically unconstrained drivers.
Sources of data	Valid sources to substantiate a smaller leakage rate include social assessments, scientific literature, and reports from civil society or governments. Sources have to be reliable and based on scientific methods and a good statistical design.
Description of measurement methods and procedures to be applied	The determination of this parameter is based on the assessment of the presence or absence of drivers of deforestation and degradation that are not geographically restricted, in accordance with the requirements set out in Section 8.3 of VM0006. To establish whether there is leakage associated with this type of driver, a qualitative and quantitative analysis is performed based on social assessments, scientific studies, and institutional reports that describe the mobility patterns of agents and land use dynamics inside and outside the project area.
Frequency of monitoring/recording	At least once before baseline update.
Value applied	See section 3.2.3
Monitoring equipment	N/A
QA/QC procedures to be applied	N/A
Purpose of data	To determine leakage emissions
Calculation method	If social, technical, and literature analyses confirm that there are no drivers that are not geographically restricted, the value of the parameter is considered not applicable and no cancellation rate is calculated. Otherwise, it should be quantified following the values and procedures described in the methodology VM0006.
Comments	There is no geographically unconstrained driver applicable in the Project Area. This parameter is calculated by Terra Global, with data from the FD or their contractors.

Data/parameter	<i>effectiveness(a, d)</i>
Data unit	[-]
Description	Effectiveness of every project activity <i>a</i> in decreasing any driver of deforestation <i>d</i> relative to that driver's contribution to deforestation and forest degradation,
Sources of data	Relevant academic literature or documented expert opinion.
Description of measurement methods and procedures to be applied	<p>The estimation of this parameter is based on a qualitative and quantitative assessment of the extent to which each project activity reduces the influence of the different drivers of deforestation and degradation identified in the project area, following the agent and driver analysis procedure described in Section 8.1.3 of VM0006.</p> <p>The analysis integrates evidence from scientific literature, social assessments, technical studies, and the knowledge of local experts, allowing for the transparent determination of the expected magnitude of the reduction in the impact of each driver attributable to each project activity. The information is evaluated considering the nature of the driver, its historical intensity, the magnitude of the intervention, and the capacity of the project activity to modify practices or behaviors associated with that driver.</p>

	The relative reduction percentages are assigned using the matrix presented in Figure 3 of the reference document, which summarizes the relationship between each activity and its potential for mitigating drivers. These values are determined once before each baseline update and represent the maximum expected effectiveness during the accreditation period, in accordance with the methodological guidelines.
Frequency of monitoring/recording	At least once before baseline update.
Value applied	See Table 31 relating to the Relative reduction (%) in the impact of drivers of deforestation and degradation due to Project Activities
Monitoring equipment	N/A
QA/QC procedures to be applied	N/A
Purpose of data	Used for ex-anti Calculation of Project Emissions.
Calculation method	
Comments	The <i>effectiveness(a, d)</i> factor represents the maximal effectiveness during the crediting period. This parameter is calculated by Terra Global, with data from the FD or their contractors.

Data/parameter	EF_{forest}
Data unit	[t CO ₂ e]
Description	Emission factor related to leakage.
Sources of data	Forest Inventory
Description of measurement methods and procedures to be applied	Emission factors were calculated by converting the biomass per hectare existing in the area to tCO ₂ e.
Frequency of monitoring/recording	At least once before verification
Value applied	n/a
Monitoring equipment	n/a
QA/QC procedures to be applied	n/a
Purpose of data	To estimated emission factor for unconstrained leakage.
Calculation method	The factor is obtained by multiplying the selected average biomass by the corresponding carbon fraction and then converting to CO ₂ e using the factor 44/12, following IPCC procedures and VM0006 guidelines for emission factors.
Comments	

3.1.2.5 Data on Organic Matter and Carbon Densities

Data/parameter	$OM_o(i)$
Data unit	[Mg DM ha ⁻¹]
Description	Plant-derived organic matter of LULC class or forest stratum <i>i</i> in pool <i>o</i> . [Mg DM ha ⁻¹]
Sources of data	Field measurements using sampling plots in forest strata and LULC classes.

Description of measurement methods and procedures to be applied	The average biomass stock density in applicable organic matter pools: aboveground tree – $OM_{AGT}(i)$, aboveground non-tree – $OM_{AGNT}(i)$, lying dead wood – $OM_{LDW}(i)$, standing dead wood $OM_{SDW}(i)$, and belowground $OM_{BG}(i)$.
Frequency of monitoring/recording	At least once before every baseline update
Value applied	See the table relating to basic statistical measures of field measurements in different LULC classes, and Biomass Excel sheet.
Monitoring equipment	DBH tapes, hypsometers or clinometers, GPS devices
QA/QC procedures to be applied	Follow uncertainty deduction procedures described in methodology. Re-measured plots by independent teams. See QA/QC Procedures for Biomass Inventories.
Purpose of data	This data is used for: Calculation of baseline emissions Calculation of project emissions Calculation of leakage
Calculation method	It is obtained as the stratified average of dry biomass measurements for each organic matter pool, adding the values of the different components where applicable and expressing the result in Mg DM ha ⁻¹ .
Comments	Summed across multiple pools. This data is gathered by the FD or their contractors.

Data/parameter	$proportion_{DF}(d)$ and $proportion_{DG}(d)$																							
Data unit	[-]																							
Description	Proportion of the gradual carbon loss that leads to deforestation or forest degradation, respectively, due to driver d																							
Sources of data	This is based on information from project partners, local implementers expertise																							
Description of measurement methods and procedures to be applied	Estimate using the procedure detailed in Table 8 in Section 8.1.3.2 of the methodology VM0006.																							
Frequency of monitoring/recording	At least once before every baseline update																							
Value applied	<table border="1"> <thead> <tr> <th>Drivers</th> <th>Proportion DF(i)</th> <th>Proportion DG(i)</th> </tr> </thead> <tbody> <tr> <td>Illegal Logging for Timber</td> <td>10</td> <td>90</td> </tr> <tr> <td>Shifting agriculture for subsistence</td> <td>90</td> <td>10</td> </tr> <tr> <td>Illicit crops</td> <td>90</td> <td>10</td> </tr> <tr> <td>Illegal Mining</td> <td>90</td> <td>10</td> </tr> <tr> <td>Conversion of Forestland to Grassland for Grazing</td> <td>90</td> <td>10</td> </tr> <tr> <td>Unplanned Wildfires</td> <td>90</td> <td>10</td> </tr> </tbody> </table>	Drivers	Proportion DF(i)	Proportion DG(i)	Illegal Logging for Timber	10	90	Shifting agriculture for subsistence	90	10	Illicit crops	90	10	Illegal Mining	90	10	Conversion of Forestland to Grassland for Grazing	90	10	Unplanned Wildfires	90	10		
Drivers	Proportion DF(i)	Proportion DG(i)																						
Illegal Logging for Timber	10	90																						
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Illicit crops	90	10																						
Illegal Mining	90	10																						
Conversion of Forestland to Grassland for Grazing	90	10																						
Unplanned Wildfires	90	10																						
Monitoring equipment																								
QA/QC procedures to be applied	See QA/QC Procedures for Social Assessments																							
Purpose of data	This data is used for: Calculation of project ex-anti emissions																							
Calculation method	The proportions are calculated by applying the equations in Table 8 of VM0006, which allow the annual carbon loss associated with each driver to be quantified and then assigned to deforestation (DF) or																							

	degradation (DG) processes. The DF(d) proportion is obtained as the part of the total carbon loss that results in permanent conversion to non-forest, while DG(d) represents the fraction corresponding to partial reductions in biomass within the forest stratum without complete transition of cover.
Comments	See worksheet '0. Drivers and Parameters' in workbook '1. Gross Emission Reduction.' This calculation is completed by Terra Global Capital.

Data/parameter	$C(t, i)$
Data unit	[Mg C ha ⁻¹ yr ⁻¹]
Description	Carbon stock density at time t in stratum i.
Sources of data	Estimated within the biomass inventory plots
Description of measurement methods and procedures to be applied	See Field Sampling SOP
Frequency of monitoring/recording	At least once before verification
Value applied	Section 3.2.1.1 Error! Reference source not found.
Monitoring equipment	Hypsometers or clinometers, DBH tapes, GPS devices
QA/QC procedures to be applied	See QA/QC Procedures for Biomass Inventories.
Purpose of data	This data is used for: Calculation of baseline emissions Calculation of project emissions Calculation of leakage
Calculation method	
Comments	Used in estimating change in carbon stock density such as in ANR areas. This calculation is completed by Terra Global Capital.

Data/parameter	$f_{allometric}(y)$								
Data unit	Equation								
Description	Allometric relationship to convert a tree metric such as DBH or tree height into biomass								
Sources of data	<table border="1"> <thead> <tr> <th>Vegetation</th> <th>Source</th> </tr> </thead> <tbody> <tr> <td>Mangroves</td> <td>(Chave et al., 2005)</td> </tr> <tr> <td>Palms</td> <td>(Duque, et al., 2017)</td> </tr> <tr> <td>Tropical Wet</td> <td>(Alvarez, et al., 2012)</td> </tr> </tbody> </table>	Vegetation	Source	Mangroves	(Chave et al., 2005)	Palms	(Duque, et al., 2017)	Tropical Wet	(Alvarez, et al., 2012)
Vegetation	Source								
Mangroves	(Chave et al., 2005)								
Palms	(Duque, et al., 2017)								
Tropical Wet	(Alvarez, et al., 2012)								
Description of measurement methods and procedures to be applied	The selected allometric equations are applied to field measurements of diameter at breast height (DBH), total tree height (H), and wood density (WD), depending on the type of vegetation present in each plot. These equations are selected for their ecological validity for tropical rainforests and for having scientific support in the reviewed literature.								
Frequency of monitoring/recording	May be updated at baseline update								
Value applied	<table border="1"> <thead> <tr> <th>Vegetation</th> <th>Allometric equation</th> </tr> </thead> <tbody> <tr> <td>Mangroves</td> <td>$AGB = 0.0509 \times WD \times DBH^2 \times H$</td> </tr> <tr> <td>Palms</td> <td>$AGB = 0.334 \times (DBH^2 \times H \times DMF)^{0.803}$</td> </tr> </tbody> </table>	Vegetation	Allometric equation	Mangroves	$AGB = 0.0509 \times WD \times DBH^2 \times H$	Palms	$AGB = 0.334 \times (DBH^2 \times H \times DMF)^{0.803}$		
Vegetation	Allometric equation								
Mangroves	$AGB = 0.0509 \times WD \times DBH^2 \times H$								
Palms	$AGB = 0.334 \times (DBH^2 \times H \times DMF)^{0.803}$								

	Tropical Wet	$\begin{aligned} \ln(AGB) = & -2.857 + 2.081 \times \ln(DBH) \\ & + 0.587 \times \ln(H) \\ & + 0.453 \times \ln(WD) \end{aligned}$
Monitoring equipment	N/A	
QA/QC procedures to be applied	See QA/QC Procedures for Biomass Inventories.	
Purpose of data	This data is used for: Calculation of baseline emissions Calculation of project emissions Calculation of leakage	
Calculation method		
Comments	Equation applicable for tropical forest from Chave et al. 2005. This calculation is completed by Terra Global Capital.	
Data/parameter	$f_{belowground}(y)$	
Data unit	Equation	
Description	Relationship between aboveground and belowground biomass, such as a root-to-shoot ratio	
Sources of data	Mosquera and Moreno (2017), https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0168211&type=printable	
Description of measurement methods and procedures to be applied	Once the above-ground biomass has been estimated using allometric equations, it is multiplied by the selected R:S value to obtain the corresponding below-ground biomass.	
Frequency of monitoring/recording	May be updated at baseline update	
Value applied	0.21	
Monitoring equipment	N/A	
QA/QC procedures to be applied	R:S ratio from Aboveground tree biomass. See QA/QC from	
Purpose of data	This data is used for: Calculation of baseline emissions Calculation of project emissions Calculation of leakage	
Calculation method	Estimated based on findings from Myanmar's FREL, averaged from Tropical Moist Deciduous Forest (based off of Table 4.4 of Chapter 4: Forest Land in 2006 IPCC Guidelines for National Greenhouse Gas Inventories)	
Comments	This calculation is completed by Terra Global Capital.	
Data/parameter	$CE_{inventory,ANR}(t,i)$	
Data unit	[-]	
Description	Combined error in estimate of average biomass stock density in ANR areas in stratum i at time t .	
Sources of data	Field inventory	
Description of measurement methods and procedures to be applied	Procedure is described in Section 8.2.5.3 of the methodology	

Frequency of monitoring/recording	At least once before verification if ANR is a project activity.
Value applied	0
Monitoring equipment	N/A
QA/QC procedures to be applied	To be determined in ANR activities are to take place.
Purpose of data	This data is used for: Calculation of project emissions
Calculation method	Uncertainty estimate in carbon stocks in harvested strata must come from sampling of plots in ANR areas.
Comment	There is no ANR activities that are demarcated at this time.

Data/parameter	$u_{transition}(i)$
Data unit	[-]
Description	Discounting factor for the emission factor for the transition from LULC class or forest stratum 1 to class 2 according to the uncertainty of the biomass inventory.
Sources of data	Biomass inventory
Description of measurement methods and procedures to be applied	See section 8.1.2.4.3 of the methodology VM0006.
Frequency of monitoring/recording	At least once before verification
Value applied	n/a
Monitoring equipment	See Biomass SOP
QA/QC procedures to be applied	See QA/QC of biomass inventory.
Purpose of data	This data is used for: Calculation of project emissions
Calculation method	Discounting factor described in Section 8.1.2.4.3 of the methodology VM0006.

3.1.3 Monitoring Plan (VCS, 3.16, 3.20)

The monitoring activities conducted during this period followed the process established in the project's VCS Monitoring Plan (PD Appendix 7), which integrated the methodological requirements of VM0048 for unplanned deforestation and VM0006 for forest degradation. These elements were complemented by modules VMD0055, VMD0001, VMD0002, VMD0003 and VMD0004 to ensure that carbon stock changes and associated GHG emissions were quantified consistently. The monitoring process encompassed field measurements, remote sensing analysis, quality control procedures, internal verification, and the integration of all results for the ex-post quantification of carbon stock changes. All procedures were implemented in accordance with the parameters listed in Section 3.1.2 of this report and the operational guidance described in the Monitoring Plan Appendix 7 in the Project Description.

The monitoring period was evaluated once during the following period.

Start of period	End of period
01 February 2021	31 December 2023

3.1.3.1 Methods used

Biomass data were obtained through direct measurements conducted in permanent 50 × 50 m sample plots using the instruments, inclusion criteria, and recording procedures defined in the project’s SOP. Within each plot, all trees with diameter at breast height equal to or greater than 10 cm were measured, while trees between 5 and 10 cm were measured within internal subplots. Non-tree biomass, litter, and soil samples were collected, processed, and analyzed in the laboratory to determine dry mass, bulk density, and organic carbon content. All observations were entered into structured field sheets, supported by photographic records, GPS files, and supplemental field notes.

The quantified carbon pools are as follows:

1. Aboveground biomass
 - a. Tree Aboveground Biomass
 - b. Non-tree Aboveground Biomass
2. Belowground Biomass
 - a. Tree Belowground Biomass
 - b. Non-tree Belowground Biomass
3. Dead wood Biomass
4. Litter Biomass
5. Soil Organic Carbon

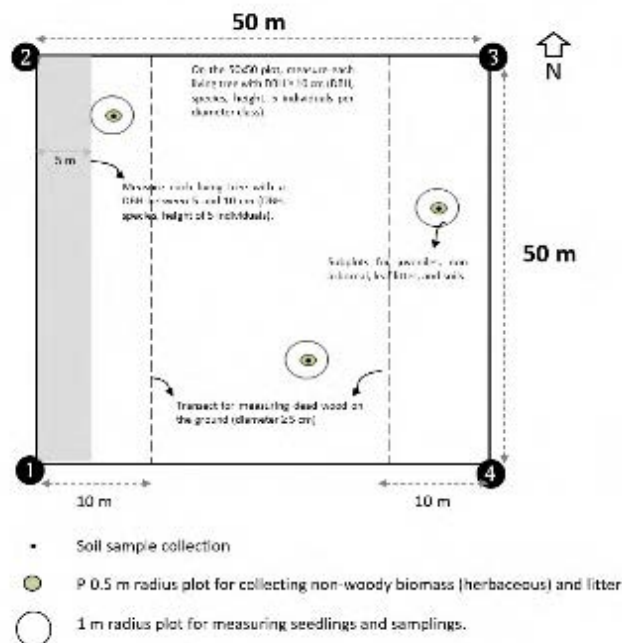
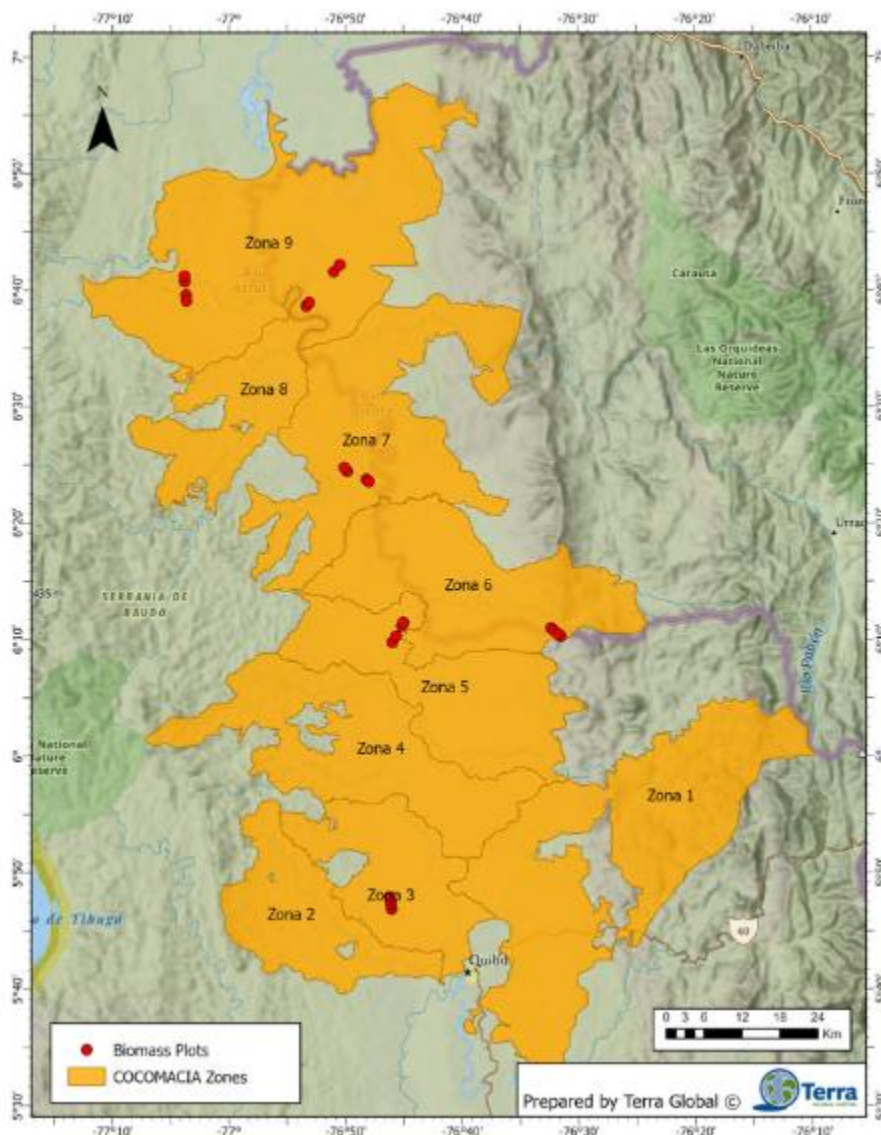


Figure 3. Biomass plot design

The spatial component of monitoring relied on a multi-sensor remote sensing approach using Sentinel-2, Sentinel-1, and Landsat 8 imagery. All imagery was preprocessed through atmospheric and radiometric corrections, orthorectification, and construction of cloud-free mosaics. Auxiliary layers such as elevation, slope, aspect, distance to infrastructure, and distance to water bodies were generated and normalized for use in classification and change detection. All spatial inputs were stored in georeferenced repositories with metadata and version control, and were subsequently used for classification, land-cover change detection, and area estimation of deforestation and degradation

Annex for VCS Monitoring plan v...

Data aggregation and reporting were conducted using processing templates and reproducible scripts, ensuring methodological consistency across monitoring periods. Final outputs were validated by the GHG team prior to their inclusion in this Monitoring Report.



Map 4. Biomass plots location within the COCOMACIA Project boundaries

3.1.3.2 Organizational structure, responsibilities, and competencies

Responsibilities

- **COCOMACIA and local partners** provided logistical support and assistance for field access.
- **The GIS and Remote Sensing team at Terra Global Capital** was responsible for data preprocessing, classification, change detection, uncertainty assessment, and preparation of spatial inputs.
- **The GHG Quantification team** oversaw internal verification, QA/QC, data integration, and carbon stock and emissions calculations. Field crews, consisting of field team leaders, forestry assistants, and local community workers, carried out plot establishment, measurements, and sample collection in accordance with the SOP.

- **The NRM team** created the SOPs, trained the contractors, QA/QC the social data collected by the contractors (PRAs and HHS), processed it, and created the report based on their findings.

The monitoring activities followed the organizational structure described in the VCS Monitoring Plan.

	Method	Frequency	Responsible
Biomass Inventory	Field data collection in permanent plots (trees, saplings, non-tree biomass, deadwood, litter) following project SOPs	Each verification	Field crews of Asociacion Nacional de Ingenieros Agroforestales (ANIAF Acronyms in Spanish), Terra Global QA/QC and processing
Soil Samples	Field sampling and laboratory analysis following SOP and VMDO004	Each verification	Field crews of Asociacion Nacional de Ingenieros Agroforestales (ANIAF Acronyms in Spanish); accredited soil analysis laboratory; Terra Global QA/QC and processing.
Land-use Change Analysis	Remote sensing analysis using Sentinel-1, Sentinel-2, Landsat 8; classification; change detection; uncertainty assessment	Each verification	Terra Global Capital GIS/RS Department (processing, QA/QC, reporting)
PRA	Field Data Collection	Each verification	Terra Global Capital SOPs, QA/QC and Processing
Household Surveys	Field Data Collection	Each verification	Terra Global Capital SOPs, QA/QC and Processing
Biodiversity Surveys	Field Data Collection	Each verification	Third Party Subcontractors using Terra Global Capital SOPs, Terra Global QA/QC and Processing
Project Implementation Data	Collection of operational and implementation records relevant to project performance (non-GHG data)	On-going	COCOMACIA and Terra Global Capital (aggregation, organization, QA/QC review)

3.1.3.3 Processes for handling internal auditing and non-conformities

Internal auditing procedures were applied to ensure data integrity throughout the monitoring cycle. During the field operations the field crew leader follows clear instructions for field-sheet data checking and information saving – this process is documented in the SOP used in the field. Upon receipt of field data, analysts verified the completeness of datasets, the correspondence between GPS files, photographs, and field sheets, and the structural consistency of the digital workbooks. Validation filters were used to identify anomalous values, transcription errors, duplicated entries, inconsistencies between DBH and height measurements, and discrepancies in downed deadwood measurements. All issues were documented in an error log, and corrections were made only when supported by verifiable evidence, such as original field sheets, photographs, or metadata. When inconsistencies could not be resolved, clarification was requested from the field team leader, and if still not resolved the plot could be flagged for re-measurement although no plots were remeasured during the monitoring period.

3.1.3.4 Implementation of sampling approaches

The biomass sampling design followed the permanent plot network established for the project, stratified according to the forest classes defined for the area, including closed and open forests in both upland and lowland zones. Plot measurements were conducted once during the monitoring period, consistent with the methodological requirements for areas where forest remained forest. QA/QC procedures included plot boundary verification, GPS coordinate checks, daily review of field sheets, and immediate correction of inconsistencies whenever possible. The SOP describing these procedures is available to the VVB.

Area estimation of unplanned deforestation relied on the stratified sampling approach described in VMD0055, which included human interpretation of sample units, statistical estimation of area and uncertainty, and the application of the uncertainty inflation factor when required. For forest degradation, land-cover classifications and biomass-loss detections were conducted in accordance with VM0006, integrating spectral and structural changes in areas that remained forest. The stratification framework and transition rules followed the jurisdictional baseline requirements applicable to the project

3.1.4 Dissemination of Monitoring Plan and Results (VCS, 3.18; CCB, CL4.2)

The Program has completed field data collection for Validation and first Verification. Summaries of the results of monitoring were prepared in Spanish and didactical posters were prepared and shared for easy reading and understanding by the communities. The REDD+ team conducted a 3-month dissemination process, where they visited all zones and 124 communities, met with them, discussed and shared the results.

Other events and multiple communication channels are used to ensure that the monitoring plan and its results are widely accessible to the main program stakeholders: During the dissemination process and meetings stakeholders are asked to comment on the monitoring plan and project description.

- WhatsApp groups are used to share program updates, and materials, especially with those who do not have email access.
- Local radio stations are used to provide updates on program activities.
- General Assembly meetings are held annually to report on program progress.
- Virtual and in person meetings with the COCOMACIA Board of Directors and the REDD Team are also held for communicating results and progress.
- The Monitoring Plan and the combined VCS/CCB Project Description and Monitoring Report are available in the VERRA website: <https://registry.verra.org/app/projectDetail/VCS/2071>.

3.2 Quantification of GHG Emission Reductions and Removals

3.2.1 Baseline Emissions (VCS, 3.15)

This Program includes two activities with independent baseline emissions: 1) Avoided Unplanned Deforestation (AUDef) and 2) Avoided Unplanned Degradation (AUDeg). AUDef baseline emissions were allocated to the Project Activity Instance through the Activity Data Allocation Report included as an Appendix

6 of the PD following VM0048, VMD0055 and VT0007. AUdeg baseline emissions were allocated to the Project Activity Instance from the Reference Region which matches the boundary of Jurisdictional Area following methods described in VM0006. Detail description of the methodological steps taken for both baseline are included in the PD (VCS ID 2071), next a summary of baseline emissions for each activity is provided.

3.2.1.1 UDef Baseline Emissions

Quantify the baseline emissions and/or carbon stock changes for the monitoring period in accordance with the applied methodology. Baseline emissions may be negative where carbon stock increases (sinks) exceed baseline emissions. Specify the reductions and removals separately where the applied methodology provides procedures and equations to do so. Include all relevant equations here and provide sufficient information to allow the reader to reproduce the calculation. Include all calculations in the emission reduction and removal calculation spreadsheet.

The baseline emissions were allocated to this Program for this monitoring period from the Choco Department FREL (VCS ID 5079) through the Allocation Report (Listed as Appendix 6 of the PD). This was evaluated in accordance with the procedures established by the Jurisdictional and Nested REDD+ (JNR) Requirements v4.1, Scenario 1, and using the VT007 v1.0, in alignment with the methodology VM0048, Reducing Emissions from Deforestation and Forest Degradation, v1.0.

UDef Activity Data (AD) was allocated to the Program for the first Baseline Validity Period that goes from 2021-2026. UDef AD During the first monitoring period is presented below in Table 16.

Table 16. UDef Activity Data (in hectares) allocated to the Program during the first monitoring period.

Year	CFU	CFL	OFU	OFL	$AD_{BSL,PA-UDef}$
2021	1,805	1,091	163	1,814	4,873
2022	1,805	1,091	163	1,814	4,873
2023	1,805	1,091	163	1,814	4,873
Total MR1	5,415	3,274	488	5,443	14,620

Biomass measurements for Validation were also used for this first Verification, and the field measurements were carried out during this monitoring period. Biomass inventories closely follow the Standard Operating Procedure (SOP) for biomass measurements (available to the VVB), and measurements were conducted by the forestry experts at ANIAF (National Association of Agroforestry Engineers). The SOP is an official document that will be used to verify that the same measurement techniques will be conducted over time in a replicable manner and includes quality assurance. Although the same data was used for validation and first verification, the biomass plots will be revisited and remeasured in the future, so that carbon increases or decreases will be measured (section 3.1.3).

Carbon stock changes were estimated at the Jurisdictional level, following methodological steps described in VMD0055 and each carbon pool-related module: VMD0002 Estimation of Carbon Stocks in the Dead Wood Pool (CP-D), VMD0003 Estimation of Carbon Stocks in the Litter Pool (CP-L), VMD0004 Estimation of

Carbon Stocks in the Soil Organic Carbon Pool (CP-S), VMD0005 Estimation of Carbon Stocks in the Long-Term Wood Products Pool (CP-W). For aboveground carbon stocks methods in VT0005 Tool for measuring aboveground live forest biomass using remote sensing were used. For belowground carbon stocks appropriate root to shoot ratios were used as described in section 3.1.1.1. A summary of carbon stocks densities for the Program is presented in Table 17.

Table 17. Mean Carbon Stocks per Pool and per Forest Stratum.

Carbon Stock per Pool (tCO ₂ e ha ⁻¹)	Forest Stratum			
	CFU	CFL	OFU	OFL
Carbon Aboveground Tree Biomass	288	462	146	212
Carbon Belowground Tree Biomass	60	97	31	44
Carbon Aboveground Biomass Nontree	11	16	19	17
Carbon Belowground Biomass Nontree	3	4	8	5
Carbon Stock of Dead Wood	22	41	6	21
Carbon Stock in Litter	0	0	0	0
Carbon Stock in Soil Organic Carbon	220	175	169	123
TOTAL	604	795	378	422

Uncertainty-Discounted Emission Factors for each Stratum were estimated based on methods in VMD0055. Emissions from aboveground biomass and litter carbon pools ($\Delta C_{CAB-LI,i}$) are assumed to occur within one year, while emissions from belowground biomass and deadwood pools ($\Delta C_{CBB-DW,i}$) are distributed over a 10-year period. Emissions from soil organic carbon and harvested wood products are accounted for over a 20-year period ($\Delta C_{CSOC-WP,i}$). Table 18 presents the results of carbon stock changes from UDef per hectare and summarizes the annual change per forest stratum.

Table 18. Conservative Estimation of UDef Emissions from Carbon Stock Change

Parameter/ Forest Stratum	CFU	CFL	OFU	OFL
	(tCO ₂ e ha ⁻¹)	(tCO ₂ e ha ⁻¹)	(tCO ₂ e ha ⁻¹)	(tCO ₂ e ha ⁻¹)
$\Delta C_{CAB-LI,i}$	263	421	145	202
$\Delta C_{CBB-DW,i}$	75	125	39	62
$\Delta C_{CSOC-WP,i}$	193	154	149	108
Annual UDef Emission Factor (tCO₂e ha⁻¹ yr⁻¹)	280	441	156	213

The sum of emissions in the UDef PA were estimated using the area of AD and the emissions from the carbon stock changes resulting from unplanned deforestation following

$$\begin{aligned}
 \Delta C_{BSL,PA-UDef,i,t} = & (AD_{BSL,PA-UDef,i,t} \times \Delta C_{CAB-LI,i}) \\
 & + (AD_{BSL,PA-UDef,i,t}) \times \frac{\Delta C_{CBB-DW,i}}{10} \\
 & + (AD_{BSL,PA-UDef,i,t}) \times \frac{\Delta C_{CSOC-WP,i}}{20}
 \end{aligned}
 \tag{Equation 1}$$

Were:

$$\Delta C_{BSL,PA-UDef,i,t} = \text{Total emissions from the baseline carbon stock change in all carbon pools in forest stratum } i \text{ within the UDef PA in year } t \text{ (t CO}_2\text{e)}$$

$AD_{BSL,PA-UDef,i,t}$	=	UDef AD in the baseline scenario allocated to forest stratum i in the UDef PA for year t (ha)
$\Delta C_{CAB-LI,i}$	=	Conservatively estimated emissions from carbon stock change in the UDef PA in aboveground biomass and litter pools in forest stratum i (t CO ₂ e/ha)
$\Delta C_{CBB-DW,i}$	=	Conservatively estimated emissions from carbon stock change over a 10- year period in the UDef PA in belowground biomass and dead wood pools in forest stratum i (t CO ₂ e/ha)
$\Delta C_{CSOC-WP,i}$	=	Conservatively estimated emissions from carbon stock change over a 20- year period in the UDef PA in the soil organic carbon and wood product pools in forest stratum i (t CO ₂ e/ha)
i	=	1, 2, 3, ..., M forest stratum
t	=	1, 2, 3, ..., t^* years elapsed since the start of the project

No other GHG emissions ($GHG_{BSLPA-Udef,E,t}$) were estimated as significant in the baseline scenario according to the VCS modules VMD0013 Estimation of Greenhouse Gas Emissions from Biomass and Peat Burning (E-BPB) and VMD0014 Estimation of Emissions from Fossil Fuel Combustion (EFFC).

Emissions under baseline conditions for UDef PA were calculated as:

$$\Delta C_{BSL,PA-UDef,i,t} = \left(\sum_{t=1}^{t^*} \sum_{i=1}^M \Delta C_{BSL,PA-UDef,i,t} \right) + GHG_{BSLPA-Udef,E,t} \quad \text{Equation 2}$$

Were:

$\Delta C_{BSL,PA-UDef,i,t}$	=	Cumulative net GHG emissions since the project start within the UDef PA in the baseline in year t (t CO ₂ e)
$GHG_{BSLPA-Udef,E,t}$	=	Cumulative other GHG emissions in the baseline in year t resulting from unplanned deforestation within the UDef PA since the project start (t CO ₂ e)
$\Delta C_{BSL,PA-UDef,i,t}$	=	Sum of the baseline emissions from carbon stock change in all carbon pools in forest stratum i within the UDef PA in year t (t CO ₂ e)
i	=	1, 2, 3, ..., M forest stratum
t	=	1, 2, 3, ..., t^* years elapsed since the start of the project

As a result only emissions from carbon stock changes were accounted for in the baseline. Baseline emissions are presented in Table 19.

Table 19. Baseline Emissions from UDef

Vintage Period	Estimated Baseline Emissions (Tco2e)
01 February 2021 to 31 December 2021	1,280,457
01 January 2022 to 31 December 2022	1,475,264
01 January 2023 to 31 December 2023	1,551,226
Total MR1	4,306,948

3.2.1.2 UDeg Baseline Emissions

The baseline emissions were allocated to this Program for the first Baseline Validity Period (2021-2026) from the reference region-level baseline activity data in terms of hectares to be degraded in the baseline per year. UDeg reference region matches the Choco Department FREL (VCS ID 5079) boundary. Baseline emissions were evaluated in accordance with the procedures established by the Jurisdictional and Nested REDD+ (JNR) Requirements v4.1, Scenario 1, and using VM0006 Methodology for Carbon Accounting for Mosaic and Landscape-scale REDD Projects, v2.2 as the underlying methodology.

UDeg Activity Data (AD) was allocated to the Program for the first Baseline Validity Period that goes from 2021-2026. UDeg AD During the first monitoring period is presented below in Table 20.

Table 20. UDeg Activity Data (in hectares) allocated to the Program during the first monitoring period.

Year	CFU→OFU	CFL→OFL	$AD_{BSL,PA-UDeg}$
2021	40	8,280	8,320
2022	207	7,650	7,857
2023	339	7,091	7,430
Total MR1	586	23,021	23,607

Biomass measurements for Validation were also used for this first Verification, and the field measurements were carried out during this monitoring period (section 3.1.3).

Carbon stock densities per forest stratum is the described in Table 17. Emission factors were estimated following equations provided by the VM0006 methodology as follows:

$$EF_{AB}(CS1 \rightarrow CS2) = \frac{44}{12} \times (C_{AB}(CS1) - C_{AB}(CS2)) \quad \text{Equation 3}$$

$$EF_{BB}(CS1 \rightarrow CS2) = \frac{44}{12} \times \left(\frac{C_{BB}(CS1) - C_{BB}(CS2)}{10} \right) \quad \text{Equation 4}$$

$$EF_{DW}(CS1 \rightarrow CS2) = \frac{44}{12} \times \left(\frac{C_{DW}(CS1) - C_{DW}(CS2)}{10} \right) \quad \text{Equation 5}$$

$$EF_{SOC}(CS1 \rightarrow CS2) = \frac{44}{12} \times \left(\frac{C_{SOC}(CS1) - C_{SOC}(CS2)}{20} \right) \quad \text{Equation 6}$$

Were:

- $EF_{AB}(CS1 \rightarrow CS2)$ = Emission factor for change in aboveground live plant organic matter from an LULC Class or forest Stratum (CS) 1 to 2. (tCO₂e ha⁻¹)
- $EF_{BB}(CS1 \rightarrow CS2)$ = Emission factor for change in belowground plant organic matter from an LULC Class or forest Stratum (CS) 1 to 2 at *tt* years after transition (tCO₂e ha⁻¹)
- $EF_{DW}(CS1 \rightarrow CS2)$ = Emission factor from change in dead wood from an LULC Class or forest Stratum (CS) 1 to 2 at *tt* years after transition (tCO₂e ha⁻¹)
- $EF_{SOC}(CS1 \rightarrow CS2)$ = Emission factor for change in soil organic matter from LULC Class or forest Stratum (CS) 1 to 2 at *tt* years after transition (tCO₂e ha⁻¹)
- $C_{AB}(CSn)$ = Carbon density of aboveground plant organic matter of classes or forest stratum *i* (MT C ha⁻¹)

$C_{BB}(CSn)$	=	Carbon density of aboveground plant organic matter of classes or forest stratum i (MT C ha ⁻¹)
$C_{DW}(CSn)$	=	Carbon density of aboveground plant organic matter of classes or forest stratum i (MT C ha ⁻¹)
$C_{SOC}(CSn)$	=	Carbon density of aboveground plant organic matter of classes or forest stratum i (MT C ha ⁻¹)
n	=	1,2,3... LULC class number

Uncertainty-Discounted Emission Factors for each Stratum were estimated based on methods in VMD0055. Table 21 presents the results of carbon stock changes from UDef per hectare and summarizes the annual change per LULC transition.

Table 21. Conservative Estimation of UDef Emissions from Carbon Stock Change

Parameter/LULC transition	CFU→OFU (tCO ₂ e ha ⁻¹)	CFL→OFL (tCO ₂ e ha ⁻¹)
ΔCCAB-LI,i	118	219
ΔCCBB-DW,i	4	6
ΔCCSOC-WP,i	2	2
Annual UDef Emission Factor (tCO₂e ha⁻¹ yr⁻¹)	124	228

The sum of emissions in the UDef PA were estimated using the area of UDef AD and the emissions from the carbon stock changes resulting from unplanned degradation as follows:

$$\begin{aligned}
 \Delta C_{BSL,PA-UDef,i,t} &= (AD_{BSL,PA-UDef,i,t} \times \Delta C_{AB-LI,i}) \\
 &+ (AD_{BSL,PA-UDef,i,t}) \times \Delta C_{BB-DW,i} \\
 &+ (AD_{BSL,PA-UDef,i,t}) \times \Delta C_{SOC-WP,i}
 \end{aligned}
 \tag{Equation 7}$$

Were:

$\Delta C_{BSL,PA-UDef,i,t}$	=	Total emissions from the baseline carbon stock change in all carbon pools in forest stratum i within the UDef PA in year t (t CO ₂ e)
$AD_{BSL,PA-UDef,i,t}$	=	UDef AD in the baseline scenario allocated to forest stratum i in the UDef PA for year t (ha)
$\Delta C_{AB-LI,i}$	=	Conservatively estimated emissions from carbon stock change in the UDef PA in aboveground biomass and litter pools in forest stratum i (t CO ₂ e/ha)
$\Delta C_{BB-DW,i}$	=	Conservatively estimated emissions from carbon stock change over a 10- year period in the UDef PA in belowground biomass and dead wood pools in forest stratum i (t CO ₂ e/ha)
$\Delta C_{SOC-WP,i}$	=	Conservatively estimated emissions from carbon stock change over a 20- year period in the UDef PA in the soil organic carbon and wood product pools in forest stratum i (t CO ₂ e/ha)
i	=	1, 2, 3, ..., M forest stratum
t	=	1, 2, 3, ..., t * years elapsed since the start of the project

The sum of annual baseline emissions are presented in Table 22.

Table 22. Baseline UDef Emissions for the first monitoring period.

Vintage Period	Estimated Baseline Emissions (tCO ₂ e)
01 February 2021 to 31 December 2021	1,280,457

Vintage Period	Estimated Baseline Emissions (tCO2e)
01 January 2022 to 31 December 2022	1,475,264
01 January 2023 to 31 December 2023	1,551,226
Total MR1	5,369,951

3.2.2 Project Emissions (VCS, 3.15)

This Program includes two activities with independent project emissions: 1) Avoided Unplanned Deforestation (AUDef) and 2) Avoided Unplanned Degradation (AUDeg). AUDef project emissions were estimated using ex-post monitoring images to detect LULC change following VM0048, VMD0055 and VT0007. AUDeg project emissions were also estimated through LULC change analysis over the monitoring period following methods described in VM0006. Detail description of the methodological steps taken for estimating project emissions for each activity is provided in the following sections.

Table 23 presents the distribution of land-cover classes within the Program Area at the start and end of the monitoring period, based on wall-to-wall land-cover maps dated 2020-12-22 and 2023-12-19. Areas (ha) are reported by class code for forest strata (CFU, CFL, OFU, OFL), non-forest classes (WTR, AGW, BAR) and excluded “No Data” (NOD), and are summarized into total Forest (F), Non-forest (NF) and Excluded Classes. These values provide the basis for quantifying forest cover change and deriving activity data for this monitoring period.

Table 23. Monitoring Period Land-Cover Distribution for Forest and Non-Forest Classes

Class Code	Class Name	Periods (MMDDYYYY)	
		20201222	20231219
NOD	No Data	9,295	-
WTR	Water	-	3,922
AGW	Agriculture Wet	-	194
BAR	Bare	-	5,509
CFU	Closed Forest Upland	361,880	355,146
CFL	Closed Forest Lowland	94,230	85,531
OFU	Open Forest Upland	15,180	21,573
OFL	Open Forest Lowland	168,589	177,300
Forest (F)		639,880	639,550
Non-forest (NF)		-	9,625
Excluded Classes		9,295	-
Total		649,174	649,174

3.2.2.1 UDef Project Emissions

Monitoring period Activity Data (AD) was estimated using a wall-to-wall mapping approach that uses human interpretation of high-resolution imagery. Section 3.1.3 presents details related to the LULC change analysis during the monitoring period.

Table 24. UDef LULC Change Analysis for Monitoring Period 2021-2023

Periods (MMDDYYYY)		Transitions		Change Category (hectares)	
From Date	To Date	From Class	To Class	Deforestation (UDef)	Stable Forest (SF)
20201222	20231219	CFU	AGW	3	-
20201222	20231219	CFL	AGW	16	-
20201222	20231219	OFU	AGW	-	-
20201222	20231219	OFL	AGW	151	-
20201222	20231219	CFU	BAR	1,544	-
20201222	20231219	CFL	BAR	706	-
20201222	20231219	OFU	BAR	253	-
20201222	20231219	OFL	BAR	2,022	-
20201222	20231220	CFU	CFU	-	333,637
20201222	20231221	CFL	CFL	-	48,919
20201222	20231222	OFU	OFU	-	7,165
20201222	20231223	OFL	OFL	-	138,665
Total MR1				4,694	528,386

The annualized activity data per stratum in the UDef PA is equal to AD calculated for the monitoring period divided by the number of years in the monitoring period as follows:

$$AD_{MP,PA-UDef,i,t} = \frac{A_{PA,inflated,UDef,i}}{MPL} \quad \text{Equation 8}$$

Were:

- $AD_{MP,PA-UDef,i,t}$ = UDef AD in the UDef PA in forest stratum i in year t (ha)
- $A_{PA,inflated,UDef,i}$ = Area of unplanned deforestation within forest stratum i of the UDef PA over the monitoring period, conservatively inflated for uncertainty (ha)
- MPL = Length of monitoring period (years)
- t = 1, 2, 3, ..., t* years elapsed since the start of the project
- i = 1, 2, 3, ..., M forest stratum

Considering the difference between the fractional year of each monitoring image (2020.98 and 2023.97), MPL is 2.99 years. Table 25 presents the annualized UDef AD per forest stratum.

Table 25. Annualized activity data per forest stratum in the UDef PA for the monitoring period.

Deforestation Transitions	Average annual transitions UDef AD (ha)
DF in CFU_AGW	1
DF in CFL_AGW	5
DF in OFU_AGW	0
DF in OFL_AGW	50
DF in CFU_BAR	516
DF in CFL_BAR	236
DF in OFU_BAR	85
DF in OFL_BAR	677
AD_{MP,PA-UDef}	1,571

Annual emissions resulting from changes in carbon stocks caused by unplanned deforestation in the project scenario were estimated using the same estimates of carbon stock differences that were established for the baseline (Section 3.2.1.1), paired with the conservatively inflated annualized UDef AD obtained (Table 25) (for the UDef PA).

Monitoring period emissions from carbon stock changes in the UDef PA were estimated as follows:

$$\begin{aligned} \Delta C_{MP,PA-UDef,i,t} = & (AD_{MP,PA-UDef,i,t} \times \Delta C_{C_{AB-LI},i}) \\ & + (AD_{MP,PA-UDef,i,t}) \times \frac{\Delta C_{C_{BB-DW},i}}{10} \\ & + (AD_{MP,PA-UDef,i,t}) \times \frac{\Delta C_{C_{SOC-WP},i}}{20} \end{aligned} \quad \text{Equation 9}$$

Were:

$\Delta C_{MP,PA-UDef,i,t}$	=	Total emissions during the Monitoring Period from carbon stock change in all carbon pools in forest stratum i within the UDef PA in year t (t CO ₂ e)
$AD_{MP,PA-UDef,i,t}$	=	UDef AD in the UDef PA in forest stratum i year t (ha) for year t (ha)
$\Delta C_{C_{AB-LI},i}$	=	Conservatively estimated emissions from carbon stock change in the UDef PA in aboveground biomass and litter pools in forest stratum i (t CO ₂ e/ha)
$\Delta C_{C_{BB-DW},i}$	=	Conservatively estimated emissions from carbon stock change over a 10- year period in the UDef PA in belowground biomass and dead wood pools in forest stratum i (t CO ₂ e/ha)
$\Delta C_{C_{SOC-WP},i}$	=	Conservatively estimated emissions from carbon stock change over a 20- year period in the UDef PA in the soil organic carbon and wood product pools in forest stratum i (t CO ₂ e/ha)
i	=	1, 2, 3, ..., M forest stratum
t	=	1, 2, 3, ..., t^* years elapsed since the start of the project

For total emissions from carbon stock change in the UDef PA the following equation was used:

$$\Delta C_{MP,PA-UDef,t} = \sum_{i=1}^M \Delta C_{MP,PA-UDef,i,t} \quad \text{Equation 10}$$

Were:

$\Delta C_{MP,PA-UDef,t}$	=	Total emissions from carbon stock change in all pools in the UDef PA in year t (t CO ₂ e)
$\Delta C_{MP,PA-UDef,i,t}$	=	Total emissions from carbon stock change in all pools in forest stratum i in the UDef PA in year t (t CO ₂ e)
i	=	1, 2, 3, ..., M forest stratum
t	=	1, 2, 3, ..., t^* years elapsed since the start of the project

No other GHG emissions occurred as a result of project activities in the UDef PA during the first Monitoring Period. In particular, there were no emissions from fossil fuel combustion, no non-CO₂ emissions from biomass burning, and no N₂O emissions from nitrogen application under alternative land uses. Therefore, other GHG emissions were accounted for as zero during this period.

Emissions during the first monitoring period for UDef PA were calculated as:

$$\Delta C_{MP,PA-UDef,i,t} = \sum_{t=1}^{t^*} \sum_{i=1}^M (\Delta C_{MP,PA-UDef,i,t}) + GHG_{MP,PA-Udef,E,t} \quad \text{Equation 11}$$

Were:

- $\Delta C_{MP,PA-UDef,i,t}$ = Cumulative net GHG emissions in the UDef PA in year t (t CO2e)
 $GHG_{MP,PA-Udef,E,t}$ = Cumulative other GHG emissions as a result of project activities in the UDef PA in year t (t CO2e)
 $\Delta C_{MP,PA-UDef,i,t}$ = Total emissions from carbon stock change in all pools in forest stratum i in the UDef PA in year t (t CO2e)
i = 1, 2, 3, ..., M forest stratum
t = 1, 2, 3, ..., t* years elapsed since the start of the project

Table 26 shows actual GHG emissions observed after project implementation (ex-post) from 2021 to 2023 Areas.

Table 26. Project emissions from UDef

Vintage period	Project emissions (tCO2e)
01 February 2021 to 31 December 2021	408,677
01 January 2022 to 31 December 2022	471,015
01 January 2023 to 31 December 2023	495,422
Total MR1	1,375,114

3.2.2.2 UDeg Project Emissions

The Calculations of UDeg project emissions follows the VCS Methodology VM0006 “Carbon Accounting for Mosaic and Landscape-scale REDD Projects v2.2”.

The changes in the Program Area were calculated based on remote sensing change analysis and field measurements.

Biomass measurements for Validation were also used for this first Verification, and the field measurements were carried out during this monitoring period (as described in Section 3.1.3). This Monitoring Report compares the changes between the classified images following procedures in Section 8.1.2.4 of the VM0006 methodology.

A land transition matrix was produced between the consecutive maps. Table 27 presents the LULC transitions in the UDeg PA, within the UDeg PA, transitions of UDef were also monitored and accounted for as emissions in the UDeg PA.

Table 27. UDeg LULC Change Analysis for Monitoring Period 2021-2023 (UDef within UDeg PA was also monitored)

Periods (MMDDYYYY)		Transitions		Change Category (hectares)		
From Date	To Date	From Class	To Class	Degradation (UDeg)	Enhancement (EN)	Deforestation (UDef)
20201222	20231219	CFU	OFU	12,531		
20201222	20231219	CFL	OFL	31,205		
20201222	20231219	OFU	CFU		6,612	
20201222	20231219	OFL	CFL		24,622	
20201222	20231219	CFU	AGW			
20201222	20231219	CFU	BAR			11
20201222	20231219	CFL	AGW			6
20201222	20231219	CFL	BAR			169
Total MR1				43,736	31,234	186

The land transition matrix was annualized by dividing the land transition rates by the duration in between the two dates of the images analyzed for the monitoring period (20201222 and 20231219) which correspond to a 2.99 period. Table 28 present the annualized UDeg AD.

Table 28. Annualized activity data per forest stratum in the UDeg PA for the monitoring period

Deforestation Transitions	Average annual transitions (ha)
DF in CFL_AGW	2
DF in CFU_BAR	4
DF in CFL_BAR	57
Total DF	62
Degradation Transition	Average annual transitions (ha)
DG in CFU_OFU	4,192
DG in CFL_OFL	10,440
Total DG	14,632
Enhancement	Average annual transitions (ha)
EN in OFU_CFU	2,212
EN in OFL_CFL	8,237
Total EN	10,449
Net Degradation (DG less EN)	
Net DG in CFU_OFU	1,980
Net DG in CFL_OFL	2,202
AD_{MIP,PA-UDeg}	4,183

Annual emissions resulting from changes in carbon stocks caused by unplanned degradation in the project scenario were estimated using the same estimates of carbon stock differences that were established for the baseline (Section 3.2.1.1), paired with the annualized UDeg AD obtained (Table 28) (for the UDeg PA). Monitoring period emissions from carbon stock changes in the UDeg PA were estimated as follows:

$$\begin{aligned}
 \Delta C_{MP,PA-UDeg,i,t} &= (AD_{MP,PA-UDeg,i,t} \times \Delta C_{C_{AB-LI,i}}) \\
 &+ (AD_{MP,PA-UDeg,i,t}) \times \frac{\Delta C_{C_{BB-DW,i}}}{10} \\
 &+ (AD_{MP,PA-UDeg,i,t}) \times \frac{\Delta C_{C_{SOC-WP,i}}}{20}
 \end{aligned}
 \tag{Equation 12}$$

Were:

$\Delta C_{MP,PA-UDeg,i,t}$	=	Total emissions during the Monitoring Period from carbon stock change in all carbon pools in forest stratum i within the UDeg PA in year t (t CO ₂ e)
$AD_{MP,PA-UDeg,i,t}$	=	UDeg AD in the UDeg PA in forest stratum i year t (ha) for year t (ha)
$\Delta C_{C_{AB-LI,i}}$	=	Conservatively estimated emissions from carbon stock change in the UDeg PA in aboveground biomass and litter pools in forest stratum i (t CO ₂ e/ha)
$\Delta C_{C_{BB-DW,i}}$	=	Conservatively estimated emissions from carbon stock change over a 10- year period in the UDeg PA in belowground biomass and dead wood pools in forest stratum i (t CO ₂ e/ha)
$\Delta C_{C_{SOC-WP,i}}$	=	Conservatively estimated emissions from carbon stock change over a 20- year period in the UDeg PA in the soil organic carbon and wood product pools in forest stratum i (t CO ₂ e/ha)
i	=	1, 2, 3, ..., M forest stratum
t	=	1, 2, 3, ..., t^* years elapsed since the start of the project

For total emissions from carbon stock change in the UDeg PA the following equation was used:

$$\Delta C_{MP,PA-UDeg,t} = \sum_{i=1}^M \Delta C_{MP,PA-UDeg,i,t} + \sum_{i=1}^M \Delta C_{MP,PA-UDef,i,t}
 \tag{Equation 13}$$

Were:

$\Delta C_{MP,PA-UDeg,t}$	=	Total emissions from carbon stock change in all pools in the UDeg PA in year t (t CO ₂ e)
$\Delta C_{MP,PA-UDeg,i,t}$	=	Total emissions from carbon stock change in all pools in forest stratum i in the UDef PA in year t (t CO ₂ e)
$\Delta C_{MP,PA-UDef,i,t}$	=	Total emissions from UDef carbon stock change in all pools in forest stratum i in the UDeg PA in year t (t CO ₂ e)
i	=	1, 2, 3, ..., M forest stratum
t	=	1, 2, 3, ..., t^* years elapsed since the start of the project

No other GHG emissions occurred as a result of project activities in the UDef PA during the first Monitoring Period. In particular, there were no emissions from fossil fuel combustion, no non-CO₂ emissions from biomass burning, and no N₂O emissions from nitrogen application under alternative land uses. Therefore, other GHG emissions were accounted for as zero during this period.

Emissions during the first monitoring period for UDef PA were calculated as:

$$\Delta C_{MP,PA-UDeg,i,t} = \sum_{t=1}^{t^*} \sum_{i=1}^M (\Delta C_{MP,PA-UDeg,i,t}) + GHG_{MP,PA-Udeg,E,t}
 \tag{Equation 14}$$

Were:

$\Delta C_{MP,PA-UDeg,i,t}$	=	Cumulative net GHG emissions in the UDeg PA in year t (t CO ₂ e)
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$GHG_{MP,PA-Udeg,E,t}$	=	Cumulative other GHG emissions as a result of project activities in the UDeg PA in year t (t CO ₂ e)
$\Delta C_{MP,PA-Udeg,i,t}$	=	Total emissions from carbon stock change in all pools in forest stratum i in the UDeg PA in year t (t CO ₂ e)
i	=	1, 2, 3, ..., M forest stratum
t	=	1, 2, 3, ..., t* years elapsed since the start of the project

Table 29 shows actual GHG emissions measured after project implementation (ex-post) from 2021 to 2023.

Table 29. Project emissions from UDeg

Vintage period	Project emissions (tCO ₂ e)
01 February 2021 to 31 December 2021	684,200
01 January 2022 to 31 December 2022	778,354
01 January 2023 to 31 December 2023	809,003
Total MR1	2,271,557

3.2.3 Leakage Emissions (VCS, 2.5, 3.2, 3.6, 3.15, 4.3)

3.2.3.1 Activity Shifting by Geographically Constrained Agents

One leakage belt was used to identify both UDef and UDeg from activity shifting by geographically constrained agents. The spatial extent of the UDef LB was defined by the Choco Department FREL Jurisdictional Proponent following the criteria described in VMD0055 Section A1.2.2 of Appendix 1. UDef Baseline AD was allocated by the Jurisdictional Proponent through the Allocation Report (VCS ID 2071 PD Appendix 6). Details of the demarcation of the leakage belt are in the PD (VCS ID 2071) Appendix 6.

Leakage from Geographically Constrained Drivers was measured ex-post as the difference between the deforestation and degradation in the Leakage Belt of the Project Activity Instance under the baseline scenario and the actual ex-post monitored deforestation and degradation in the Leakage Belt. If monitored deforestation and/or degradation was higher than the baseline, then it is deducted from the monitored emissions, if lower than leakage was zero.

The allocation of UDef AD to forest strata in the leakage belt comes from the Choco JNR FREL (VCS ID 5079) following VMD0055 and VT0007. Details of the allocation are in the PD (VCS ID 2071) Appendix 6. Allocation Report. UDeg AD allocation to the leakage belt comes from the Reference Region risk assessment according to methods in VM0006. Table 30 presents the AD baseline allocation to the leakage belt.

Table 30. UDef adn Udeg AD ($AD_{BSL, LB}$) in the baseline scenario allocated to forest stratum

Year	Baseline UDef-LB AD (hectares)					Baseline UDeg-LB AD (hectares)		
	CFU	CFL	OFU	OFL	Total	CFU→OFU	CFL→OFL	Total
2021	4,228	387	314	643	5,572	790	2,456	3,246
2022	4,228	387	314	643	5,572	1,246	1,661	2,907
2023	4,228	387	314	643	5,572	1,633	1,397	3,030
Total	12,684	1161	942	1929	16,716	3,669	5,514	9,183

The annualized activity data per stratum in the UDef LB was equal to AD calculated for the monitoring period divided by the number of years in the monitoring period. Table 31 present the results of annualized AD for the monitoring period.

Table 31. Annualized activity data per forest stratum in the UDef LB for the monitoring period

Deforestation Transitions	Average annual transitions UDef AD (ha)
DF in CFU_AGW	1
DF in CFL_AGW	1
DF in OFU_AGW	0
DF in OFL_AGW	19
DF in CFU_BAR	532
DF in CFL_BAR	78
DF in OFU_BAR	193
DF in OFL_BAR	188
AD_{MP, LB-UDef}	1,011

Annualized UDeg AD for the monitoring period is presented in Table 32 below.

Table 32. Annualized activity data per forest stratum in the UDeg LB for the monitoring period

Degradation Transition	Average annual transitions (ha)
DG in CFU_OFU	7,916
DG in CFL_OFL	2,069
Total DG	9,985
Enhancement	Average annual transitions (ha)
EN in OFU_CFU	4,094
EN in OFL_CFL	1,416
Total EN	5,511
Net Degradation (DG less EN)	Average annual transitions UDeg AD (ha)
Net DG in CFU_OFU	3,822
Net DG in CFL_OFL	653
AD_{MP, LB-UDeg}	4,474

The same carbon stocks densities used for validation were used for estimating carbon stock changes due to activity shifting leakage by geographically constrained agents.

The difference in carbon stocks between the baseline scenario and the monitoring period within the UDef and UDeg LB since the project start date to year was calculated as follows:

$$\Delta C_{LK-net-LB,UDef,t} = \Delta C_{BSL,LB-UDef,t} - \Delta C_{MP,LB-UDef,t} \quad \text{Equation 15}$$

$$\Delta C_{LK-net-LB,UDeg,t} = \Delta C_{BSL,LB-UDeg,t} - \Delta C_{MP,LB-UDeg,t} \quad \text{Equation 16}$$

Where:

- $\Delta C_{LK-net-LB,UDef,t}$ = Difference in cumulative net GHG emissions between the baseline and monitoring period within the UDef LB due to unplanned deforestation in year t (t CO₂e)
- $\Delta C_{LK-net-LB,UDeg,t}$ = Difference in cumulative net GHG emissions between the baseline and monitoring period within the UDeg LB due to unplanned deforestation in year t (t CO₂e)
- $\Delta C_{BSL,LB-UDef,t}$ = Cumulative net GHG emissions in the baseline in year t within the UDef LB since the project start (t CO₂e)
- $\Delta C_{BSL,LB-UDeg,t}$ = Cumulative net GHG emissions in the baseline in year t within the UDeg LB since the project start (t CO₂e)
- $\Delta C_{MP,LB-UDef,t}$ = Cumulative net monitored GHG emissions in year t within the UDef LB since the project start (t CO₂e)
- $\Delta C_{MP,LB-UDeg,t}$ = Cumulative net monitored GHG emissions in year t within the UDeg LB since the project start (t CO₂e)
- t = 1, 2, 3, ..., t* years elapsed since the start of the project

Fossil-fuel related and non-CO₂ GHG emissions occurring in the UDef LB were evaluated (as determined following Appendix 1 of VM0048). Other emissions were estimated to be insignificant both in the baseline and Project ex-post and thus accounted as zero.

The net GHG emissions are summed for the UDef and UDeg LB as presented in Table 33 below.

Table 33. Baseline (BSL) and Monitoring (MP) emissions in the leakage belt.

Year	LB Baseline Emissions (tCO ₂ e)		LB Project ex-post (tCO ₂ e)		
	ΔC_{BSL} UDef LB	ΔC_{BLS} UDeg LB	ΔC_{MP} UDef LB	ΔC_{MP} UDef LB within UDeg PA	ΔC_{MP} UDeg LB
2021	1,541,639	657,739	258,050	-	623,160
2022	1,633,190	559,044	273,380	-	651,124
2023	1,724,742	568,526	288,711	-	679,088
Total MR1	4,899,571	1,785,309	820,141	-	1,953,373

3.2.3.2 Activity Shifting by Geographically Mobile Agents

Emissions from activity shifting to areas outside the UDef Leakage Belt (UDef LB) were estimated in accordance with Equation (46) of Module VMD0055 (v1.1). The area of deforestation displaced from the UDef Project Area (UDef PA) ($AD_{AS-OLB,t}$) was assumed to result in an equivalent extent of land cover conversion occurring beyond the UDef LB. The cumulative emissions associated with this displaced activity ($\Delta C_{LK,OLB,t}$) were obtained by multiplying the displaced area by the jurisdictional emission factor ($\Delta C_{OLB,t}$), which represents the average carbon stock change per hectare of land available for activity shifting outside

the leakage belt. Details about land Available for Activity Shifting-Mobile Agents and the jurisdictional emission factor are in sections 2.6.2.2.1 and 2.6.2.2.2 of the Choco Department JNR FREL (VCS ID5079).

$$\Delta C_{LK,OLB,t} = AD_{AS-OLB,t} \times \Delta C_{OLB,t} \quad \text{Equation 17}$$

Where

$\Delta C_{LK,OLB,t}$	=	Cumulative area outside the UDef LB experiencing land cover conversion due to activity shifting in year t (ha)
$AD_{AS-OLB,t}$	=	Proportion of households living in the project activities region that are recent migrants and are engaging in land use activities identified as a baseline driver of unplanned deforestation, as calculated for year t (proportion)
$\Delta C_{OLB,t}$	=	UDef AD in the baseline scenario allocated to forest stratum i in the UDef PA for year t (ha)
t	=	1, 2, 3, ..., t * years elapsed since the start of the project

The emission factor $\Delta C_{OLB,t}$ was derived from jurisdictional baseline following Appendix 2 of the module VMD0055.

The emission factor was as follows: **294 tCO₂e ha⁻¹**

Given that PROP_{MIG,t} is zero, for the initial BVP, activity shifting leakage outside the leakage belt is zero.

3.2.3.3 Market-Effect Leakage

The Program applied Module VMD0011 *Estimation of Emissions from Market-Effects (LK-ME)* to quantify potential indirect emissions resulting from changes in regional supply and demand of wood products. The resulting parameter ($\Delta CLK-ME,t$) represents the cumulative emissions from increased harvesting pressure or production displacement in areas outside both the UDef Project Area (UDef PA) and the UDef Leakage Belt (UDef LB).

3.2.3.3.1 Market-Effects Leakage Through Decreased Timber Harvest

Emissions due to market effects are equal to baseline emissions from logging multiplied by a leakage factor and, where applicable, also by a leakage management factor.

Emissions due to market leakage were calculated as follows:

$$LK_{MarketEffects,timber} = \sum_{i=1}^M (LF_{ME} * LK_{MAF} * AL_{T,i}) \quad \text{Equation 18}$$

Where:

$LK_{MarketEffects,timber}$	=	Total GHG emissions due to market-effects leakage through decreased timber harvest (t CO ₂ e)
LF_{ME}	=	Leakage factor for market-effects calculations (dimensionless)
LK_{MAF}	=	Leakage management adjustment factor (dimensionless)

$AL_{T,i}$ = Summed emissions from timber harvest in stratum i in the baseline case potentially displaced through implementation of the project (t CO₂e)
 i = 1, 2, 3, ...M strata (dimensionless)

3.2.3.3.2 Leakage factor for market-effects leakage through decreased timber harvest

For each stratum, the commercial biomass was calculated and divided by the total aerial biomass to obtain a proportion of the total aerial biomass. This proportion is compared with the following table in the module:

Table 34. Deduction factor for LF_{ME}

Deduction Factors for LF_{ME}	
PML_{FT} is equal ($\pm 15\%$) to PMP_i	$LF_{ME} = 0.4$
PML_{FT} is > 15% less than PMP_i	$LF_{ME} = 0.7$
PML_{FT} is > 15% greater than PMP_i	$LF_{ME} = 0.2$

Where:

PML_{FT} = Mean merchantable biomass as a proportion of total aboveground tree biomass for each forest type (%)
 PMP_i = Merchantable biomass as a proportion of total aboveground tree biomass for stratum i within the project boundary (%).
 LF_{ME} = Leakage factor for market-effects calculations (dimensionless).

Table 35. Leakage factor for market-effects leakage through decreased timber harvest

Description	Parameter	Value
Mean merchantable biomass as a proportion of total aboveground tree biomass for each forest type (%)	PML_{FT}	27%
Merchantable biomass as a proportion of total aboveground tree biomass for stratum i within the project boundary (%)	PMP_i	13%
Leakage factor for market-effects calculations	LF_{ME}	0.2

3.2.3.3.3 Leakage Management Adjustment Factor

For this Program, no leakage management activities will be implemented to offset or compensate for potential market-effects leakage. Consequently, the leakage management adjustment factor ($LKMAF$) was not applied, and market-effects leakage was estimated without deductions.

3.2.3.3.4 Emissions From Timber Harvest

Carbon emissions from displaced logging were estimated in accordance with Equation (5) of Module VMD0011 (v1.2). These emissions comprise two main components: (i) the biomass carbon of the extracted timber and (ii) the biomass carbon from forest damage occurring during the logging process. The total emissions from displaced timber harvests ($C_{BSL, XBT, i, t}$) were calculated as the sum of carbon in extracted timber, the collateral damage factor (LDF), and the logging infrastructure factor (LIF), multiplied by the molecular weight ratio of CO₂ to carbon.

$$C_{B_{SL},X_{BT},i,t} = \left[(V_{B_{SL},X_{E},i,t} \times D_{mn} \times CF) + (V_{B_{SL},X_{E},i,t} \times LDF) + (V_{B_{SL},X_{E},i,t} \times LIF) \right] \times \frac{44}{12}$$

Equation 19

Where:

- $C_{B_{SL},X_{BT},i,t}$ = Carbon emission due to timber harvests in the baseline scenario in stratum i in year t (t CO₂e)
- $V_{B_{SL},X_{E},i,t}$ = Volume of timber projected to be extracted from within the project boundary during the baseline in stratum i in year t (m³).
- D_{mn} = Mean wood density of commercially harvested species (t d.m.m-3)
- CF = Carbon fraction of biomass for commercially harvested species j (t C t d.m.-1)
- LDF = Logging damage factor (t C m-3)
- LIF = Logging infrastructure factor (t C m-3)
- i = 1, 2, 3, ...M strata
- t = 1, 2, 3, ... t* time elapsed since the start of the project activity (years)

Following VMD0011 default parameters for LDF and LIF were adopted from Winrock International field data and represent conservative upper confidence limits derived from empirical analyses conducted in tropical forests of Bolivia, Belize, the Republic of Congo, Brazil, Indonesia, and Mexico. The LDF accounts for non-commercial biomass losses (branches, stumps, and trees incidentally felled), while the LIF represents emissions from logging infrastructure, including roads, skid trails, and decks.

Table 36. Parameters used to estimate total volume of commercial timber harvested in 2013 and emission in the baseline.

Parameter	Value Used
Logging damage factor (LDF)	0.53 tC m-3
Logging infrastructure factor (LIF)	0.29 tC m-3
The volume legal and illegal commercial timber in 2013 ($V_{B_{SL},X_{BT},i,t}$)	60,334 m-3.
Carbon emission due to timber harvests in the baseline scenario in stratum i in year t ($C_{B_{SL},X_{BT},i,t}$)	239,211 tCO₂e

3.2.3.3.5 Results Market Effects Leakage

Using Equation 19 in this section, the tons of CO₂e resulting from market effects were estimated. The total GHG emissions due to market-effects leakage through decreased timber harvest is the following $LK_{MarketEffects,timber}$ is 47,842 tCO₂e yr-1.

3.2.3.4 Leakage Mitigation Emissions

This Program activities include leakage mitigation measures, that directly target deforestation and degradation agents, those activities apply across all Program Area (UDef-PA and UDeg-PA). These activities

are designed to avoid significant increases in emissions from carbon stock changes, biomass burning, and/or increased fertilizer usage. Project Activities are specifically designed to alleviate shifting of emissions to other areas both within and outside the Project Activity Instance and are part of the overall project design. These activities which are considered Leakage Mitigation Measures aim to reduce deforestation and degradation and effectively mitigate any potential leakage resulting from the Program. Section 2.6.1.1 of the PD carefully outlines the Leakage Mitigation Measures and quantifies how the Leakage Mitigation Measures do not increase any emissions above the baseline.

Since the net sum of carbon stock changes within the leakage management zones over the monitoring period is zero, emissions from leakage mitigation activities are not included in the calculation of net GHG emission reductions of the Program.

3.2.3.5 Estimation of Summed Net Leakage Emissions

Total leakage emissions are equal to the summed emissions from activity shifting, market-effects, and GHG emissions associated with leakage mitigation measures. Net leakage emissions were estimated as follows:

$$\Delta C_{LK-UDef,t} = \Delta C_{LK-AS,t} + \Delta C_{LK-ME,t} + GHG_{LK-E,t} \quad \text{Equation 20}$$

Were:

$\Delta C_{LK-UDef,t}$	=	Cumulative net GHG emissions due to leakage from the project activity in year t (t CO2e)
$\Delta C_{LK-AS,t}$	=	Cumulative net GHG leakage emissions due to the displacement of unplanned deforestation in year t (t CO2e)
$\Delta C_{LK-ME,t}$	=	Cumulative net GHG emissions due to market-effects leakage in year t, from VMD0011 (t CO2e)
$GHG_{LK-E,t}$	=	Cumulative other GHG emissions as a result of leakage mitigation measures in year t (t CO2e)
t	=	1, 2, 3, ..., t* years elapsed since the start of the project

Table 37 presents the ex-ante projection of leakage emissions over the Program crediting period. Because emissions from the displacement of geographically unconstrained activities outside the UDef and UDeg leakage belts, market leakage effects, and emissions from leakage-mitigation measures are not spatially explicit, they are quantified as a single consolidated leakage value for UDef and UDeg combined. This total leakage is then allocated between the UDef and UDeg project activity instances in proportion to their respective ex-ante emission reductions (i.e., each instance is assigned a share of total leakage equal to its share of the Program's combined ex-ante emission reductions).

Table 37. Summed Leakage Emissions

Year	Activity Shifting Leakage			Market Effects	Leakage Mitigation Activities	Total Leakage UDef	Total Leakage UDeg
	UDef-LB	UDeg-LB	Outside LB	UDef & UDeg	UDef & UDeg		
(-)	(tCO2e)	(tCO2e)	(tCO2e)	(tCO2e)	(tCO2e)	(tCO2e)	(tCO2e)
2021	-	-	-	43,779	-	19,890	19,890
2022	-	92,080	-	47,842	-	23,244	115,324
2023	-	110,562	-	47,842	-	24,708	135,270
Total	-	202,642	-	139,463	-	67,842	270,484

3.2.4 GHG Emission Reductions and Carbon Dioxide Removals (VCS, 3.15, 4.1)

State the non-permanence risk rating (%)	12%
Has the non-permanence risk report been attached as either an appendix or a separate document?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
For ARR and IFM projects with harvesting, state, in tCO2e, the Long-term Average (LTA).	N/A
Has the LTA been updated based on monitored data, if applicable?	<input type="checkbox"/> Yes <input type="checkbox"/> No
State, in tCO2e, the expected total GHG benefit to date.	5,691,902 tCO2e
If a loss occurred (including a loss event or reversal), state the amount of tCO2e lost:	Not applicable

Table 38 and Table 39 show the reductions in carbon dioxide emissions broken down by type of project activity. Reductions associated with deforestation were estimated using the VM0048 methodology, while reductions resulting from forest degradation were quantified using the VM0006.

Table 38. GHG Emissions reductions and carbon dioxide removals for UDef

Vintage period	Baseline emissions (tCO2e)	Project emissions (tCO2e)	Leakage emissions (tCO2e)	Buffer pool allocation (tCO2e)	Reductions VCUs (tCO2e)	Removals VCUs (tCO2e)
01-February-2021 to 31-December-2021	1,280,457	408,677	19,890	102,227	769,554	-
01-January-2022 to 31-December-2022	1,475,264	471,015	23,244	117,721	886,528	-
01-January-2023 to 31-December-2023	1,551,226	495,422	24,708	123,731	932,072	-
Total	4,306,948	1,375,114	67,842	343,679	2,588,155	-

Table 39. GHG Emissions reductions and carbon dioxide removals for UDeg

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Buffer pool allocation (tCO ₂ e)	Reductions VCUs (tCO ₂ e)	Removals VCUs (tCO ₂ e)
01-February-2021 to 31-December-2021	1,731,273	684,200	19,890	123,262	923,811	-
01-January-2022 to 31-December-2022	1,841,125	778,354	115,324	113,694	949,078	-
01-January-2023 to 31-December-2023	1,797,553	809,003	135,270	102,394	886,156	-
Total	5,369,951	2,271,557	270,484	339,349	2,759,045	-

The Table 40 compares the Program originally projected (ex-ante) GHG benefits with the actual verified reductions achieved during each monitoring year. The ex-ante values represent the emission reductions expected for the Program based on jurisdictional baseline allocation, projected activity data, and assumed implementation effectiveness prior to monitoring. The achieved values reflect the real performance of the Program, based on observed unplanned deforestation and degradation, monitored carbon stock changes, and verified leakage emissions during the reporting period.

Table 40. Estimated ex-ante GHG emission reductions and carbon dioxide removals and the achieved reductions and removals for the monitoring period.

Vintage period	Ex-ante estimated reductions /removals (tCO ₂ e)	Achieved reductions /removals (tCO ₂ e)	Percent difference	Explanation for the difference
01-February-2021 to 31-December-2021	217,371	1,879,074	764%	Ex-ante emission reductions were estimated using a deliberately conservative ex-ante effectiveness (EAEF,t) profile for the reduction of baseline deforestation drivers, based on local expert judgment and the REDD+ team's assessment of likely uptake of project measures. Consistent with VM0048/ VMD0055 requirements to present conservative ex-ante net GHG emission reductions, the implementation schedule assumed a gradual ramp-up of Program Activities with low coverage and effectiveness in the initial years prior to the first verification. Ex-post emission reductions for the monitoring period are instead based on monitored deforestation activity data (AD) and observed implementation of project interventions, which differ from these conservative ex-ante assumptions and therefore explain the percentage difference between ex-ante and achieved GHG emission reductions before buffer deductions.
01-January-2022 to 31-December-2022	416,386	1,928,453	363%	
01-January-2023 to 31-December-2023	728,317	1,884,375	159%	
Total	1,362,074	5,691,902	318%	

3.3 Optional Criterion: Climate Change Adaptation Benefits

This Program will not seek Exceptional Climate Benefits for this Monitoring Period.

3.3.1 Activities and/or processes implemented for Adaptation (CCB, GL1.3)

4 COMMUNITY

4.1 Net Positive Community Impacts

4.1.1 Community Impacts (CCB, CM2.1)

Outcome 1. Robust administrative and fiscal management of the REDD+ program led by COCOMACIA

Community Group	Community members					
Impact	<ul style="list-style-type: none"> Number of operational and governance arrangements approved (Activity 1.1.1.1) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: #1a3d4d; color: white;">MR1</th> </tr> </thead> <tbody> <tr> <td style="background-color: #1a3d4d; color: white;">Number of operational and governance arrangements approved</td> <td style="text-align: center;">1</td> </tr> </tbody> </table>	MR1		Number of operational and governance arrangements approved	1	
	MR1					
	Number of operational and governance arrangements approved	1				
	<ul style="list-style-type: none"> Number of hired REDD+ Team members (Activity 1.1.1.3-Operational Reports) <p>Hiring REDD+ Team members provides a source of empowerment for the COCOMACIA community members, along with improving their own understanding of the program and increases their management capabilities. The REDD+ Team is hired full-time.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: #1a3d4d; color: white;">MR1</th> </tr> </thead> <tbody> <tr> <td style="background-color: #1a3d4d; color: white;">Number of hired REDD+ Team members</td> <td style="text-align: center;">9</td> </tr> </tbody> </table>	MR1		Number of hired REDD+ Team members	9	
	MR1					
	Number of hired REDD+ Team members	9				
	<ul style="list-style-type: none"> Creation of fiscal management policies and process for funds (Activity 1.1.1.4) <p>Fiscal management policies were created for fund management and has been shared with the community leaders.</p>					
	<ul style="list-style-type: none"> Community engagement plan implemented (Activity 1.1.2.4) <p>A community engagement plan was created but has not been disseminated to the COCOMACIA community members. It's dissemination is scheduled for January 2025.</p>					
	<ul style="list-style-type: none"> Number of trainings on zone level fund managers for fiscal management (Activity 1.1.3.4, Operational Reports) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: #1a3d4d; color: white;">MR1</th> </tr> </thead> <tbody> <tr> <td style="background-color: #1a3d4d; color: white;">Number of training sessions on zone level for fiscal management</td> <td style="text-align: center;">0</td> </tr> </tbody> </table>	MR1		Number of training sessions on zone level for fiscal management	0	
	MR1					
Number of training sessions on zone level for fiscal management	0					
<ul style="list-style-type: none"> Number of training and participants on financial management for REDD+ Team and Zone level (Activity 1.1.3.1-Operational Reports) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: #1a3d4d; color: white;">MR1</th> </tr> </thead> <tbody> <tr> <td style="background-color: #1a3d4d; color: white;">Number of training sessions on financial management</td> <td style="text-align: center;">19</td> </tr> <tr> <td style="background-color: #1a3d4d; color: white;">Number of attendees</td> <td style="text-align: center;">120</td> </tr> </tbody> </table>	MR1		Number of training sessions on financial management	19	Number of attendees	120
MR1						
Number of training sessions on financial management	19					
Number of attendees	120					
<ul style="list-style-type: none"> Number of communities meeting sessions on project awareness and socialization of project (Activity 1.1.3.1-Operational Reports) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: #1a3d4d; color: white;">MR1</th> </tr> </thead> <tbody> <tr> <td style="background-color: #1a3d4d; color: white;">Number meetings on socialization of project</td> <td style="text-align: center;">96</td> </tr> <tr> <td style="background-color: #1a3d4d; color: white;">Number of attendees</td> <td style="text-align: center;">3,716</td> </tr> </tbody> </table>	MR1		Number meetings on socialization of project	96	Number of attendees	3,716
MR1						
Number meetings on socialization of project	96					
Number of attendees	3,716					
<ul style="list-style-type: none"> Number of quarterly financial reports approved (Activity 1.1.3.2) 						

	MR1
Number of quarterly financial reviews conducted	4
Type of Benefit/Cost/Risk	The impact is predicted and direct benefit.
Change in Well-being	2.1 Financial - Income levels, variability over time, distribution within society 4.2 Human - Educational level, skills

Outcome 2. The Program area has clear boundaries and land tenure secured with internal management plans and use rights recognized and applied by local communities

Community Group	Community members										
Impact	<ul style="list-style-type: none"> Number of conflicts reported and resolved with neighboring communities (Activity 2.1.1.1, Operational Report) <table border="1" style="margin-left: 20px;"> <tr><td colspan="2" style="text-align: right;">MR1</td></tr> <tr><td>Number of conflicts reported</td><td style="text-align: center;">0</td></tr> <tr><td>Number of conflicts resolved</td><td style="text-align: center;">0</td></tr> </table> Registration of COCOMACIA boundaries with government officials (Activity 2.1.1.3) COCOMACIA boundaries were acknowledged by law in 1997. <table border="1" style="margin-left: 20px;"> <tr><td colspan="2" style="text-align: right;">MR1</td></tr> <tr><td>Number of has registered under COCOMACIA</td><td style="text-align: center;">695,000 ha</td></tr> </table> 	MR1		Number of conflicts reported	0	Number of conflicts resolved	0	MR1		Number of has registered under COCOMACIA	695,000 ha
MR1											
Number of conflicts reported	0										
Number of conflicts resolved	0										
MR1											
Number of has registered under COCOMACIA	695,000 ha										
Type of Benefit/Cost/Risk	The impact is predicted and direct benefit.										
Change in Well-being	Natural Capital N1.1: Access to land, water, grazing.										

Outcome 3. Strengthened governance, planning and zoning capacity for conservation of the Program Area

Strengthened governance, planning, and zoning capacity for the conservation of the Program Area

Community Group	Community members																		
Impact	<ul style="list-style-type: none"> Number of management plans reviewed and updated within the Project Activity Instance (Outcome 3) <table border="1" style="margin-left: 20px;"> <tr><td colspan="2" style="text-align: right;">MR1</td></tr> <tr><td>Number of land management plan updated</td><td style="text-align: center;">0</td></tr> </table> Number of coordination meetings on REDD+ activities with government officials (Activity 3.1.1.5-Operational Report) <table border="1" style="margin-left: 20px;"> <tr><td colspan="2" style="text-align: right;">MR1</td></tr> <tr><td>Number of meetings with government officials</td><td style="text-align: center;">7</td></tr> </table> Number of participatory mapping activities conducted (Activity 3.1.2.1-Operational Report) <table border="1" style="margin-left: 20px;"> <tr><td colspan="2" style="text-align: right;">MR1</td></tr> <tr><td>Number of participatory mapping activities</td><td style="text-align: center;">0</td></tr> </table> Number of zones defined for agricultural land use (Activity 3.1.2.3, Operational Report) <table border="1" style="margin-left: 20px;"> <tr><td colspan="2" style="text-align: right;">MR1</td></tr> <tr><td>Number of agricultural land-use zones</td><td style="text-align: center;">0</td></tr> </table> Number of approved management plans (Activity 3.1.2.8, Operational Report) <table border="1" style="margin-left: 20px;"> <tr><td colspan="2" style="text-align: right;">MR1</td></tr> </table> 	MR1		Number of land management plan updated	0	MR1		Number of meetings with government officials	7	MR1		Number of participatory mapping activities	0	MR1		Number of agricultural land-use zones	0	MR1	
MR1																			
Number of land management plan updated	0																		
MR1																			
Number of meetings with government officials	7																		
MR1																			
Number of participatory mapping activities	0																		
MR1																			
Number of agricultural land-use zones	0																		
MR1																			

	Number of approved management plans	0
	<ul style="list-style-type: none"> Number of sustainable management plans updated for protected areas (Activity 3.1.2.9) 	
	MR1	
	Number of sustainable management plans updated	0
Type of Benefit/Cost/Risk	The impact is predicted and direct benefit.	
Change in Well-being	Natural Capital N1.1: Access to land, water, grazing.	

Outcome 4. Communities participating in the REDD+ program are committed to conserving forest areas.

Community Group	COCOMACIA community members	
Impact	<ul style="list-style-type: none"> Number of community members actively involved in forest monitoring <p>They are hired, trained and paid per day worked (usually, 3 patrolling days per month)</p>	
	MR1	
	Number of hired environmental managers	153
	MR1	
	Number of environmental managers leaders trainings	1
	Number of environmental managers leaders trained	128
	<ul style="list-style-type: none"> # of people receiving training and improving their knowledge 	
	MR1	
	Total number of people receiving training and improving their knowledge (environmental managers + REDD+ Team)	161
	Number of women receiving training and improving their knowledge (environmental managers + REDD+ Team)	23
	<ul style="list-style-type: none"> # outreach and training meetings, # participants (#women) 	
	MR1	
	Number of trainings for environmental managers	62
	Number of trained environmental managers	153
	Number of meetings for equipment distribution	62
<ul style="list-style-type: none"> Number of patrolling activities conducted per year by manager 		
MR1		
Number of patrolling activities conducted per year (2022)	120	
Number of patrolling activities conducted per year (2023)	361	

Zone	Patrol Hours MR1
Zona 1	617
Zona 2	1249
Zona 3	503
Zona 4	1507
Zona 5	833
Zona 6	692
Zona 7	334
Zona 8	205
Zona 9	692

- 124 communities involved in the REDD+ project's planning and implementation (Operational, Intermediate Outcome 4.1)
- 96 of informative Zonal meetings held on the REDD+ project (Operational, Activity 4.1.1.4)
- 0 of annual COCOMACIA Assembly meetings that all community councils and Terra participated (Operational, Activity 4.1.1.5)
- 0 of meetings with other stakeholders (Operational, Activity 4.1.1.6)
- 0 of educators, trained teachers, # of students, young and adult people (incl. women), trained in conservation, # of training sessions/workshops organized and topics discussed (Operational, Activity 4.1.1.7)
- # hectares mapped for restoration

MR1	
Number of hectares mapped for restoration	0
- # workshops conducted on restoration

MR1	
Number of workshops on restoration	0
- # trees planted for restoration with community participation

MR1	
Number of trees planted for restoration	0
- # community nurseries established and operating;

MR1	
Number of communities nurseries established and operating	0
- # seedlings produced; # participants managing nurseries (# women)

MR1	
Number of seedlings produced	0
Numbers of participants managing nurseries	0

Type of Benefit/Cost/Risk	The impact is predicted and direct benefit.
Change in Well-being	Financial Capital F2.1: Income levels, variability over time, distribution within society Human Capital 4.2: Educational level and skills

Outcome 5. Artisanal and traditional mining areas are operated in accordance with agreements, zoning, and protocols established by Local Community Councils.

Community Group	COCOMACIA community members																								
Impact	<ul style="list-style-type: none"> Number of hectares planted with native species; number of planted individuals and annual survival rate <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="2" style="background-color: #1a3d4d; color: white;">MR1</th> </tr> </thead> <tbody> <tr> <td style="background-color: #1a3d4d; color: white;">Number hectares planted with native species</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: #1a3d4d; color: white;">Number of planted species</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: #1a3d4d; color: white;">Survival rate</td> <td style="text-align: center;">0</td> </tr> </tbody> </table> # community members involved in restoration activities (#women) <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="2" style="background-color: #1a3d4d; color: white;">MR1</th> </tr> </thead> <tbody> <tr> <td style="background-color: #1a3d4d; color: white;">Number community members involved in restoration activities</td> <td style="text-align: center;">0</td> </tr> </tbody> </table> #restoration activities, # participants (#women) <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="2" style="background-color: #1a3d4d; color: white;">MR1</th> </tr> </thead> <tbody> <tr> <td style="background-color: #1a3d4d; color: white;">Number of restoration activities (planting)</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: #1a3d4d; color: white;">Number of participants</td> <td style="text-align: center;">0</td> </tr> </tbody> </table> #training session, # participants (#women) <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="2" style="background-color: #1a3d4d; color: white;">MR1</th> </tr> </thead> <tbody> <tr> <td style="background-color: #1a3d4d; color: white;">Number trainings</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: #1a3d4d; color: white;">Number of participants</td> <td style="text-align: center;">0</td> </tr> </tbody> </table> 	MR1		Number hectares planted with native species	0	Number of planted species	0	Survival rate	0	MR1		Number community members involved in restoration activities	0	MR1		Number of restoration activities (planting)	0	Number of participants	0	MR1		Number trainings	0	Number of participants	0
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Number of participants	0																								
Type of Benefit/Cost/Risk	The impact is predicted and direct benefit.																								
Change in Well-being	Financial Capital F2.1: Income levels, variability over time, distribution within society Human Capital 4.2: Educational level and skills																								

Outcome 6. The expansion of illicit crops in the program area is reduced

Community Group	COCOMACIA community members																
Impact	<ul style="list-style-type: none"> # priority areas and substitution agreements signed <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="2" style="background-color: #1a3d4d; color: white;">MR1</th> </tr> </thead> <tbody> <tr> <td style="background-color: #1a3d4d; color: white;">Number of priority areas</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: #1a3d4d; color: white;">Number of substitutions agreements signed</td> <td style="text-align: center;">0</td> </tr> </tbody> </table> Replacement plan developed and validated by local stakeholder The replacement plan has not been developed. # of technical visits made <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="2" style="background-color: #1a3d4d; color: white;">MR1</th> </tr> </thead> <tbody> <tr> <td style="background-color: #1a3d4d; color: white;">Number of technical visits</td> <td style="text-align: center;">0</td> </tr> </tbody> </table> # workshops conducted and % participants who adopt practices <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="2" style="background-color: #1a3d4d; color: white;">MR1</th> </tr> </thead> <tbody> <tr> <td style="background-color: #1a3d4d; color: white;">Number of workshops</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: #1a3d4d; color: white;">Number of participants</td> <td style="text-align: center;">0</td> </tr> </tbody> </table> 	MR1		Number of priority areas	0	Number of substitutions agreements signed	0	MR1		Number of technical visits	0	MR1		Number of workshops	0	Number of participants	0
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Type of Benefit/Cost/Risk	The impact is predicted and direct benefit.																
Change in Well-being	Financial Capital F2.1: Income levels, variability over time, distribution within society																

Human Capital 4.2: Educational level and skills

Outcome 7. Diversified agricultural production to improve communities' food security

Community Group	COCOMACIA community members																																				
Impact	<ul style="list-style-type: none"> Agricultural efficiency and yield increased with intensification with crop diversification (Intermediate Outcome 6.1, HHS) <p>An increase in productivity for subsistence crops is related to an increase in food security for the households, along with an increase of income from commercializing the surplus of the yields. Additionally, with a diversification of crops adapted to the climate the household would have a larger safety net to fall back on drier months.</p> <table border="1" data-bbox="565 604 1144 814"> <thead> <tr> <th>Subsistence Crops</th> <th>MR1 Average Productivity</th> </tr> </thead> <tbody> <tr> <td>Rice</td> <td>1,553 kg/ha</td> </tr> <tr> <td>Maize</td> <td>299 kg/ha</td> </tr> <tr> <td>Cassava</td> <td>897 kg/ha</td> </tr> <tr> <td>Lulo</td> <td>324 units/ha</td> </tr> <tr> <td>Plantain</td> <td>70 ración/ha</td> </tr> </tbody> </table> <p>Most of the farmers grew only one crop (36% with monocrop compared to 19% growing two crops, and 18% three crops). It is important to notice that most of the community has its main income source from selling the surplus of their subsistence crops, 82% of the households sell plantains, 24% rice, 17% cassava, 9% maize and 9% lulo. The average monthly income from the subsistence crops mentioned above is shown in the table below.</p> <table border="1" data-bbox="651 1014 1234 1251"> <thead> <tr> <th>Subsistence crops</th> <th>Average Monthly Income (USD)</th> </tr> </thead> <tbody> <tr> <td>Rice</td> <td>\$ 646</td> </tr> <tr> <td>Maize</td> <td>\$ 237</td> </tr> <tr> <td>Cassava</td> <td>\$ 242</td> </tr> <tr> <td>Lulo</td> <td>\$ 252</td> </tr> <tr> <td>Plantain</td> <td>\$ 614</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Number of people receiving technical assistance (Activity 7.1.1.3, HHS) <table border="1" data-bbox="612 1339 1276 1430"> <thead> <tr> <th></th> <th>MR1</th> </tr> </thead> <tbody> <tr> <td>Number of people receiving technical assistance</td> <td>0</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Number of inputs delivered <table border="1" data-bbox="612 1486 1276 1549"> <thead> <tr> <th></th> <th>MR1</th> </tr> </thead> <tbody> <tr> <td>Number of inputs delivered</td> <td>0</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Number of farmers receiving inputs (Activity 7.1.1.5, Operational Report) <table border="1" data-bbox="612 1640 1276 1703"> <thead> <tr> <th></th> <th>MR1</th> </tr> </thead> <tbody> <tr> <td>Number of farmers receiving inputs</td> <td>0</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Number of households reporting adoption of sustainable agricultural practices (Activity 6.1.1.1, HHS) <p>The adoption of sustainable agricultural practices is connected to participation in training programs/sessions and the acquisition of knowledge regarding practices conducive to climate adaptation,</p>	Subsistence Crops	MR1 Average Productivity	Rice	1,553 kg/ha	Maize	299 kg/ha	Cassava	897 kg/ha	Lulo	324 units/ha	Plantain	70 ración/ha	Subsistence crops	Average Monthly Income (USD)	Rice	\$ 646	Maize	\$ 237	Cassava	\$ 242	Lulo	\$ 252	Plantain	\$ 614		MR1	Number of people receiving technical assistance	0		MR1	Number of inputs delivered	0		MR1	Number of farmers receiving inputs	0
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Number of inputs delivered	0																																				
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Number of farmers receiving inputs	0																																				

	including the use of locally sourced sustainable inputs. There is a total of 317 people already using sustainable practices according to the HHS.		
	MR1		
	Sustainable practices	Household Count	Household Percentage
	Crop rotation	35	11.04%
	Agroforestry	172	54.26%
	Nitrogen fixing crop rotation	7	2.21%
	Manure use	8	2.52%
	Fallow terrain	8	2.52%
	Crop residue incorporation	21	6.62%
	Compost use	19	5.99%
Deep rooted trees	32	10.09%	
Living barriers	10	3.15%	
Rainwater storage	3	0.95%	
Water filtering plants	1	0.32%	
Drainage	1	0.32%	
	<ul style="list-style-type: none"> Number of households reporting use of chemical or organic inputs (Activity 6.1.1.1, HHS) <p>The use of organic inputs instead of inorganic/synthetic inputs is related to sustainable agricultural practices which benefit the environment and ecosystem.</p>		
	MR1		
	Fertilizer use	Household Count	Household Percentage
	Inorganic/Synthetic	16	6%
	Organic	3	1%
	<ul style="list-style-type: none"> Number of trainings for efficient agricultural techniques and crop diversification (Activity 6.1.1.3, Operational Report) 		
	MR1		
	Number of training sessions on agricultural practices and crop diversification	0	
	Number of participants	0	
Type of Benefit/Cost/Risk	The impact is predicted and direct benefit.		
Change in Well-being	<p>Natural Capital 1.3: Productivity (per unit of land, per unit of water, per unit of inputs)</p> <p>Financial Capital F2.1: Income levels, variability over time, distribution within society</p> <p>Human Capital 4.2: Educational level and skills</p>		

Outcome 8. Increased community income through sustainable crop and NTFP production.

Community Group	COCOMACIA community members	
Impact	<ul style="list-style-type: none"> Average income reported for each of the cash crops (HHS) <p>In COCOMACIA, marketing of cash crops is an important, but underdeveloped, source of income. Of those that have agriculture as a main source of income, only 4% grows cacao and 1% grows annatto, our target crops for development. This data was taken from the Household Survey (HHS).</p>	
	MR1 Average Income (USD)	
Cacao	0	

	Annatto	0						
	<ul style="list-style-type: none"> Average productivity for each of the cash crops (Output 7.1.1, HHS) <p>In COCOMACIA, the productivity of the cash crops can be improved with further training and workshops.</p>	<table border="1"> <thead> <tr> <th colspan="2">MR1 Average Productivity</th> </tr> </thead> <tbody> <tr> <td>Cacao</td> <td>622 kg/ha</td> </tr> <tr> <td>Annatto</td> <td>9 kg/ha</td> </tr> </tbody> </table>	MR1 Average Productivity		Cacao	622 kg/ha	Annatto	9 kg/ha
	MR1 Average Productivity							
	Cacao	622 kg/ha						
	Annatto	9 kg/ha						
	<ul style="list-style-type: none"> Number of hectares identified and participating in cash crop expansion program (Activity 7.1.1.1, Operational Report) 	<table border="1"> <thead> <tr> <th colspan="2">MR1</th> </tr> </thead> <tbody> <tr> <td>Number of hectares participating in cash crop expansion program</td> <td>0</td> </tr> </tbody> </table>	MR1		Number of hectares participating in cash crop expansion program	0		
	MR1							
	Number of hectares participating in cash crop expansion program	0						
	<ul style="list-style-type: none"> Number of farmers reporting improved processing skills or infrastructure (Activity 7.1.2.3, HHS) 	<table border="1"> <thead> <tr> <th colspan="2">MR1</th> </tr> </thead> <tbody> <tr> <td>Number of producers reporting improved processing skills/infrastructure</td> <td>0</td> </tr> </tbody> </table>	MR1		Number of producers reporting improved processing skills/infrastructure	0		
	MR1							
Number of producers reporting improved processing skills/infrastructure	0							
<ul style="list-style-type: none"> Average income NTFP reported by sector (Activity 7.1.3.1, HHS) <p>The community average monthly income is \$195 (USD), the households have zero income from NTFP, aside from beekeeping which generates on average \$156 yearly.</p>								
Type of Benefit/Cost/Risk	The impact is predicted and direct benefit.							
Change in Well-being	Natural Capital 1.3: Productivity (per unit of land, per unit of water, per unit of inputs) Financial Capital F2.1: Income levels, variability over time, distribution within society Human Capital 4.2: Educational level and skills							

4.1.2 Negative Community Impact Mitigation (VCS, 3.19; CCB, CM2.2)

No negative community impacts were observed. A Gender Action Plan was created jointly with the COCOMACIA Gender group to identify and implement activities that will maintain the well-being of women and vulnerable groups. The details of the plan are included in Appendix 3: Commercially Sensitive Information.

No grievances related to the environment (generation of waste, pollution, etc.) were received since the implementation of the program activities. Additionally, the HCV areas (rivers, swamps, forest areas) are accessible and the communities benefit from their ecosystem and social services.

4.1.3 Net Positive Community Well-Being (VCS 3.19; CCB, CM2.3, GL1.4)

To assess the impact on the communities' well being, The community impacts are positive regarding the improvement of Financial Capital, particularly regarding Income levels (2.1), since the Program made payments to the community members participating in patrolling activities.

Table 41 an indicator framework (*A Framework for Research on Sustainability Indicators for Agriculture and Rural Livelihoods* by Phil Woodhouse, David Howlett and Dan Rigby (2000)) was adopted from the Sustainable Rural Livelihood (SRL) Framework from Well-being The framework classifies well being into natural, physical, human, financial and social capital, and from those categories, the program determine the positive well-being impacts derived from the implementation of Program activities, based on the Project Outcomes from the Long-Term Implementation Plan, as shown in Table.

The community impacts are positive regarding the improvement of Financial Capital, particularly regarding Income levels (2.1), since the Program made payments to the community members participating in patrolling activities.

Table 41. Well-Being Indicators

Well-being Indicators		Long-term and Short-term Program indicators (see COCOMACIA Long-term Implementation Plan)
Natural capital:	Access to land, water, grazing	<p><u>Outcome 2:</u> Program boundaries (coordinates) verified</p> <p><u>Intermediate Outcome 2.1:</u> COCOMACIA territory has clear boundaries and land tenure is secured with internal management plans and use rights recognized and enforced by local communities.</p> <p><u>Output 2.1.1:</u> The boundaries of COCOMACIA are verified and conflict resolution with the government and neighboring communities is facilitated.</p> <p><u>Outcome 3.1:</u> Improved management and governance plans for the protection and sustainability of the Program Area</p> <p><u>Intermediate Outcome 3.1:</u> Strengthened land use governance, planning and territorial</p> <p><u>Output 3.1.1:</u> Policies and institutional support for the REDD+ program with the COCOMACIA board established</p>
	Productivity (per unit of land, per unit of water, per unit of inputs)	<p><u>Outcome 6:</u> Greater diversity of agricultural production to strengthen access to food and improve community food security</p> <p><u>Intermediate Outcome 6.1:</u> Increased agricultural productivity through the adoption of crop diversification and sustainable practices</p> <p><u>Output 6.1.1:</u> Communities receive training in good agricultural practices and demonstration plots are established to promote the adoption of sustainable agricultural practices</p> <p><u>Outcome 7:</u> Increased community income through sustainable crop and NTFP production.</p> <p><u>Intermediate outcome 7.1:</u> A Strengthened and competitive local producers and NTFP value chains, with increased capacities in management, processing, and access to sustainable markets that generate stable incomes for communities</p> <p><u>Output 7.1.1:</u> Expanded access to markets for sustainable community products, as well as identified and prioritized NTFP initiatives with the greatest market potential and sustainability in the territory.</p> <p><u>Output 7.1.3:</u> Improved producer-managed processing</p>
	Soil, water quality	<p><u>Outcome 5:</u> Artisanal and traditional mining areas are slowing down their expansion and are implemented in accordance with agreements, zoning and protocols established with the Local Community Councils</p> <p><u>Intermediate outcome 5.1:</u> The community territory has a system of planning, restoration, and management of traditional and artisanal mining that promotes the recovery of degraded areas and reduces the environmental impacts of mining activity</p> <p><u>Output 5.1.1:</u> Restoration and recovery activities carried out in the areas most impacted by mining.</p>
Financial capital	Income levels, variability over time, distribution within society	<p><u>Outcome 4:</u> Communities involved in the REDD+ program and committed to conservation through local outreach and training</p> <p><u>Intermediate Outcome 4.1:</u> Communities actively participating in the planning and implementation of forest conservation and sustainable use activities</p> <p><u>Output 4.1.2:</u> Organized and strengthened communities implement restoration, monitoring, and sustainable management actions for the territory.</p>

		<p><u>Outcome 7</u>: Increased community income through sustainable crop and NTFP production <u>Intermediate outcome 7.1</u>: Strengthened and competitive local producers and NTFP value chains, with increased capacities in management, processing, and access to sustainable markets that generate stable incomes for communities <u>Output 7.1.2</u>: Support and advise local productive initiatives at trade fairs and negotiations of commercial agreements with potential buyers.</p>
<p>Human capital</p>	<p>Educational level, skills</p>	<p><u>Outcome 4</u>: Communities involved in the REDD+ program and committed to conservation through local outreach and training <u>Intermediate Outcome 4.1</u>: Communities actively participating in the planning and implementation of forest conservation and sustainable use activities <u>Output 4.1.2</u>: Organized and strengthened communities implement restoration, monitoring, and sustainable management actions for the territory <u>Outcome 6</u>: Greater diversity of agricultural production to strengthen access to food and improve community food security <u>Intermediate Outcome 6.1</u>: Increased agricultural productivity through the adoption of crop diversification and sustainable practices <u>Output 6.1.1</u>: Communities receive training in good agricultural practices and demonstration plots are established to promote the adoption of sustainable agricultural practices. <u>Outcome 7</u>: Increased community income through sustainable crop and NTFP production <u>Intermediate outcome 7.1</u>: Strengthened and competitive local producers and NTFP value chains, with increased capacities in management, processing, and access to sustainable markets that generate stable incomes for communities <u>Output 7.1.2.1</u>: Strengthen the technical, organizational, and commercial capacities of communities in best practices for the sustainable harvesting, post-harvesting, processing, and marketing of NTFPs and associated crops. <u>Outcome 9</u>: Increased local capacity for data collection and on-going monitoring <u>Intermediate outcome 9.1</u>: Establishment of a data collection and monitoring system for the program, with all participants trained and with sufficient capacity <u>Output 9.1.1</u>: Build local capacity for continual data collection over time</p>

4.1.4 Protection of High Conservation Values (CCB, CM2.4)

In COCOMACIA there are sites of social, cultural and/or ecological significance such as rivers, marshes and forest areas. These are areas that are a source of subsistence and they are socializing environment. The PRAs confirmed what are the HCV areas and there was no mention of any negative impacts by the Program.

4.2 Other Stakeholder Impacts

4.2.1 Mitigation of Negative Impacts on Other Stakeholders (VCS, 3.18, 3.19; CCB, CM3.2)

Any negative impact on other stakeholders (CODECHOCO, CORPOURABA, government authorities (Ministry of Environment), international agencies (UN, World Bank, FAO, USAID, WWF), SINA, and CONCEA) will be assessed through meetings and possible. Their mitigation will come through adaptation of the Program.

The Grievance and Feedback Mechanism is public and will help in finding, mitigating and solving any negative impact brought by the Program, which can include adapting the management and the activities implemented.

4.2.2 Net Impacts on Other Stakeholders (VCS, 3.18, 3.19; CCB, CM3.3)

CODECHOCO, CORPOURABA, government authorities (Ministry of Environment), international agencies (UN, World Bank, FAO, USAID, WWF), SINA, and CONCEA, are being positively impacted through the implementation of program activities since it promotes the achievement of sustainability and environmental goals from these stakeholders.

Stakeholders that are important regarding implementation of activities, or dissemination of information or trainings, such as farmers associations, NGOs, educational and research institutions, UMATAS, catholic churches acting in the region, have not been affected by the implementation of Program activities.

4.3 Community Impact Monitoring

4.3.1 Community Monitoring Plan (CCB, CM4.1, CM4.2, GL1.4, GL2.2, GL2.3, GL2.5)

In 2022, 474 household surveys (HHS) were done in the 9 zones of COCOMACIA, and there was a PRA conducted by zone, where the community HCV areas were identified. The surveys were reviewed by the local contractor, Ingeobosque, to verify that the language was appropriate to the region context, and modify wording were needed. The HHS and PRAs were conducted according to the Standardized Operating Procedures (SOP) which were a joint effort between Terra and the contractor, where their comments were incorporated both procedures.

Ingeobosque generated reports based on their analysis of the HHS and PRAs conducted and a more in-depth analysis was done by Terra with the data from the HHS, and the results are included in Section 4.1.1.

The relevant results from the Program during this monitoring period are:

The local REDD+ Team, 9 people were hired and trained (19 trainings) for this monitoring period. As for the environmental managers, 153 were hired and patrolled the territory 3 times per month; there were 62

trainings done for environmental managers, where they also received the equipment necessary to perform their activities. There were 96 socialization meetings done to the communities, with 3,716 people attending.

This monitoring period provided the baseline for productivity of the main cash crops grown in the PAI, with 1,553 kg/ha for rice, 299 kg/ha for maize, 897 kg/ha for cassava, 324 units/ha for lulo and 70 racion/ha for plantain; the surplus of the food crops are commercialized and the highest income from that comes from selling rice (average \$646 yearly), while the lowest income is from the commercialization of maize (average \$237 yearly).

The development of cash crops commercialization and NTFPs can become an important source of income for the COCOMACIA communities. On this monitoring period, there were zero activities on NTFP recorded from the HHs, and \$0 income from the commercialization of cash crops, while only 4% and 1% of the communities produce cacao and annatto, respectively.

The community members on the PRAs, highlighted interest in mitigation activities to reduce deforestation, some of those are: planting trees, trainings to raise awareness of the importance of forest conservation, sensitization of the population on sustainable forest and natural resources management, implementation of productive areas (fruit trees), creation of artisanal small business, and creation of other sources of income different than wood extraction. Some of those activities are part of the Program Workplan, along with other activities important for the continuation of the Program and its maintenance by the community during the Program lifetime.

The Program have defined a Gender Workplan to target the measurement of specific activities intended to support women and vulnerable groups. Those activities are trainings to increase income sources, capacity building on forest conservation, creation of employment opportunities, trainings and meetings to raise awareness of gender inequalities, and activities to improve productivities of subsistence and cash crops targeted for women and vulnerable groups. The Gender Workplan was reviewed with members of the COCOMACIA community to ensure its appropriateness and to built on what is already in place in the communities.

Community monitoring is described in the CCB Monitoring Plan, which follows an adaptive management approach. The Monitoring Plan was created in parallel with the Project Document (PD) and is publicly available on www.verra.org.

The monitoring data was combined to complete the VCS/CCB Monitoring Report. This document was made available to stakeholders and communities following the dissemination process listed in Section 4.3.

The communities had a few comments regarding the results disseminated in the Monitoring Report. The comments received are briefly described here:

Comments from stakeholder meetings (Community consultations): During the consultation process and the zonal meetings and general assemblies, the communities raised several key concerns that were addressed by the Program team:

- **Land Tenure:** There were concerns about whether the Program would involve the expropriation of the land. It was clarified that collective ownership is protected by Law 70 of 1993 and that the Program does not affect land ownership.
- **Use of Natural Resources:** The question was raised as to whether the Program would restrict the use of ancestral resources or practices. It was explained that the Program does not restrict subsistence use, but rather seeks to reduce deforestation and degradation by promoting sustainable practices.
- **Distribution of Benefits:** The communities asked how the income would be distributed and whether the money would be given individually. It was clarified that the resources would be invested in agreed-upon collective activities to improve livelihoods and the program, and that the distribution would be based on the performance of each zone/community.
- **Financial Management:** When asked who would manage the resources, it was reported that a Trust (Autonomous Estate) would be created to ensure transparency and that the funds require authorization from all parties for their use.
- **Employment:** Inquiries were made about job opportunities. The local REDD+ team and environmental managers (patrolmen) were presented as sources of direct employment generated by the Program.
- **No formal complaints were filed:** No complaints were raised through the grievance mechanism during the monitoring period.
- **Advertising Mechanism:** The monitoring plan and its results have been made publicly available on the Verra website and summaries in Spanish have been disseminated to the communities, informing them of their right to send comments directly to the auditors or through the Verra website.

4.3.2 Monitoring Plan Dissemination (CCB, CM4.3)

Describe how any results of monitoring undertaken in accordance with the monitoring plan have been disseminated and made publicly available on the internet. Describe the means by which summaries (at least) of the monitoring results have been communicated to the communities and other stakeholders.

The Monitoring Plan and results of the monitoring were disseminated along with the PD and MR1, and their summaries in Spanish, through in-person meetings. The process and steps on the VVB visit were also communicated. The communities have been informed that they may comment on any of those documents during the in-person meetings, in written form through the Verra website (www.verra.org) and to the auditor during their field visit.

Local and direct stakeholders will be asked to comment on the Monitoring Plan along with the summarized translated MR.

The following community meetings were held to disseminate the MR and the Monitoring Plan:

Participants	Purpose	Date
REDD+ Team, communities	Informational meetings, socialize PD and MR summaries and process for comments and feedback	June-August 2025
Board of directors, community leaders, small-scale farmers	“Encuentros zonales”, Informational meetings, socialize PD summary and process for comments and feedback	Nov 2024
Board of directors and The Legal Representative, All the communities	General Assembly socialize MR summary and process for comments and feedback n	Dec 2024

All direct stakeholders will be asked to comment on the Project description along with the summarized translated version, and if needed to send comments to CCBStandards@vcs.org. During the Monitoring Period, the results of the Program were reported to communities. This has been the responsibility of COCOMACIA Great Council and be conducted every verification period.

4.4 Optional Criterion: Exceptional Community Benefits

This Program will not seek Exceptional Community Benefits for this Monitoring Period.

4.4.1 Short-term and Long-term Community Benefits (CCB, GL2.2)

4.4.2 Marginalized and/or Vulnerable Community Groups (CCB, GL2.4)

4.4.3 Net Impacts on Women (CCB, GL2.5)

4.4.4 Benefit Sharing Mechanisms (CCB, GL2.6)

4.4.5 Governance and Implementation Structures (CCB, GL2.8)

4.4.6 Smallholders/Community Members Capacity Development (CCB, GL2.9)

5 BIODIVERSITY

5.1 Net Positive Biodiversity Impacts

5.1.1 Biodiversity Changes (VCS, 3.19; CCB, B2.1)

Change in Biodiversity	Communities engaged with REDD+ Project and conducting community-based patrolling
Monitored Change	<p>Specific data for this indicator includes:</p> <p>Species richness of wildlife and species and endemic plant species (Monitoring data, Outcome 4)</p> <p>Species richness by taxa (monitoring data) =</p> <ul style="list-style-type: none"> • 161 bird species • 27 mammal species • 72 herpetofauna species • 35 plant endemic species <p>Specific data for the output Improved Forest protection through increased patrolling, anti-corruption, and enforcement efforts within the COCOMACIA territory (Output 4.1.2)</p> <ul style="list-style-type: none"> • 6,632 patrol hours between September 2022-July 2023 forest protection community patrols established (Operational, Output 4.1.2) • ha of forest areas under community-based patrolling, (Operational, Output 4.1.2) • 108 findings total between September 2022- July 2023 from forest law enforcement reports conducted, 4 community patrol logs documented and saved (Operational, Output 4.1.2) <p>Project developed (Operational, Activity 4.1.2.2)</p> <ul style="list-style-type: none"> • 62 Training and equipment provided to environmental managers (using personal phones and paper for data collection), 186 of people and # of women ((Operational, Activity 4.1.2.2) <p>The following metrics correspond to baseline values, and most activities will be implemented during the second monitoring period:</p> <ul style="list-style-type: none"> • 0 community members actively engaged in sustainable forest management,
Justification of Change	<p>The amount of patrolling should increase over the project lifetime, this should help reduce illegal activities such as mining, logging, hunting. Having community-based patrolling activities (including women and other vulnerable groups in the activities) will help to reduce illegal activities that occur within the Project Activity Instance and increase conservation based mindsets in the local communities. The number of wildlife species was found during the baseline biodiversity survey conducted in the first monitoring period. Thus, there is no change in species richness that needs to be justified. The Monitoring Plan details the collection of these observations. The environmental managers who patrol their CCL's gather all the information including length of time patrolling and observations while patrolling. This data is usually gathered on phones using WhatsApp (for pictures) and simple datasheets. This data is then back entered into an excel sheet by our local project coordinator. Some of this data for patrol hours may be overestimated by environmental managers and future monitoring periods will use mobile software to collect data that will automize all data collected and reduce errors in reporting data. The mobile software to be used to monitor the patrols is known as SMART Conservation Tool. The transition to the use of this tool was begun during the first monitoring period, thus the justification for no patrols after September 2023 in</p>

the first monitoring period. The capacity building and training of using this tool has taken some time, but patrols using SMART and SMART mobile will have started in monitoring period 2. The change in the next monitoring period will be compared to the first monitoring period, and adjustments will be made in order to account for sampling error.

5.1.2 Mitigation Actions (VCS, 3.19; CCB, B2.3)

The most critical threats to biodiversity in COCOMACIA are change in land use and deforestation, development of mining activities, hunting for subsistence and/or trafficking, the use of fertilizers and pesticides, and inadequate waste disposal. Among the different impacts that were identified in the COCOMACIA REDD+ Chocó Community Project, the affectation to the vegetation cover, the change in the composition, structure and diversity of fauna and the affectation to the aquatic ecosystems stood out.

Community-based patrolling will help to protect areas of HCV and wildlife species that are extensively hunted as it will deter illegal activities from occurring in the Project Activity Instance and surrounding area of influence. As patrols have begun in this monitoring period from September 2022 – September 2023, approximately 6,000 total hours have been accumulated across the different communities involved in community patrolling. The figure below demonstrates the patrol efforts by each zone in the Project Activity Instance (Figure 4). It is apparent from this analysis that some zones spent more time patrolling than others, and for the next monitoring period, it will be imperative to ensure that all zones are contributing to the patrols for their communities. With higher participation of patrols and increased patrol effort, we will be better informed on the activities that occur within each zona, thus identifying hot spots of illegal activities. Patrol effort for the year of September 2022 to September 2023 was still quite high and informed us on some mining activities that have occurred in the Project Activity Instance (*Figure 5*). This information will help identify areas to begin implementation of mining recovery activities. From the analysis, the zones with the most mining activities are from zones 1, 5, and 6. While there may be some sampling bias, the zones with the highest mining activities were not the same as the zones with the highest patrol effort. These activities will need to be confirmed across several monitoring periods, but it does provide preliminary estimates of what zones have the highest mining activities and provide insight on where implementation of activities should be prioritized. Patrol effort does relate to observations of illegal activities and will continue to help mitigate the impacts of these activities in the Project Activity Instance. Other illegal activities will continue to be monitored by community members, and over time the number of activities detected during patrols will decline, as other resources become more available to the local communities. HCV1 which includes rare, threatened, and endangered species will be protected by these patrols as it deters hunters that directly kill wildlife, and also activities that degrade their habitats (i.e., logging, mining).

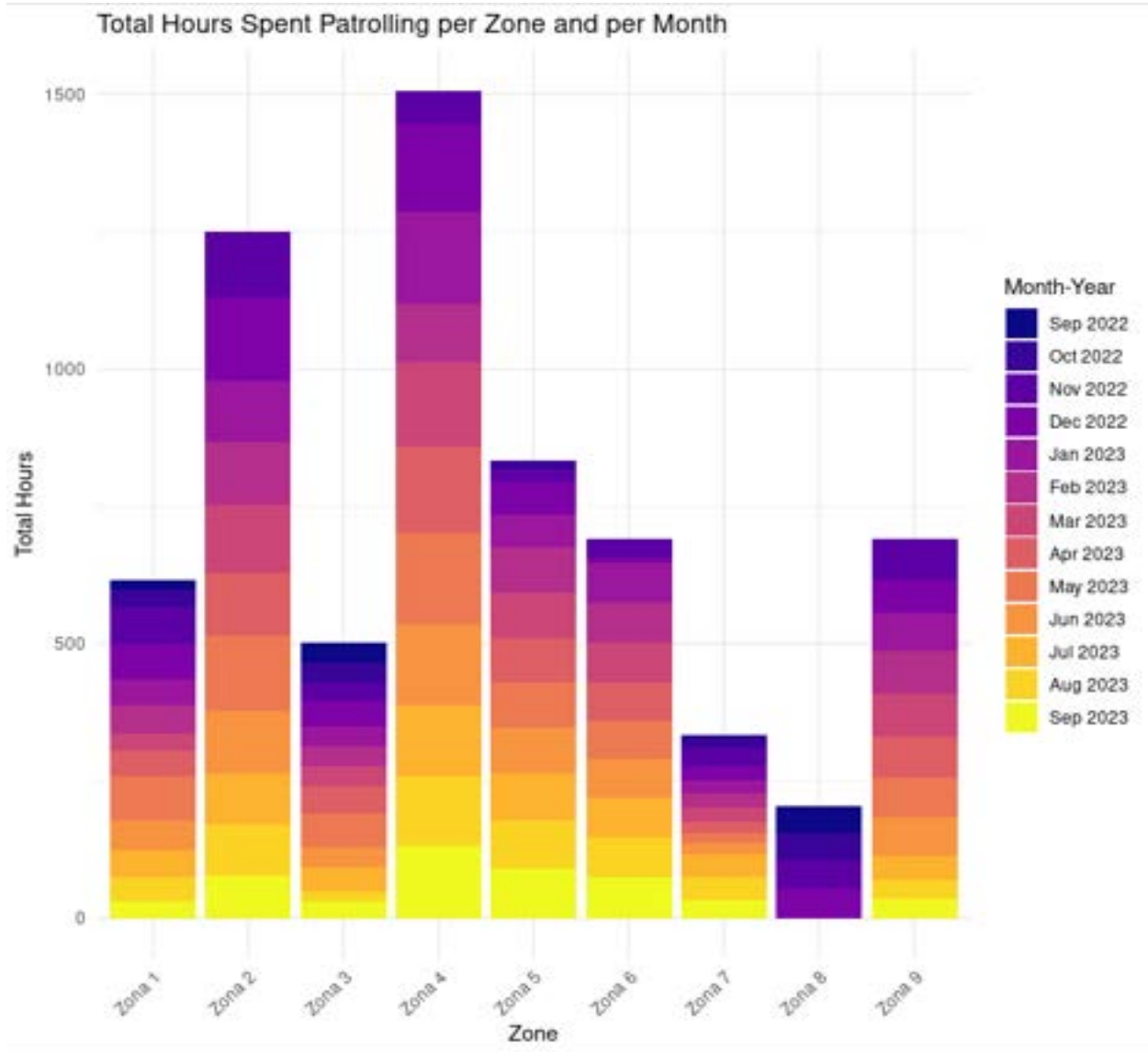


Figure 4. Patrol Effort by each Zona in the Project Activity Instance

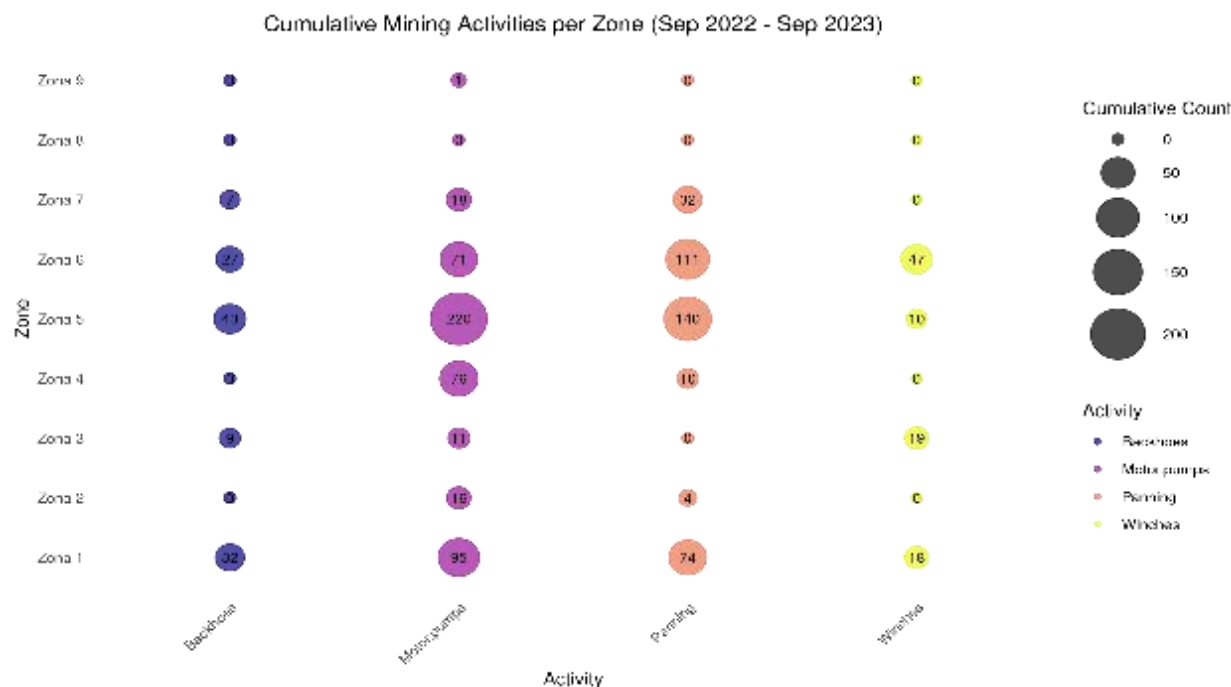


Figure 5. Cumulative Mining Activities per Zone (Sep 2022 - Sep 2023)

5.1.3 Net Positive Biodiversity Impacts (VCS, 3.19; CCB, B2.2, GL1.4)

In the absence of the project, high rates of deforestation and degradation would continue to occur in the Project Activity Instance, leading to adverse impacts on local biodiversity and would eliminate corridors allowing species to travel between different sites across the Choco, resulting in a reduced genetic interchange between surrounding protected areas. Furthermore, habitat availability will be limited and increase competition between and within communities. Activities including small-scale mining, logging, hunting, and exotic wildlife trade would continue to happen in the Project Activity Instance, and project activities like community patrolling would not be established.

Community patrolling has increased the participation of the communities in conservation and will work to deter these illegal activities in the with-project scenario through the project lifetime. Community environmental managers in the current monitoring period have had over 6,000 total patrolling hours and 108 findings. The continued work and participation of these teams will allow more project activities to be implemented in the future based on these findings and to continue to provide protection against the over-exploited resources in the Project Activity Instance. Activities that will help biodiversity adapt to climate change are still under development, but community activities that will help reduce the overall dependence on forest resources, will allow the ecosystems to grow and restore ecological functions that will help them adapt to changes in climate change. Overall, the biodiversity impacts are positive and will continue to be positive as the program continues.

habitat – Choco biogeographic	
RTE species - <i>Penelope ortonii</i> , <i>Crax rubra</i> , <i>Panthera onca</i> , <i>Ateles dusciceps</i> , <i>Cebus capucinus</i> , <i>Saguinus geoffroyi</i> , <i>Huberodendron patinoi</i> , etc.	RTE species and their habitat (biogeography of Chocó) will not be negatively affected by the program and its activities. As demonstrated above, RTE species and their habitat will benefit from the project through increased patrolling in communities, which will deter illegal activities that often threaten them in the Project Activity Instance. Other activities to be implemented in the future under the project include restoration of former mining areas, activities that improve community livelihoods that will reduce dependence on forest resources, and sustainable agricultural practices that will have less impact on habitat. Patrolling is the main activity during the first monitoring period that helped maintain species populations in the Project Activity Instance. The patrolling by communities identified hunting and other activities that harm RTE species and others. Though most of the findings revolved around illegal activities related to deforestation, it still helped protect and maintain the habitats for these species. Future monitoring periods and improvement in patrolling practices will help to maintain these populations even more and help the program make informed decisions about decision making.

5.1.4 High Conservation Values Protected (CCB, B2.4)

The COCOMACIA REDD+ Chocó Community Program was designed to achieve three main general objectives: mitigate climate change through the reduction of greenhouse gases, improve the social conditions of local communities by providing alternative livelihoods and conserving the inherent biodiversity found in the forested landscapes of the forest area. The Project Activity Instance includes community forests (lowland forests) and are under the category of HCV 1. These areas are within the Choco Biogeographic area which is as a Key Biodiversity Area (KBA) due to the presence of several endangered species at significant concentrations and the ecological niche they provide.

The monitoring and the prioritization of areas for this is essential to conserve biological diversity in the region and will provide future tools for the sustainable management of its resources. These areas of special environmental, biological, and/or rare ecosystem significance are expected to proliferate during the Program life and beyond its end due to project activities like patrolling, improved forest protection, and community participation.

In the baseline biodiversity assessment, the following threatened species were observed (*Table 42*). In future monitoring periods, we will evaluate the impacts of program activities on these species and their forest ecosystems. We expect that program activities will maintain and enhance the HCVs of the program.

Table 42. Red List Species of IUCN present in the Project Activity Instance

Family	Scientific Name	IUCN Status	Observed in Project Activity Instance
Anhimidae	<i>Chauna Chavaria</i>	Near Threatened	Yes
Cracidae	<i>Crax rubra</i>	Vulnerable	Yes
Cracidae	<i>Penelope ortonii</i>	Endangered	Yes
Icteridae	<i>Psarocolius cassini</i>	Vulnerable	Yes
Bufoidea	<i>Rhinella acrolopha</i>	Endangered	Yes:
Dendrobatidae	<i>Oophaga lehmanni</i>	Critically endangered	Yes

Family	Scientific Name	IUCN Status	Observed in Project Activity Instance
Dendrobatidae	<i>Colostethus imbricolus</i>	Endangered	Yes
Dendrobatidae	<i>Oophaga andresi</i>	Endangered	Yes
Dendrobatidae	<i>Oophaga solanensis</i>	Vulnerable	Yes
Strabomantidae	<i>Strabomantis bufoniformes</i>	Endangered	Yes
Atelidae	<i>Ateles fusciceps</i>	Endangered	Yes
Cebidae	<i>Cebus capucinus</i>	Vulnerable	Yes

5.1.5 Species Used (VCS, 3.19; CCB, B2.5, 2.6)

No species were introduced during the first monitoring period. However, when project activities in future monitoring periods are implemented, the species proposed in the PD Section 5.2.5 will be considered in this section.

Species introduced	Classification	Justification for use	Adverse effects and mitigation
No species introduced	N/A	N./A	N/A

5.1.6 Invasive Species (VCS, 3.19; CCB, B2.5)

This program supports protection of native forests. Planting activities in the future could include agroforestry and improved agricultural practices. While not all species will be native, invasive species will not be considered, unless mitigation measures are in place. No existing invasive species were identified during the first monitoring period, and according to the Global Invasive Species Database, the region does not have any known invasive species that would impact the Project Activity Instance (IUCN, n.d.).

Existing invasive species	Mitigation measures to prevent spread or continued existence of invasive species
None	None

5.1.7 GMO Exclusion (CCB, B2.7)

No genetically modified organisms are included in this Program design. No genetically modified material will be used for this program.

5.1.8 Inputs Justification (VCS, 3.19; CCB, B2.8)

Fertilizers were not used as part of the program in the first monitoring period. Future activities that include planting will limit the use of any fertilizers and pesticides, and organic fertilizers and inputs will be prioritized. Future monitoring reports will record any inputs used in future program activities.

Name	None
Justification of Use	None
Adverse Effect	None

5.2 Offsite Biodiversity Impacts

5.2.1 Negative Offsite Biodiversity Impacts (CCB, B3.1) and Mitigation Actions (CCB, B3.2)

The Program activities in the first monitoring period did not have many interventions, other than community participation in forest protection. Community patrolling in the first monitoring was to identify the activities and wildlife in the Project Activity Instances to inform the REDD+ team on what future interventions can be identified. Thus, no negative impacts on biodiversity as a result from program activities was identified in the first monitoring period. While the PD identified potential leakage related to hunting of species outside of the Project Zone, this has yet to be identified. However, this will continue to be monitored in future monitoring periods to ensure that program activities don't cause negative impacts. If any negative impacts are identified, mitigation activities will be developed under the Adaptive Management Plan, if necessary.

Negative Offsite Impact	Mitigation Measure(s)
None	None

5.2.2 Net Offsite Biodiversity Benefits (VCS, 3.19; CCB, B3.3)

The baseline biodiversity assessment did not identify any unforeseen negative impacts outside of the Project Activity Instance, this will continue to be monitored in the future monitoring periods. However, the net effect of the program on biodiversity is positive overall. Community patrolling helps to monitor the number of illegal activities that occur and protect the ecosystems that thrive there. The program will also implement different income streams for the communities that will also reduce the dependence on forest resources and will expect to also reduce the number of activities that occur in the Project Activity Instance. Wildlife and especially threatened species are protected under this program and will help many of these populations to recover. Deforestation activities will also be halted and limited in some cases and increase the habitat availability for wildlife and provide corridors in the mosaic landscape.

5.3 Biodiversity Impact Monitoring

5.3.1 Biodiversity Monitoring Plan (CCB, B4.1, B4.2, GL1.4, GL3.4)

The main goal of this baseline Biodiversity Assessment was to gather data on the presence of wildlife species (birds, mammals, reptiles and amphibians), especially of IUCN important ones, mainly with the use of camera traps and wildlife surveys as well.

The study was carried out in 5 locations in the department of Chocó, located between the municipalities of Quibdó and Murindó, with an average height ranging between 7 and 330 masl. The field work was carried out in two cycles; the first between July 8 - 31 and the second between September 29 - October 24, 2022. Carrying out a five-day visit to each location, for a total of 25 effective days of field search.

5.3.1.1 Results of Birds

For the sampling of birds, the technique of counting points of constant time and variable radius was used according to the methodology proposed by (Ralph et al., 1996). This methodology makes it possible to study the different specific compositions according to the type of habitat and the patterns of abundance for each species. The counting points in this study were located at a minimum distance of 150 meters to guarantee the independence of each sampling event, each census lasted 10 minutes and the bird species seen or heard, their abundance, stratum you were using and the behavior you performed. The counts were carried out between 6:00 a.m. and 11:00 a.m. and between 3:00 p.m. and 6:00 p.m., which are the peaks of greatest activity in this group. The number of point counts for each quadrant was three for a total of 30 counts per location and 150 point counts for the general sampling.

A total of 161 bird species were recorded, grouped into 47 families and 22 orders (*Table 43*). This list represents 8.43% of the 1909 bird species registered for Colombia (Avendano et al., 2017), 16.13% of the 998 species reported for the department of Chocó, and 19.53% of the 824 potential species for the region.

Table 43. List of Bird Species Found in the COCOMACIA (CITES conventions: Appendix II, III; NL: Not listed, NA: Does not apply. IUCN: (LC) Least Concern, (NT) Near Threatened, (Vu) Vulnerable, (EN) Endangered)

Family	Species	CITES	IUCN	Distribution
Accipitridae	<i>Accipiter superciliosus</i>	Appendix II	LC	Restricted
Accipitridae	<i>Busarellus nigricollis</i>	Appendix II	LC	Restricted
Accipitridae	<i>Buteogallus urubitinga</i>	Appendix II	LC	Restricted
Accipitridae	<i>Elanoides forficatus</i>	Appendix II	LC	Restricted
Accipitridae	<i>Harpagus bidentatus</i>	Appendix II	LC	Restricted
Accipitridae	<i>Leptodon cayanensis</i>	Appendix II	LC	Restricted
Accipitridae	<i>Rupornis magnirostris</i>	Appendix II	LC	Restricted
Accipitridae	<i>Spizaetus tyrannus</i>	Appendix II	LC	Restricted
Alcedinidae	<i>Chloroceryle amazona</i>	NA	LC	Restricted
Alcedinidae	<i>Chloroceryle americana</i>	NA	LC	Restricted
Alcedinidae	<i>Megaceryle torquata</i>	NA	LC	Restricted
Anatidae	<i>Cairina moschata</i>	NA	LC	Restricted
Anatidae	<i>Dendrocygna autumnalis</i>	NA	LC	Restricted
Anhimidae	<i>Chauna chavaria</i>	NA	NT	Restricted
Apodidae	<i>Streptoprocne zonaris</i>	NA	LC	Restricted
Ardeidae	<i>Ardea alba</i>	NA	LC	Restricted
Ardeidae	<i>Ardea herodias</i>	NA	LC	Restricted
Ardeidae	<i>Butorides striata</i>	NA	LC	Restricted
Bucconidae	<i>Bucco noanamae</i>	NA	NT	Endemic
Bucconidae	<i>Malacoptila panamensis</i>	NA	LC	Restricted
Bucconidae	<i>Monasa morphoeus</i>	NA	LC	Restricted
Bucconidae	<i>Notharchus tectus</i>	NA	LC	Restricted
Caprimulgidae	<i>Nyctidromus albicollis</i>	NA	LC	Restricted
Cardinalidae	<i>Piranga rubra</i>	NA	LC	Restricted
Cathartidae	<i>Cathartes aura</i>	NA	LC	Restricted
Cathartidae	<i>Cathartes burrovianus</i>	NA	LC	Restricted
Cathartidae	<i>Coragyps atratus</i>	NA	LC	Restricted
Charadriidae	<i>Vanellus chilensis</i>	NA	LC	Restricted

Family	Species	CITES	IUCN	Distribution
Cinclidae	<i>Cinclus leucocephalus</i>	NA	LC	Restricted
Columbidae	<i>Claravis pretiosa</i>	NA	LC	Restricted
Columbidae	<i>Geotrygon montana</i>	NA	LC	Restricted
Columbidae	<i>Leptotila pallida</i>	NA	LC	Almost endemic
Columbidae	<i>Leptotila verreauxi</i>	NA	LC	Restricted
Columbidae	<i>Patagioenas cayennensis</i>	NA	LC	Restricted
Conopophagidae	<i>Pittasoma rufopileatum</i>	NA	NT	Almost endemic
Corvidae	<i>Cyanocorax affinis</i>	NA	LC	Almost endemic
Cotingidae	<i>Querula purpurata</i>	NA	LC	Restricted
Cotingidae	<i>Tityra semifasciata</i>	NA	LC	Restricted
Cracidae	<i>Crax rubra</i>	NA	VU	Restricted
Cracidae	<i>Penelope ortonii</i>	NA	EN	Endemic
Cracidae	<i>Penelope purpurascens</i>	NA	LC	Restricted
Cuculidae	<i>Crotophaga ani</i>	NA	LC	Restricted
Cuculidae	<i>Crotophaga major</i>	NA	LC	Restricted
Donacobidae	<i>Donacobius atricapilla</i>	NA	LC	Restricted
Eurypygidae	<i>Eurypyga helias</i>	NA	LC	Restricted
Falconidae	<i>Caracara plancus</i>	Appendix II	LC	Restricted
Falconidae	<i>Herpetotheres cachinnans</i>	Appendix II	LC	Restricted
Falconidae	<i>Micrastur semitorquatus</i>	Appendix II	LC	Restricted
Falconidae	<i>Milvago chimachima</i>	Appendix II	LC	Restricted
Formicariidae	<i>Formicarius nigricapillus</i>	NA	LC	Restricted
Fringillidae	<i>Euphonia minuta</i>	NA	LC	Restricted
Fringillidae	<i>Euphonia xanthogaster</i>	NA	LC	Restricted
Furnariidae	<i>Certhiaxis cinnamomeus</i>	NA	LC	Restricted
Furnariidae	<i>Dendrocolaptes sanctithomae</i>	NA	LC	Restricted
Furnariidae	<i>Glyphorhynchus spirurus</i>	NA	LC	Restricted
Furnariidae	<i>Lepidocolaptes lacrymiger</i>	NA	LC	Restricted
Furnariidae	<i>Xiphorhynchus lachrymosus</i>	NA	LC	Restricted
Furnariidae	<i>Xiphorhynchus susurrans</i>	NA	LC	Restricted
Galbulidae	<i>Galbula ruficauda</i>	NA	LC	Restricted
Icteridae	<i>Cacicus cela</i>	NA	LC	Restricted
Icteridae	<i>Cacicus uropygialis</i>	NA	LC	Restricted
Icteridae	<i>Chrysomus icterocephalus</i>	NA	LC	Restricted
Icteridae	<i>Psarocolius cassini</i>	NA	EN	Endemic
Icteridae	<i>Psarocolius wagleri</i>	NA	LC	Restricted
Icteridae	<i>Quiscalus mexicanus</i>	NA	LC	Restricted
Jacaniidae	<i>Jacana Jacana</i>	NA	LC	Restricted
Pandionidae	<i>Pandion haliaetus</i>	Appendix II	LC	Cosmopolitan
Parulidae	<i>Myiothlypis fulvicauda</i>	NA	LC	Restricted
Parulidae	<i>Parkesia noveboracensis</i>	NA	LC	Restricted
Parulidae	<i>Setophaga fusca</i>	NA	LC	Restricted
Phalacrocoracidae	<i>Nannopterum brasilianum</i>	NA	LC	Restricted
Picidae	<i>Campephilus melanoleucos</i>	NA	LC	Restricted
Picidae	<i>Dryocopus lineatus</i>	NA	LC	Restricted
Picidae	<i>Melanerpes pucherani</i>	NA	LC	Restricted
Picidae	<i>Melanerpes rubricapillus</i>	NA	LC	Restricted
Pipridae	<i>Ceratopipra mentalis</i>	NA	LC	Restricted
Pipridae	<i>Lepidothrix coronata</i>	NA	LC	Restricted
Pipridae	<i>Manacus manacus</i>	NA	LC	Restricted
Psittacidae	<i>Amazona autumnalis</i>	Appendix II	LC	Restricted

Family	Species	CITES	IUCN	Distribution
Psittacidae	<i>Amazona farinosa</i>	Appendix II	LC	Restricted
Psittacidae	<i>Ara severus</i>	Appendix II	LC	Restricted
Psittacidae	<i>Pionus menstruus</i>	Appendix II	LC	Almost endemic
Rallidae	<i>Aramides cajaneus</i>	NA	LC	Restricted
Ramphastidae	<i>Pteroglossus torquatus</i>	Appendix II	LC	Restricted
Ramphastidae	<i>Ramphastos ambiguus</i>	Appendix II	LC	Restricted
Ramphastidae	<i>Ramphastos brevis</i>	Appendix II	LC	Almost endemic
Scolopacidae	<i>Tringa solitaria</i>	NA	LC	Restricted
Strigidae	<i>Glaucidium brasilianum</i>	Appendix II	LC	Restricted
Thamnophilidae	<i>Cercomacra nigricans</i>	NA	LC	Restricted
Thamnophilidae	<i>Cercomacroides tyrannina</i>	NA	LC	Restricted
Thamnophilidae	<i>Dysithamnus puncticeps</i>	NA	LC	Restricted
Thamnophilidae	<i>Epinecrophylla fulviventris</i>	NA	LC	Restricted
Thamnophilidae	<i>Hylophylax naevioides</i>	NA	LC	Restricted
Thamnophilidae	<i>Microrhopias quixensis</i>	NA	LC	Restricted
Thamnophilidae	<i>Myrmotherula axillaris</i>	NA	LC	Restricted
Thamnophilidae	<i>Myrmotherula ignota</i>	NA	LC	Restricted
Thamnophilidae	<i>Myrmotherula pacifica</i>	NA	LC	Restricted
Thamnophilidae	<i>Poliocrania exsul</i>	NA	LC	Restricted
Thamnophilidae	<i>Thamnistes anabatinus</i>	NA	LC	Almost endemic
Thamnophilidae	<i>Thamnophilus atrinucha</i>	NA	LC	Restricted
Thamnophilidae	<i>Thamnophilus multistriatus</i>	NA	LC	Almost endemic
Thamnophilidae	<i>Thamnophilus nigriceps</i>	NA	LC	Almost endemic
Thraupidae	<i>Cyanerpes caeruleus</i>	NA	LC	Restricted
Thraupidae	<i>Dacnis cayana</i>	NA	LC	Restricted
Thraupidae	<i>Dacnis venusta</i>	NA	LC	Restricted
Thraupidae	<i>Heterospingus xanthopygius</i>	NA	LC	Restricted
Thraupidae	<i>Mitrospingus cassinii</i>	NA	LC	Restricted
Thraupidae	<i>Poecilostreptus palmeri</i>	NA	LC	Almost endemic
Thraupidae	<i>Ramphocelus dimidiatus</i>	NA	LC	Almost endemic
Thraupidae	<i>Ramphocelus flammigerus</i>	NA	LC	Restricted
Thraupidae	<i>Saltator grossus</i>	NA	LC	Restricted
Thraupidae	<i>Sporophila funerea</i>	NA	LC	Restricted
Thraupidae	<i>Stilpnia larvata</i>	NA	LC	Restricted
Thraupidae	<i>Tachyphonus delatrii</i>	NA	LC	Restricted
Thraupidae	<i>Tachyphonus luctuosus</i>	NA	LC	Restricted
Thraupidae	<i>Tachyphonus rufus</i>	NA	LC	Restricted
Thraupidae	<i>Tangara inornata</i>	NA	LC	Restricted
Thraupidae	<i>Tangara lavinia</i>	NA	LC	Restricted
Thraupidae	<i>Thraupis episcopus</i>	NA	LC	Restricted
Thraupidae	<i>Thraupis palmarum</i>	NA	LC	Restricted
Tinamidae	<i>Crypturellus soui</i>	NA	LC	Restricted
Tinamidae	<i>Tinamus major</i>	NA	NT	Restricted
Tityridae	<i>Pachyramphus homochrous</i>	NA	LC	Almost endemic
Tityridae	<i>Pachyramphus polychopterus</i>	NA	LC	Restricted
Tityridae	<i>Schiffornis veraepacis</i>	NA	LC	Restricted
Trochilidae	<i>Amazilia tzacatl</i>	Appendix II	LC	Restricted
Trochilidae	<i>Androdon aequatorialis</i>	N.A.	LC	Almost endemic
Trochilidae	<i>Eutoxeres aquila</i>	Appendix II	LC	Restricted
Trochilidae	<i>Florisuga mellivora</i>	Appendix II	LC	Restricted
Trochilidae	<i>Glaucis hirsutus</i>	Appendix II	LC	Restricted

Family	Species	CITES	IUCN	Distribution
Trochilidae	<i>Heliothryx barroti</i>	Appendix II	LC	Restricted
Trochilidae	<i>Phaethornis longirostris</i>	Appendix II	LC	Restricted
Trochilidae	<i>Phaethornis striigularis</i>	Appendix II	LC	Restricted
Trochilidae	<i>Phaethornis yaruqui</i>	Appendix II	LC	Almost endemic
Trochilidae	<i>Threnetes ruckeri</i>	Appendix II	LC	Restricted
Troglodytidae	<i>Cantorchilus leucopogon</i>	NA	LC	Almost endemic
Troglodytidae	<i>Cantorchilus leucotis</i>	NA	LC	Restricted
Troglodytidae	<i>Cantorchilus nigricapillus</i>	NA	LC	Restricted
Troglodytidae	<i>Microcerculus marginatus</i>	NA	LC	Restricted
Troglodytidae	<i>Troglodytes aedon</i>	NA	LC	Restricted
Trogonidae	<i>Trogon caligatus</i>	NA	LC	Restricted
Trogonidae	<i>Trogon massena</i>	NA	LC	Restricted
Trogonidae	<i>Trogon melanurus</i>	NA	LC	Restricted
Turdidae	<i>Catharus ustulatus</i>	NA	LC	Restricted
Tyrannidae	<i>Conopias albobittatus</i>	NA	LC	Restricted
Tyrannidae	<i>Contopus virens</i>	NA	LC	Restricted
Tyrannidae	<i>Empidonax virescens</i>	NA	LC	Restricted
Tyrannidae	<i>Fluvicola pica</i>	NA	LC	Restricted
Tyrannidae	<i>Mionectes olivaceus</i>	NA	LC	Restricted
Tyrannidae	<i>Myiarchus tuberculifer</i>	NA	LC	Restricted
Tyrannidae	<i>Myiodynastes luteiventris</i>	NA	LC	Restricted
Tyrannidae	<i>Myiozetetes cayanensis</i>	NA	LC	Restricted
Tyrannidae	<i>Ornithion brunneicapillus</i>	NA	LC	Restricted
Tyrannidae	<i>Pitangus sulphuratus</i>	NA	LC	Restricted
Tyrannidae	<i>Rhynchocyclus olivaceus</i>	NA	LC	Restricted
Tyrannidae	<i>Terentriacus erythrurus</i>	NA	LC	Restricted
Tyrannidae	<i>Tyrannulus elatus</i>	NA	LC	Restricted
Tyrannidae	<i>Tyrannus melancholicus</i>	NA	LC	Restricted
Tyrannidae	<i>Mionectes oleagineus</i>	NA	LC	Restricted
Vireonidae	<i>Tunchiornis ochraceiceps</i>	NA	LC	Restricted
Vireonidae	<i>Vireo olivaceus</i>	NA	LC	Restricted

5.3.1.2 Results of Mammals

For the registration of mammals, two methodologies were used to obtain a better representativeness. The methodologies included non-invasive methods such as camera traps and transects that made it possible to observe evidence and/or sighting of medium and large mammals.

14 camera traps were installed (10 in photo mode and four in video mode) in the 10 quadrants (one camera per quadrant), these were located 0.7 meters above the ground, in places with the presence of footprints, caves/ burrows or trails along which there was a higher chance of recording mammals and were active for five consecutive days.

In addition, to increase the probability of encountering large and some medium-sized mammals given the difficulty of capturing them, observation tours were carried out in each of the quadrants in 500-meter transects. In these tours, records were obtained through sightings, hearing records, or signs such as footprints, excrement, hair, food remains, dead animals, territorial marks, changes in vegetation, skins, nests, and skulls. These transects were divided into five daytime transects and five nighttime ones in

locations where it was possible to sample at night. In the town of Tadó, due to security protocols, nocturnal sampling could not be carried out, therefore, the ten transects were carried out during the day.

Table 44. List of Mammals Species Found in the COCOMACIA (CITES conventions: Appendix II, III; NL: Not listed, NA: Does not apply. IUCN: (LC) Least Concern, (NT) Near Threatened, (Vu) Vulnerable, (EN) Endangered)

Family	Species	CITES	IUCN	Distribution
Atelidae	<i>Alouatta seniculus</i>	Appendice II	LC	Restricted
Atelidae	<i>Ateles fusciceps</i>	Appendice II	EN	Restricted
Bradyrodidae	<i>Bradypus variegatus</i>	Appendice II	LC	Restricted
Callitrichidae	<i>Saguinus geoffroyi</i>	Appendice I	NT	Almost endemic
Cebidae	<i>Aotus zonalis</i>	Appendice II	NT	Almost endemic
Cebidae	<i>Cebus capucinus</i>	Appendice II	VU	Restricted
Cervidae	<i>Mazama temama</i>	NA	DD	Restricted
Chlamyphoridae	<i>Cabassous centralis</i>	NA	DD	Restricted
Cuniculidae	<i>Cuniculus paca</i>	NA	LC	Restricted
Dasyproctidae	<i>Dasyprocta novemcinctus</i>	NA	LC	Restricted
Dasyproctidae	<i>Dasyprocta punctata</i>	NA	LC	Restricted
Didelphidae	<i>Caluromys derbianus</i>	NA	LC	Restricted
Didelphidae	<i>Didelphis marsupialis</i>	NA	LC	Restricted
Didelphidae	<i>Marmosa sp.</i>	NA	NA	Restricted
Didelphidae	<i>Metachirus myosuroides</i>	NA	LC	Restricted
Echimyidae	<i>Proechimys sp.</i>	NA	LC	Restricted
Felidae	<i>Leopardus sp</i>	Appendice I	LC	Restricted
Felidae	<i>Panthera onca</i>	Appendice I	NT	Restricted
Felidae	<i>Puma yagouaroundi</i>	Appendice II	LC	Restricted
Mustelidae	<i>Eira barbara</i>	NA	LC	Restricted
Myrmecophagidae	<i>Tamandua mexicana</i>	NA	LC	Restricted
Procyonidae	<i>Nasua nasua</i>	NA	LC	Restricted
Procyonidae	<i>Potos flavus</i>	NA	LC	Restricted
Procyonidae	<i>Procyon cancrivorus</i>	NA	LC	Restricted
Sciuridae	<i>Microsciurus alfari</i>	NA	LC	Restricted
Sciuridae	<i>Syntheosciurus granatensis</i>	NA	LC	Restricted
Tayassuidae	<i>Dicotyles tajacu</i>	Appendice II	LC	Restricted

A total of 291 individuals were recorded, belonging to 27 species, included in seven (7) orders and 17 families. The richness found represents 4.9 % of the Colombian mammals (Ramírez-Chaves H E et al., 2021) The richness and abundance found in this study, where the most diverse orders were Carnivora, Primates and Rodentia, agrees with what was reported for the Chocó biogeographic and neotropical ecosystems (Arias-Alzate et al., 2012). Despite Rodentia being the second order in number of species in the country (Ramírez-Chaves H E et al., 2021), it is very underrepresented in the results due to the non-implementation of capture methods. In the case of bats, the most diverse group in the country (Ramírez-Chaves H E et al., 2021), there is no representation since they were not evaluated in this study. In the case of the results obtained, the most common families and species in these tropical humid ecosystems were recorded (De La Ossa V., J., & Galván Guevara, S., 2017).

5.3.1.3 Results of Amphibians and Reptiles

To search for herpetofauna, in each sampling unit two people (professional and auxiliary) carried out a fixed band transect 300m long x 4m wide. These transects were carried out for approximately four hours during the day (7:00-11:00 hours) and were repeated at night when possible (18:00-22:00 hours), at times of greatest activity of this group.

In each transect, the search method by visual encounters VES by its acronym in English Visual Encounter Survey and sampling by removal (Crump, M. L., & Scott Jr., N. J. (, 1994) were used, where actively searched for organisms by lifting rocks, logs, and removing litter or substrate. In addition, auditory records of vocalizing species were made.

In the case of aquatic reptiles such as turtles and crocodiles, tours were carried out in the sites that presented marshy landscapes at the same times mentioned above.

A transect was established in each of the quadrants in order to standardize the sampling in all locations. A total of 10 transects per location and 50 transects, in general, were carried out.

A total of 72 species and 755 individuals were recorded. For amphibians, 37 species are reported, all belonging to the order Anura. The most abundant species within this group were *Diasporus gularis* with 154 individuals, followed by *Craugastor longirostris* with 78 individuals, *Boana boans* with 54 individuals and *Craugastor fitzingeri* with 41 individuals (Table 45). On the other hand, the least abundant species recorded were *Agalychnis spurrelli*, *Allobates talamancae*, *Oophaga lehmani* and *Leptodactylus sp*, each with one individual observed.

For reptiles, 35 species were found, most belonging to the Squamata order. The most abundant species in this group were *Basiliscus galeritus* with 35 individuals, followed by *Holcosus anomalus* with nine individuals and *Anolis notopholis* with five individuals (Table 45). On the other hand, among the less abundant species, the *Anolis anchicayae* and *Anolis granuliceps* lizards and the snakes *Micrurus multiscutatus* and *Stenorrhina degenhardtii* stand out, each with one registered individual.

Table 45. List of Reptiles and Amphibians Species Found in the COCOMACIA (CITES conventions: Appendix II, III; NL: Not listed, NA: Does not apply. IUCN: (LC) Least Concern, (NT) Near Threatened, (Vu) Vulnerable, (EN) Endangered)

Family	Species	CITES	IUCN	Distribution
Alligatoridae	<i>Caiman crocodilus fuscus</i>	Appendix II	LC	Restricted
Boidae	<i>Corallus ruschenbergerii</i>	Appendix II	LC	Restricted
Bufo	<i>Rhaebo haematiticus</i>	NL	LC	Restricted
Bufo	<i>Rhinella acrolopha</i>	NL	EN	Almost endemic
Bufo	<i>Rhinella alata</i>	NL	DD	Restricted
Bufo	<i>Rhinella horribilis</i>	NL	NE	Restricted
Bufo	<i>Rhinella margaritifera</i>	NL	LC	Restricted
Centrolenidae	<i>Hyalinobatrachium aureoguttatum</i>	NL	LC	Restricted
Centrolenidae	<i>Hyalinobatrachium tatayoi</i>	NL	NT	Restricted
Centrolenidae	<i>Sachatamia ilex</i>	NL	LC	Restricted
Colubridae	<i>Atractus sp</i>	NA	NA	NA
Colubridae	<i>Erythrolamprus epinephelus pseudocobella</i>	NL	LC	Restricted

Family	Species	CITES	IUCN	Distribution
Colubridae	<i>Imantodes cenchoa</i>	NL	LC	Restricted
Colubridae	<i>Leptodeira annulata</i>	NL	LC	Restricted
Colubridae	<i>Leptophis riveti</i>	NL	LC	Restricted
Colubridae	<i>Ninia atrata</i>	NL	LC	Restricted
Colubridae	<i>Oxybelis aeneus</i>	NL	LC	Restricted
Colubridae	<i>Stenorrhina degenhardtii</i>	NL	LC	Restricted
Corytophanidae	<i>Basiliscus basiliscus</i>	NL	LC	Restricted
Corytophanidae	<i>Basiliscus galeritus</i>	NL	LC	Restricted
Corytophanidae	<i>Corytophanes cristatus</i>	NL	LC	Restricted
Craugastoridae	<i>Craugastor fitzingeri</i>	NL	LC	Restricted
Craugastoridae	<i>Craugastor longirostris</i>	NL	LC	Restricted
Craugastoridae	<i>Craugastor sp</i>	NA	NA	NA
Craugastoridae	<i>Pristimantis cruentus</i>	NL	LC	Restricted
Craugastoridae	<i>Pristimantis sp</i>	NA	NA	NA
Dactyloidae	<i>Anolis gracilipes</i>	NL	LC	Almost endemic
Dactyloidae	<i>Anolis anchicayae</i>	NL	LC	Almost endemic
Dactyloidae	<i>Anolis chloris</i>	NL	LC	Almost endemic
Dactyloidae	<i>Anolis frenatus</i>	NL	LC	Restricted
Dactyloidae	<i>Anolis granuliceps</i>	NL	LC	Almost endemic
Dactyloidae	<i>Anolis notopholis</i>	NL	LC	Endemic
Dactyloidae	<i>Anolis sp</i>	NA	NA	NA
Dactyloidae	<i>Anolis tropidogaster</i>	NL	LC	Almost endemic
Dendrobatidae	<i>Allobates talamancae</i>	NL	LC	Restricted
Dendrobatidae	<i>Colostethus imbricolus</i>	NL	EN	Endemic
Dendrobatidae	<i>Colostethus pratti</i>	NL	LC	Almost endemic
Dendrobatidae	<i>Colosthetus sp 2</i>	NA	NA	NA
Dendrobatidae	<i>Oophaga andresi</i>	Appendix II	EN	Endemic
Dendrobatidae	<i>Oophaga lehmanni</i>	Appendix II	CR	Endemic
Dendrobatidae	<i>Oophaga solanensis</i>	Appendix II	VU	Endemic
Dendrobatidae	<i>Phyllobates aurotaenia</i>	Appendix II	LC	Endemic
Elapidae	<i>Micrurus multiscutatus</i>	NL	NT	Almost endemic
Elapidae	<i>Micrurus sp</i>	NA	NA	NA
Eleutherodactylidae	<i>Diasporus gularis</i>	NL	LC	Almost endemic
Geoemydidae	<i>Rhinoclemys melanosterna</i>	NL	NA	Restricted
Gymnophthalmidae	<i>Loxopholis rugiceps</i>	NL	LC	Almost endemic
Hoplocercidae	<i>Enyalioides heterolepis</i>	NL	LC	Restricted
Hylidae	<i>Agalychnis spurrelli</i>	Appendix II	LC	Restricted
Hylidae	<i>Boana boans</i>	NL	LC	Restricted
Hylidae	<i>Boana picturata</i>	NL	LC	Almost endemic
Hylidae	<i>Boana rufitela</i>	NL	LC	Restricted
Hylidae	<i>Dendropsophus microcephalus</i>	NL	LC	Restricted
Hylidae	<i>Hyloscirtus palmeri</i>	NL	LC	Restricted
Hylidae	<i>Scinax ruber</i>	NL	LC	Restricted
Hylidae	<i>Smilisca phaeota</i>	NL	LC	Restricted
Iguanidae	<i>Iguana iguana</i>	Appendix II	LC	Restricted
Kinosternidae	<i>Kinosternon leucostomum</i>	NL	NA	Restricted
Leptodactylidae	<i>Leptodactylus colombiensis</i>	NL	LC	Almost endemic
Leptodactylidae	<i>Leptodactylus fragilis</i>	NL	LC	Restricted
Leptodactylidae	<i>Leptodactylus fuscus</i>	NL	LC	Restricted
Leptodactylidae	<i>Leptodactylus savagei</i>	NL	LC	Restricted
Leptodactylidae	<i>Leptodactylus sp</i>	NA	NA	NA

Family	Species	CITES	IUCN	Distribution
Phyllodactylidae	<i>Thecadactylus rapicauda</i>	NL	LC	Restricted
Ranidae	<i>Lithobates vaillanti</i>	NL	LC	Restricted
Sphaerodactylidae	<i>Lepidoblepharis sp</i>	NA	NA	NA
Strabomantidae	<i>Strabomantis bufoniformis</i>	NL	EN	Almost endemic
Teidae	<i>Ameiva ameiva</i>	NL	LC	Restricted
Teidae	<i>Holcosus anomalus</i>	NL	LC	Endemic
Viperidae	<i>Bothrops asper</i>	NL	LC	Restricted
Viperidae	<i>Bothrops punctatus</i>	NL	LC	Restricted
Viperidae	<i>Lachesis acrochorda</i>	NL	LC	Restricted

5.3.1.4 Results of Plants

The biomass sampling included some planting species identification. For more detailed information on biomass sampling and plant species identification refer to Section 3.2 The resulting RTE and other significant species from the biomass sampling can be found below in *Table 46*. There were several RTE species identified during the sampling, including *Huberodendron patinoi*, *Cariniana pyriformis*, *Dussia lehmannii*, *Orphanodendron bernalii*, *Prioria copaifera*, and *Attalea amygdalina*.

Table 46. List of Plant Species Found in the COCOMACIA (CITES conventions: Appendix II, III; NL: Not listed, NA: Does not apply. IUCN: (LC) Least Concern, (NT) Near Threatened, (Vu) Vulnerable, (EN) Endangered)

Family	Species	IUCN status	National status	Endemic
Malvaceae	<i>Huberodendron patinoi</i>	CR	CR	Yes
Lecythidaceae	<i>Cariniana pyriformis</i>	EN	EN/CR	Yes
Fabaceae	<i>Dussia lehmannii</i>	EN	EN	Yes
Fabaceae	<i>Orphanodendron bernalii</i>	EN	EN	Yes
Fabaceae	<i>Prioria copaifera</i>	EN	EN	Yes
Arecaceae	<i>Attalea amygdalina</i>	NT	VU/NT	Yes
Fabaceae	<i>Dipteryx oleifera</i>	NT		No
Fabaceae	<i>Pterocarpus officinalis</i>	NT	NT	No
Arecaceae	<i>Astrocaryum standleyanum</i>	LC		No
Moraceae	<i>Brosimum utile</i>	LC		No
Malvaceae	<i>Ceiba pentandra</i>	LC		No
Lecythidaceae	<i>Couratari guianensis</i>	LC		No
Fabaceae	<i>Enterolobium cyclocarpum</i>	LC		No
Lecythidaceae	<i>Eschweilera integrifolia</i>	LC		No
Lecythidaceae	<i>Eschweilera juruensis</i>	LC		No
Arecaceae	<i>Euterpe oleracea</i>	LC		No
Fabaceae	<i>Hymenaea courbaril</i>	LC		No
Bignoniaceae	<i>Jacaranda copaia</i>	LC		No
Arecaceae	<i>Manicaria saccifera</i>	LC		No
Arecaceae	<i>Oenocarpus bataua</i>	LC		No
Arecaceae	<i>Oenocarpus mapora</i>	LC		No
Burseraceae	<i>Protium amplum</i>	LC		No
Rhizophoraceae	<i>Rhizophora mangle</i>	LC		No
Arecaceae	<i>Syagrus sancona</i>	LC		No
Bignoniaceae	<i>Tabebuia rosea</i>	LC		No
Burseraceae	<i>Trattinnickia aspera</i>	LC		No
Meliaceae	<i>Trichilia poeppigii</i>	LC		No

5.3.2 Biodiversity Monitoring Plan Dissemination (CCB, B4.3)

The Monitoring Plan and results of the monitoring period were disseminated through in-person meetings in between June and August of 2025. The biodiversity results for the monitoring report were disseminated through a PowerPoint presentation, that made it easier and more palatable for the communities to understand and digest. The communities have been informed that they may comment on any of those documents during the in-person meetings, in written form through the Verra website (www.verra.org) and to the auditor during their field visit.

5.4 Optional Criterion: Exceptional Biodiversity Benefits

5.4.1 Trigger Species Population Trends (CCB, GL3.2, GL3.3)

Trigger Species	Baudo guan (<i>Penelope ortonii</i>).
With-project Scenario	Project activities that include protecting areas of HCV, which includes their habitat and stopping the conversion of forested land for agriculture and developmental purposes have helped to create a buffer for these species to successfully reproduce and live. In the first biodiversity assessment, 29 individuals across the Project Activity Instance were observed, Future monitoring periods will continue to measure the abundance of these species to understand local population dynamics. Patrolling of the Project Activity Instance has identified the main threats to forest degradation and therefore loss of habitat for the identified trigger species and other RTE (rare, threatened and endangered) species. Patrolling in the first monitoring period had over 100 findings and patrolling will continues to identify and observe illegal activities in the forests. This will also reduce the pressures of hunting and increasing conservation mindset in the surrounding communities, including educational awareness programs in schools, etc. This species was observed in all five study sites.
Trigger Species	Yellow-billed Curassow (<i>Crax rubra</i>)
With-project Scenario	Project activities that include protecting trigger species, which includes their habitat and stopping the conversion of forested land for agriculture and developmental purposes have helped to create a buffer for these species to successfully reproduce and live. In the first biodiversity assessment, 3 individuals across the Project Activity Instance were observed, Future monitoring periods will continue to measure the abundance of these species to understand local population dynamics. Patrolling of the Project Activity Instance has identified the main threats to forest degradation and therefore loss of habitat for the identified trigger species and other RTE (rare, threatened and endangered) species. Patrolling in the first monitoring period had over 100 findings and patrolling will continues to identify and observe illegal activities in the forests, This will also reduce the pressures of hunting and increasing conservation mindset in the surrounding communities, including educational awareness programs in schools, etc. This species was observed in one of the study sites of the Project Activity Instance.
Trigger Species	Baudó Oropendola (<i>Psarocolius Cassini</i>)

With-project Scenario	<p>Project activities that include protecting trigger species, which includes their habitat and stopping the conversion of forested land for agriculture and developmental purposes have helped to create a buffer for these species to successfully reproduce and live. In the first biodiversity assessment, 0 individuals across the Project Activity Instance were observed, Future monitoring periods will continue to measure the abundance of these species to understand local population dynamics. Patrolling of the Project Activity Instance has identified the main threats to forest degradation and therefore loss of habitat for the identified trigger species and other RTE (rare, threatened and endangered) species. Patrolling in the first monitoring period had over 100 findings and patrolling will continue to identify and observe illegal activities in the forests, This will also reduce the pressures of hunting and increasing conservation mindset in the surrounding communities, including educational awareness programs in schools, etc. This species was observed in the three of the five study sites of the Project Activity Instance.</p>
Trigger Species With-project Scenario	<p>Geoffroy's Tamarin (<i>Saguinus geoffroyi</i>)</p> <p>Project activities that include protecting trigger species, which includes their habitat and stopping the conversion of forested land for agriculture and developmental purposes will create a buffer for these species to successfully reproduce and live. Other activities that will help to improve biological conditions of these habitats will also ensure this species survival. In the first biodiversity assessment, 52 individuals across the Project Activity Instance were observed, Future monitoring periods will continue to measure the abundance of these species to understand local population dynamics. Patrolling of the Project Activity Instance will also reduce the pressures of hunting and trapping by increasing conservation mindset in the surrounding communities, including educational awareness programs in schools, etc. This species was observed often in three of the five study sites and only twice in another study site of the Project Activity Instance. In total, the presence of this species was reported in four of the five study sites.</p>
Trigger Species With-project Scenario	<p>Brown-headed spider monkey (<i>Ateles fusciceps</i>)</p> <p>Project activities that include protecting trigger species, which includes their habitat and stopping the conversion of forested land for agriculture and developmental purposes will create a buffer for these species to successfully reproduce and live. Other activities that will help to improve biological conditions of these habitats will also ensure this species survival. In the first biodiversity assessment, 8 individuals across the Project Activity Instance were observed, Future monitoring periods will continue to measure the abundance of these species to understand local population dynamics. Patrolling of the Project Activity Instance will also reduce the pressures of hunting and trapping by increasing conservation mindset in the surrounding communities, including educational awareness programs in schools, etc. This species was observed in two of the five study sites in the Project Activity Instance.</p>
Trigger Species With-project Scenario	<p>Cocorro (<i>Oophaga andresi</i>)</p> <p>Project activities that include protecting trigger species, which includes their habitat and stopping the conversion of forested land for agriculture and developmental purposes have helped to create a buffer for these species to successfully reproduce and live. Patrolling of the Project Activity Instance has</p>

identified the main threats to forest degradation and therefore loss of habitat for the identified trigger species and other RTE (rare, threatened and endangered) species. In the first biodiversity assessment, 9 individuals across the Project Activity Instance were observed, Future monitoring periods will continue to measure the abundance of these species to understand local population dynamics. Patrolling in the first monitoring period had over 100 findings and patrolling will continue to identify and observe illegal activities in the forests, This will also reduce the pressures of hunting and increasing conservation mindset in the surrounding communities, including educational awareness programs in schools, etc. This species was observed in two of the five study sites of the Project Activity Instance.

Trigger Species	Koe-Koe (<i>Oophaga solanensis</i>)
With-project Scenario	Project activities that include protecting trigger species, which includes their habitat and stopping the conversion of forested land for agriculture and developmental purposes have helped to create a buffer for these species to successfully reproduce and live. In the first biodiversity assessment, 21 individuals across the Project Activity Instance were observed, Future monitoring periods will continue to measure the abundance of these species to understand local population dynamics. Patrolling of the Project Activity Instance has identified the main threats to forest degradation and therefore loss of habitat for the identified trigger species and other RTE (rare, threatened and endangered) species. Patrolling in the first monitoring period had over 100 findings and patrolling will continue to identify and observe illegal activities in the forests, This will also reduce the pressures of hunting and increasing conservation mindset in the surrounding communities, including educational awareness programs in schools, etc. This species was also reported in two of the five study sites of the Project Activity Instance.

Trigger Species	Lehmann's poison dart frog (<i>Oophaga lehmanni</i>)
With-project Scenario	Project activities that include protecting trigger species, which includes their habitat and stopping the conversion of forested land for agriculture and developmental purposes have helped to create a buffer for these species to successfully reproduce and live. In the first biodiversity assessment, 1 individual across the Project Activity Instance was observed, Future monitoring periods will continue to measure the abundance of these species to understand local population dynamics. Patrolling of the Project Activity Instance has identified the main threats to forest degradation and therefore loss of habitat for the identified trigger species and other RTE (rare, threatened and endangered) species. Patrolling in the first monitoring period had over 100 findings and patrolling will continue to identify and observe illegal activities in the forests, This will also reduce the pressures of hunting and increasing conservation mindset in the surrounding communities, including educational awareness programs in schools, etc. This species was also reported in two of the five study sites of the Project Activity Instance.

Trigger species	Cativo (<i>Prioria copaifera</i>)
With-project scenario	Protection of this trigger species includes enforcement against illegal logging, and community awareness actions to promote regeneration and ensure the persistence of <i>P. copaifera</i> populations within the Project Activity Instance. In the biodiversity assessment, 6 individual across the Project Activity Instance

was observed, Future monitoring periods will continue to measure the abundance of these species to understand local population dynamics.

Trigger species	<i>Dussia lehmannii</i>
With-project scenario	By conserving the forest cover and promoting community-based forest stewardship, the Project safeguards critical habitat and connectivity for <i>D. lehmannii</i> . In the biodiversity assessment, 76 individuals across the Project Activity Instance were observed, Future monitoring periods will continue to measure the abundance of these species to understand local population dynamics.

Trigger species	<i>Orphanodendron bernalii</i>
With-project scenario	Forest-protection actions and enrichment planting within degraded areas will facilitate recovery and maintain this endemic species as part of the region's ecological integrity. In the biodiversity assessment, 64 individuals across the Project Activity Instance were observed, Future monitoring periods will continue to measure the abundance of these species to understand local population dynamics.

Trigger species	<i>Abarco (Cariniana pyriformis)</i>
With-project scenario	Forest-protection and regeneration measures within the Project Activity Instance reduce exploitation pressure and secure habitat for natural recruitment of this commercially valuable hardwood. In the first biodiversity assessment, 1 individual across the Project Activity Instance was observed, Future monitoring periods will continue to measure the abundance of these species to understand local population dynamics.

Trigger species	<i>Huberodendron patinoi</i>
With-project scenario	Protection of lowland rainforest and wetland mosaics, combined with monitoring and environmental education, prevents further loss and support species recovery.

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7 APPENDIX 1: NEW PROJECT AREAS AND STAKEHOLDERS

Stakeholder	Rights, interest, and overall relevance to the project	Demonstrate how they meet the eligibility criteria (G1.14)	Demonstrate how their inclusion does not violate the scalability limits (G1.15)
There are none to report in this monitoring period	N/A	N/A	N/A

8 APPENDIX 2: PROJECT RISKS TABLE

	Identified Risk(s)	Potential impact of risk on stakeholders, ecosystem health, and biodiversity	Mitigation or preventative measure(s) taken
Natural and human induced risks to stakeholders' wellbeing	Extreme weather events such as floods and droughts, as well as human activities such as illegal mining and indiscriminate logging, can affect the health of ecosystems and local communities.	Loss of biodiversity, soil degradation, decreased water quality, and impacts on community health and livelihoods.	No taken in monitoring period
Risks to stakeholder participation	Lack of information, exclusion of vulnerable groups, and non-inclusive decision-making processes.	Distrust of the program, social conflicts, and lack of ownership of program activities.	Effective engagement and two-way communication processes have been established that are supported by the broad, REDD+ Team, Zone committees and local community councils.
Working conditions	Activities in the field including patrolling and field data collection could result in injuries to communities	Community workers could be injured supporting the Program	Training and protective equipment for use in field is provided
Safety of women and girls	Gender-based violence, discrimination, and lack of access to opportunities in both internal and external processes that allow for personal and professional development.	Increased inequality and limited women's participation in the project. Lack of interest in governance processes.	Implementation of gender action plan, safe engagement in decision-making spaces, and development of women's empowerment activities as part of the program activities
Safety of minority and marginalized groups, including children	Social exclusion, lack of access to basic services, lack of job opportunities, disregarded opinions, and vulnerability to exploitation.	Increased poverty and marginalization.	
Pollutants (air, noise, discharges to water, generation of waste, and release of hazardous materials and chemical pesticides and fertilizers)	No risk identified		
Discrimination	Exclusion based on ethnicity, gender, and socioeconomic status. Unsafe work environments. Wage gaps based on gender or social status.		<ul style="list-style-type: none"> The COCOMACIA Community Council follows national labor and anti-discrimination laws and applies the COCOMACIA REDD+ Hiring Policy, The Operations Manual developed and applied to the Program is used by the COCOMACIA REDD+ Team, promotes equal employment opportunities without discrimination based on various factors, such as race, gender, or disability.

	Identified Risk(s)	Potential impact of risk on stakeholders, ecosystem health, and biodiversity	Mitigation or preventative measure(s) taken
			<ul style="list-style-type: none"> Any cases of discrimination or harassment are handled through the established grievance and complaint mechanism
Sexual harassment	Unsafe work environments.	Psychological impacts and reduced female participation in program activities.	Policy in place, training, and anonymous reporting channels adopted.
Equal pay for equal work	No risk identified		
Gender equity in labor and work	Lack of female representation in leadership and decision-making roles.	Limited perspectives on the actions and decisions taken in the territory, and decisions that could reduce non-inclusive gaps.	Program activities promote women's leadership and support their the gender action plan.
Forced labor	No risk identified		Compliance with national laws
Child labor	No risk identified		Compliance with national laws
Human trafficking	No risk identified		Compliance with national laws
Recognition of, respect of, and promotion of the rights to IPs, LCs and customary rights holders	No risk identified		
Preserving and protecting cultural heritage	Destruction or alteration of cultural sites and practices.	Loss of identity and community cohesion.	HCVs studies completed for the monitoring period
Protecting and preserving property rights, customary rights, or protecting legal or customary tenure/access rights to territories, property, and resources, including collective and/or conflicting rights	Disputes over land tenure and access to different types of resources.	Gaps in legal regulations and conflicts between communities.	COCOMACIA under their legal internal regulations protect and preserve property and customary rights
Impacts on biodiversity and ecosystems	Species loss, habitat fragmentation, and ecological imbalances.	Reduction of ecosystem services and environmental resilience.	Maintenance and report on HCVs conducted
	Inappropriate agricultural practices and deforestation.	Endangered species.	Patrolling and reporting completed for the monitoring period
Soil degradation and soil erosion	Inappropriate agricultural practices and deforestation.	Decreased soil fertility and agricultural productivity.	Promotion of sustainable agricultural practices as part of the program activities
Water consumption and stress	No risk identified		
	Habitat fragmentation due to deforestation		

	Identified Risk(s)	Potential impact of risk on stakeholders, ecosystem health, and biodiversity	Mitigation or preventative measure(s) taken
Habitats (and areas needed for habitat connectivity) for rare, threatened, and endangered species	Medium- and large-scale mining	Loss of biodiversity and ecological imbalances.	Protection of critical areas through conservation agreements with local communities. Monitoring of key species populations
Areas needed for habitat connectivity	Expansion of human activities, such as agriculture and infrastructure, can divide ecosystems.	Local extinction of species and a general decline in biological diversity.	Creation and maintenance of areas that connect habitat fragments.
	Disruption of natural routes used by wildlife impedes the movement and migration of species.	Disruption of processes such as pollination, seed dispersal, and nutrient cycling.	Ecological restoration, sustainable territorial planning.
Invasive species	No risk identified		No invasive species are used in program activities
Ecosystem conversion	Transformation of forests into agricultural, urban.	Decreased carbon sequestration, habitat loss, and increased vulnerability to natural disasters.	Implementation of land use policies that prioritize the conservation of key ecosystems.
			Economic incentives for sustainable practices that prevent the conversion of natural ecosystems.
			Strengthening environmental governance and community participation in land use decision-making.

9 APPENDIX 3: COMMERCIALY SENSITIVE INFORMATION

Section	Information	Justification
2.5.4	The Patrimonio Autonomo trust contract	Financial information whose disclosure could reasonably be expected to result in a material financial loss
2.5.4	REDD+ Agreement	Technical information whose disclosure could reasonably be expected to result in a material loss
2.5.4	Investment Agreement – Payment in Kind Loan Agreement (first investor)	Financial information whose disclosure could reasonably be expected to result in a material financial loss
2.5.4	Project Investment Agreement (from TB-NBS Pool, follow-on investment)	Financial information whose disclosure could reasonably be expected to result in a material financial loss
2.5.5	Terra Global Anti-corruption, Anti-trafficking, and Ethics Policies	Commercial information whose disclosure could reasonably be expected to result in a material loss
3.2	Actual (Ex-Post) removals-Confidential	Technical information whose disclosure could reasonably be expected to result in a material financial loss due to trade secret
3.2	Baseline modeling files and code	Technical information whose disclosure could reasonably be expected to result in a material financial loss due to trade secret

10 APPENDIX 4 PROGRAM ACTIVITIES IMPLEMENTED DURING MONITORING PERIOD

10.1 Program Start to June 30, 2021

10.1.1 Program Start-up

After an intense 18-month Investment Readiness preparation phase where Terra Global and COCOMACIA worked collaboratively to develop the necessary elements to structure a REDD+ project, complete the Due Diligence and secure the investment, the program activities could start scaling on the ground. Getting to this point with the largest and oldest community council of black communities in the Colombian territory took building a great deal of trust and capacity with the people of COCOMACIA and their governance board.

The following was achieved in the first reporting period:

1. Investment Agreement signed (Choco Conservation, LLC and COCOMACIA)
2. Colombian Fiscal and tax analysis on the constitution of the loan
3. Identification of the trustee with the expertise and ability to draft the trust agreement based on a completely new transaction in the Colombian market
4. Signed the long-term REDD + Implementation Agreement
5. Developed a 90-day scale-up plan
6. Organized meetings on the Protected Area with all interested parties (COCOMACIA, Codechoco, GWC and Terra), agree to go ahead with Pacurita as the most appropriate area to start the Declaratory Route and propose a new schedule to GWC
7. Wrote job descriptions for all the new hires for COCOMACIA REDD+ Management team, posted them publicly and started the interview process
8. Hiring of the COCOMACIA REDD+ team and hiring of the Terra Local Coordinator for the project
9. Completed the Long-term REDD+ Program Implementation Plan
10. Finalized detailed program implementation budgets in line with the available funding
11. Design of the Project logo, the Brand guidelines and the project image (see right)



10.1.2 COCOMACIA REDD+ Team Roles and Hiring

The COCOMACIA REDD + Project Management Team is responsible for implementing the activities and making the necessary decisions for the REDD+ Program. The COCOMACIA REDD+ Team has extensive

working knowledge of the territory, including the local culture and customs, the behavior of the community and the appropriate language to transfer important information in a clear and effective way. This intimate knowledge of the territory's dynamics allows risk to be effectively management and ensures ongoing success of the Project.

The COCOMACIA REDD+ Team applies knowledge, capacities, constancy, tools, and techniques to the development of project activities to satisfy its requirements.

Among the COCOMACIA REDD+ Team responsibilities are 1) execute project activities in the expected time, 2) follow the project implementation plan and the budget, 3) comply with processes and procedures, 4) have full knowledge of the tools to be used in the development of the project and continually train and stay informed, and 5) execute timely corrective actions when any of the activities are not carried out properly.

The project has hired 5 people to date and will hire 7 more people on the following months.

Position Hired	Director of the REDD + Program	Full Time
	Communication, Outreach and Interact with the community	Full Time
	Agronomist	Full Time
	Accounting Assistant	Part Time
	Project Coordinator - Terra	Full Time
Position Still Open	Coordinator in Conservation and Land Use Planning	Full Time
	Assistant Executive Director - Bilingual	Full Time
	Agricultural Technician / Technician in Environmental Management	Full Time
	Monitoring and evaluation	Full Time
	Fiscal Auditor	Part Time
	Treasurer	Part Time
	Coordinator of the Private Sector Carbon and AG	Part Time

Terra has hired a Field Project Coordinator for the project and will be hired an additional one in the next months.

10.1.3 Trainings

These first training sessions were aimed at training the newly formed COCOMACIA REDD+ Management Team to clarify concepts about the development of the COCOMACIA REDD+ project and the importance of the development of successful activities with the communities and in the generation of emission reductions.

Training Workshops	# People Attended	Total People /Hours	Women to Men Gender Ratio
Carbon Development Process, highlights the positive impact generated in the communities that participate in the different activities of the project	5	30 hours	2:3
AFOLU Projects, oriented on how changes in land use and natural resources generate emission reductions	5	20 hours	2:3
REDD+ Agreement, Processes and Procedures <ul style="list-style-type: none"> • Annex I -Grievance and Redress Mechanism REDD + COCOMACIA • Annex K - Operations Manual for COCOMACIA REDD+ Project • Annex F - Fiscal, Financial and Procurement Management Policy 	5	100 hours	2:3
Total hours of training		150 hours	

10.1.4 Equipment/goods purchased

The equipment and goods that have been purchased to date are those necessary for the establishment of the office, in addition to some equipment that is required to make socializations in the communities. Among those, are the following:

Laptop / Desktop 7 units with their Office 365 Business licenses and Adobe® Creative Cloud Suite, Multifunctional Printer, Projectors - Video beam, Desks, Office chairs, Air Conditioning, Power Plant, 1 Speaker with Microphone

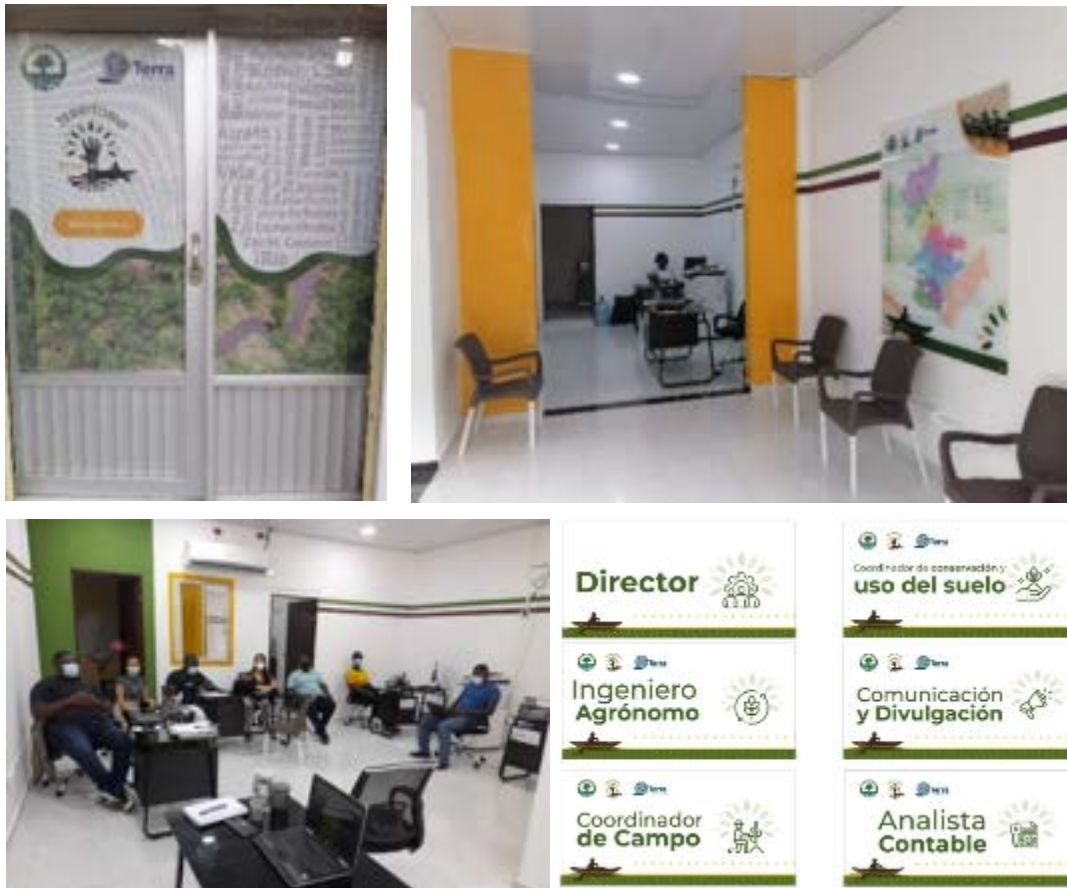
10.2 July 1 to September 30, 2021

During this period Terra Global and COCOMACIA re-reviewed all the procedures and process that were developed for the project to make the purchases of the necessary equipment, for decision-making and planning of field trips. The Board of Directors has been integrated into the processes and has strengthened its internal processes. The REDD+ Team has been in charge of documenting and reporting on each field trip, and the diagnosis by zones of productive activities has begun, as well as the conditions of forest areas, together with the identification of opportunities for the transition of activities and deforestation agents

The following was achieved in the Second reporting period:

1. Completed office establishment for the REDD + Project
2. The first disclosure and presentation of the REDD + Project and basic concepts for the community is designed
3. Socialization started in meetings that group 3 areas with similar livelihood conditions
4. Developed a 120-day Follow-up work plan (see below)
5. Sign the Trust Contract

10.2.1 Workspace Established



10.2.2 Tri-Zonal Meetings and Committee Formation

During the tri-zonal meetings, the communities were engaged in the start-up of the implementation of the REDD + project. This included forming zonal committees which are composed of a zonal leader and 4 people who are recognized as leaders and who have the capacity and ability to manage on-going communications with the community members. The function of the committees is to become an extension of the REDD+ Team to support the implementation of activities, train the community and address questions and doubts from community members. Table 47 provides the Tri-zonal Committee formation and breakdown of delegates by gender.

Table 47. Tri-Zonal Community Committees Formed (disaggregated by gender)

Trizonal meetings 2021					
Zone 7, 8, 9	CCL Isla de los Palacios	Aug 16	Zone 7: 5 delegates (2 women and 3 men)	Zone 8: 7 delegates (2 women 4 men, 1 child)	Zone 9: 20 delegates (12 men 8 women)
Zone 4, 5, 6	CCL Boca de Bebara	Aug 18	Zone 4: 5 delegates (1 woman and 4 men)	Zone 5: 10 delegates (3 women and 7 men)	Zone 6: 7 delegates (2 women 5 men)
Zone 1, 2, 3	CCL Las Mercedes Zona 3	Aug 20	Zone 1: 4 male delegates	Zone 2: 5 delegates (4 men and 1 Woman)	Zone 3: 5 delegates (1 man and 4 women)





During the trizonal meetings, participatory mapping activities were carried out in which, each of the zones was able to identify what changes their forest areas have suffered, and which have been the drivers and agents of deforestation and degradation. In addition, local expertise is an essential tool for identifying the activities carried out by zone and by community, being identified the productive areas, the settlement of the communities, the use of wood and the community forest. Each zone groups a different number of communities that have gathered around their productive activities, their transport dynamics and their livelihoods.

- Zone 1 is made up of 20 communities
- Zone 2 is made up of 14 communities
- Zone 3 is made up of 12 communities
- Zone 4 is made up of 14 communities
- Zone 5 is made up of 20 communities
- Zone 6 is made up of 13 communities
- Zone 7 is made up of 13 communities
- Zone 8 is made up of 13 communities
- Zone 9 is made up of 17 communities

The expectation of the community revolves around being able to improve their living conditions, this project is viewed as the central axis of the community's activities, which can provide training and expertise in

different areas of the project, to become a self-sufficient community and that would manage their project by the lifetime

10.2.3 Zone Meetings

Training was conducted in the zone meetings to raise awareness of forest protection and climate finance from sale of verified emission reductions.

ZONE MEETING DATES 2021		
Zone 1	CCL San Antonio de Icho	Sept 16 to 19
Zone 2	CCL Winando	July 29 to Aug 1
Zone 3	CCL Tanguí	Oct 07 to 10
Zone 4	CCL San José de Buey	Sept 30 to Oct 3
Zone 5	CCL Tagachí	Oct 14 to 17
Zone 6	CCL San Antonio de Padua	Nov 4 to 7
Zone 7	CCL San José de la Calle	Sept 09 to 12
Zone 8	CCL Loma de Bojayá	Aug 26 to 28
Zone 9	CCL Napipi	Sept 02 to 05



10.2.4 People Employed / Contracted

The project hired the Coordinator in Conservation and Land Use Planning a full-time position and would hire 6 more people on the following months.

10.2.5 Trainings

These first training sessions were aimed at training the newly formed COCOMACIA REDD+ Management Team to clarify concepts about the development of the COCOMACIA REDD+ project and the importance of the development of successful activities with the communities and in the generation of emission reductions.

Training Workshops	Presenter or Trainer	Audience or Attenders	# People Attended	Total People /Hours	Women to Men Gender Ratio
Organize the information on the virtual drive	Investment Manager	REDD+ Management Team	6	5 hours	2 : 04
How to prepare field trip reports	Investment Manager	REDD+ Management Team	6	5 hours	2 : 04
Georeferenced photographic records	Investment Manager	REDD+ Management Team	6	2 hours	2 : 04
Elaboration of diagnoses of agricultural activities	Investment Manager	REDD+ Management Team	6	5 hours	2 : 04
Format of questions on the state of conservation of community forests	Investment Manager	REDD+ Management Team	6	5 hours	2 : 04
Administrative formats (equipment delivery certificates, asset use tracking format, equipment marking format, among others)	Investment Manager	REDD+ Management Team	6	48 hours	2 : 04
Total hours of training				70 hours	

REDD+ Management Team: Director of the REDD + Program, Agronomist, Accounting Analyst, Communication, Coordinator in Conservation and Land Use Planning, Project Coordinator - Terra

10.2.6 Community Engagement

The timing within the Zonal meetings (mentioned in section 3.3) that were assigned to the REDD+ Management Team was focused on the explanation on how the relationship between Terra and COCOMACIA was carried out and how the project was built jointly, along with the processes and procedures that govern it. In addition to the community awareness about the REDD+ project star up and the implications that it has for the community since nowadays and in the long term.

Training Workshops	Presenter or Trainer	Audience or Attenders	# People Attended on Average	Total People /Hours
COCOMACIA REDD+ Project Scope of Work and Activities to Develop	REDD+ Management Team	Zone 1	90	180 hours

Training Workshops	Presenter or Trainer	Audience or Attendees	# People Attended on Average	Total People /Hours
COCOMACIA REDD+ Project Scope of Work and Activities to Develop	REDD+ Management Team	Zone 2	90	180 hours
COCOMACIA REDD+ Project Scope of Work and Activities to Develop	REDD+ Management Team	Zone 3	90	180 hours
COCOMACIA REDD+ Project Scope of Work and Activities to Develop	REDD+ Management Team	Zone 4	90	180 hours
COCOMACIA REDD+ Project Scope of Work and Activities to Develop	REDD+ Management Team	Zone 5	90	180 hours
COCOMACIA REDD+ Project Scope of Work and Activities to Develop	REDD+ Management Team	Zone 6	90	180 hours
COCOMACIA REDD+ Project Scope of Work and Activities to Develop	REDD+ Management Team	Zone 7	90	180 hours
COCOMACIA REDD+ Project Scope of Work and Activities to Develop	REDD+ Management Team	Zone 8	90	180 hours
COCOMACIA REDD+ Project Scope of Work and Activities to Develop	REDD+ Management Team	Zone 9	90	180 hours
Total hours of training				1,620 hours

Of the **Total Attendees**, most of the meetings were attended by **45% women and 55% men**.

10.3 October 1 to December 31, 2021

Over this period, COCOMACIA has been able to strengthen its organizational structure together with Terra Global. This generated greater knowledge on foreign exchange, administrative management, and governance issues, unifying the documents that govern the Community Council and training in different legal and tax aspects that favor and strengthen COCOMACIA. In addition, the REDD+ Team has provided support to the Board of Directors in the development of various essential internal documents that must be presented to the General Assembly. We had the pleasure of being invited to provide the first report on the progress of the REDD+ project before the General Assembly, which is the highest control and decision-making body of the COCOMACIA Community Council.

The following was achieved in the Third reporting period:

1. Completed office establishment for the REDD + Project (see below)
2. Environmental Managers Guide (Patrollers) and data sheet collection
3. Preparation and Participation in the Assembly and presentation of the progress report to the Assembly
4. Strengthening of the project brand/image: t-shirts, banners and other
5. Final Proposal on Protected Area Completed
6. Carbon Development Process Underway
7. Agricultural characterization (food and cash crops) of the territory in process

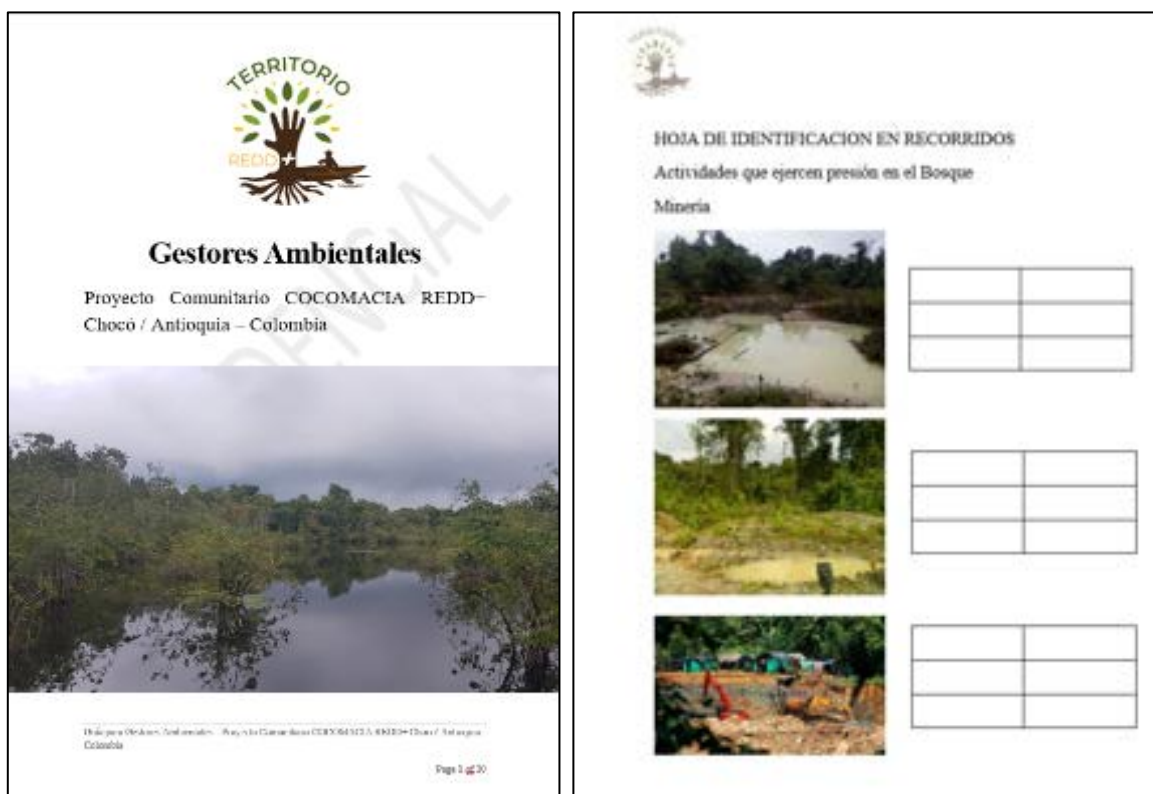
10.3.1 Environmental Managers Guide (Patrollers) and data sheet collection

The purpose of these documents is to be a guide for quick consultation for all members of the community who will serve as Environmental Managers for the COCOMACIA REDD+ Project. The people involved in this activity will perform their duties in the areas assigned by zone and by community and must have the ability to recognize and identify the areas through which the patrols must be made.

The Environmental Managers will carry out their work in the forest areas of the community to which they belong. In addition, during their tours they will be able to obtain findings related to the main objectives of the REDD+ project, such as identification of fauna species and corridors of the different species, identification of animals considered extinct or in danger of extinction, identification of the flora, specifically timber species and non-timber forest products, traditionally used in the community, considered depleted by loggers, etc.

Environmental Managers are essential in the development of the project because they are in charge of communicating to their community what activities harm their community forests and what are the opportunities to transition towards safe, productive activities that the project can promote and support.

There will be 3 Environmental Managers per community, for a total of 372 managers in the territory of the COCOMACIA. They will start their functions in the next month and will be trained and will perform their functions under the instructions of the REDD+ Team. In addition they will have the support of the Zonal committees. This manner of involving the community in the project allows appropriation of the REDD+ project activities, in addition to strengthening the governance process that they did not have before.



10.3.2 Communications and Branding

With the aim of strengthening the image developed to represent the identity of the community within the project, new signs and apparel have been created that allow the logo to be more visible and create the opportunity to communicate its meaning at the Assembly.



10.3.3 COCOMACIA General Assembly

The General Assembly was attended on behalf of Terra by Gregory Ives, Nature-Based Solutions - Portfolio Manager, and Sandra Sarmiento, Principal for Terra Bella NBS Carbon Pool. A report was provided on the progress of the REDD+ project in aspects such as the development of the brand/image, the establishment of the office, the beginning of the first stage of socialization on REDD+ concepts, among others, and information was provided on the carbon development activities that will be implemented in the following months that involve the community in aspects such as Biodiversity, Biomass and Households surveys. We had the opportunity to answer questions and interact directly with the community, who were very happy to host us after a long absence due to covid.







10.3.4 Colombia Trust Account Establishment

COCOMACIA has signed the Trust contract and now the Bancolombia Fiduciary has opened the Autonomous Patrimonio account and is preparing what is necessary to make it operational. Once the process is formalized, the second disbursement can be made.

The process of establishing the autonomous patrimony has required in the first instance a broad and very detailed explanation of how the project works to the Trust, with the understanding that its control and operation will be governed by a technical committee that ensures decisions will be made more effectively and with complete transparency. This financial vehicle is new for COCOMACIA (and the Trustee Bank FiduColombia), which has allowed us to provide a broad and clear explanation of its operation.

Some of the challenges that arose were aiding COCOMACIA in the monetization of the first disbursement and registering it with the Central Bank (Banco de la República) as a loan. During the monetization process, the exchange rate can affect the project positively or negatively depending on how the foreign exchange market behaves. In addition to holding meetings between the Trustee, COCOMACIA and Terra to explain the operational process of the trust operation.

What remains to be completed is the consolidation of two internal COCOMACIA formal governance documents that are contradictory in their content where one does not support all that is needed for the loan and monetization of VCUs. But has been recognized by COCOMACIA that the document without the terms that support the loan and the VCU monetization is no longer in force. But to follow the correct procedures it will be resolved in an extraordinary assembly that will take place at the end of February.

In addition, prior to the next cash distribution to COCOMACIA, the Terra Global internal COCOMACIA fiscal procedures and Trust management manual will be completed.

10.3.5 Final Proposal on Protected Area Establishment Completes

The final proposal to the Andes Amazon Fund was submitted by Nature and Culture International, Codechocó and Rewild for review and comments by COCOMACIA and Terra, and was sent in January 2022. The proposal defines and clearly details which activities are going to be developed and the outcomes that are expected to occur. This is named *M1.2. CHARACTERIZATION AND DIAGNOSIS PHASE (this phase will be carried out between February and June 2022 by Codechocó, COCOMACIA, and NCI-Humboldt)*. The most important activity to highlight is the Development of the Prior Consultation process with COCOMACIA for both the declaration process and the Environmental Management Plan.

In accordance with the Deliverable 3, that mentions that *“By the sixth month from receipt of funds: The Local Partner will have documented proposed locations and rationale that will be discussed with COCOMACIA and CODECHOCO and the Local Partner will propose different models for the on-going*

management of the Protected Area Overlays as it relates to patrolling, governance, and enforcement” is still to be completed.

10.3.6 Carbon Development Process Underway

In this first stage of carbon development, we have performed the following activities:

- Review existing data, information, satellite images of the project area Develop a detailed collaborative Work Plan with partners which outlines the roles and responsibilities of all project partners for PD and MR
- Created and approved the collaborative Work Plan and budget which outlines the roles and responsibilities of all project partners.
- Created draft Monitoring Plan and monitoring variables.
- Started Field Data Collection for VCS+CCB
 - Defined plots for biomass
 - Developed Biomass RFP, got the quotes, selected the contractor , and hire Biomass Expert
 - Developed Biodiversity RFP, got the quotes, selected the contractor , and hire Biodiversity Expert
 - Developed Social RFP, got the quotes, selected the contractor, and hire Social Expert
- Submitted project to the RENARE system to request the government provided the Maximum Mitigation Potential for the Project Area (which will determine the maximum number of VCUs from deforestation that the project can generate)
 - Followed up multiple times with government, without getting response
 - Based on Colombia’s FREL adjusted assumption for ex-ante VCU estimates

10.3.7 Employment Opportunities

The REDD+ program team in COCOMACIA, who are working full time are 12 people. In addition, Terra Global has two full time local project coordinators in the project area.

Other job opportunities that arise around the REDD+ project and that allow the community to get involved in a more committed way, are created through the formation of the zonal committees which are composed of a zonal leader and four people who are recognized as leaders and have the capacity and ability to manage on-going communications with the community members.

The function of the committees is to serve as an extension of the REDD+ Team to support the implementation of activities, train the community and address questions and doubts from community members. The Environmental managers, which are made up of three people from each community (124 communities) for a total of 372 people from the communities involved in the activities of the REDD+ project, will be trained in activities such as the reports on the monitoring carried out in the field.

10.3.8 Trainings

The training sessions were focused on knowledge in foreign exchange, administrative and tax management, and general knowledge of Colombian legislation. These trainings were given to the board of directors of COCOMACIA and to the members of the REDD+ Team and will be repeated as necessary.

Training Workshops	Presenter or Trainer	Audience or Attenders	# People Attended	Total People /Hours	Women to Men Gender Ratio
Completion of the forms required to register the loan as external debt before the Banco de la República	Financial Manager and Investment Manager	REDD+ Team Director	1	10 hours	0 : 1
Training in the liquidation of advances, preparation of excel files and digitalization of the required supports	Investment Manager	REDD+ Team - Accountant	1	20 hours	1 : 0
Clarification and explanation to the Board of Directors of the tax effects that the community council may have for the commercialization of carbon credits	Investment Manager	REDD+ Team Director and Board of Directors	11	4 hours	4 : 7
Clarification of the documents that govern the Community Council under Colombian law and definition of its Internal Regulations as the only legal instrument	Investment Manager	REDD+ Management Team, Board of Directors and Legal Advisers	17	10 hours	4 : 13
Training in all aspects related to patrolling and the best way to communicate it to the community, in addition to training and the development of material for use in the field	Portfolio Manager and Investment Manager	REDD+ Management Team	4	20 hours	0 : 4
Total hours of training				324 hours	

10.4 January 1 to March 31, 2022

Over these first three months of 2022, Terra made contributions to update the Internal Regulations of COCOMACIA, which have been defined as the only instrument by which the community council is governed. There was an old version of by-laws that was formally retired to ensure there was no confusion. Meanwhile, the REDD+ Team has actively participated in the meetings to plan for field data collection of Biomass, Biodiversity and Social Assessments (household surveys and participatory rural appraisals). This included working with Terra and the sub-contractors (identified through a competitive RFP process managed by Terra) to determine the best way to carry out this work in the territory of COCOMACIA which is large and primarily assessable via rivers. Different Manuals, Guides and Procedures have been designed, among others, that nurture and allow the generation of community training material.

The following was achieved in the Fourth reporting period, see details for each component in sections below:

1. Definition of subcontracting deliverables and field data collection logistics for Biomass, Biodiversity and Social contractors
2. Addition of the obligations required under the REDD+ Agreement to the Regulations of COCOMACIA
3. Development of a Practical Guide for the Production, Transformation and Commercialization of Cocoa
4. Fiscal Management and Operation Manual of the Patrimonio Autonomo (Trust Contract) COCOMACIA REDD+ developed
5. Carbon Development Process underway
6. Agricultural characterization (food and cash crops) of the territory in progress

10.4.1 Calendars and Schedules of Household Surveys, Biomass and Biodiversity

The schedules for each of the components that will be developed in the next 3 months have been designed in detail, considering the navigability of the rivers, as well as the complexity of access to the different points to obtain the precise information required for project validation. Throughout the planning and programming of the activities we were discovering the needs of local personnel, such as experts in recognizing the possible routes or paths to the interior of the jungle, which is required for the execution of the work. Each one of the schedules has been designed considering all travel times, the days of data collection or establishment of plots or trap cameras, as well as the rest days scheduled for the Team and its collaborators. Each calendar is accompanied by its budget, execution times, material and equipment required. Below is the map of the biomass plots, along with sections of a few of the calendars.

Table 48. Social Survey Schedule

# Días	Fecha del Recorrido	Tiempo Establecido	Consejo Comunitario Local	Descripción Trayecto			Consejo Comunitario Local	Descripción Trayecto		
	18/04/2022			Capacitación en Biomasa						
	19/04/2022			Capacitación en Biomasa						
	20/04/2022		Equipo Willinton	Capacitación en Biomasa	ERP (Diagnóstico y Talleres) - Encuestas	Número de encuestas	Equipo Darío		ERP (Diagnóstico y Talleres) - Encuestas	Número de encuestas
1	25/04/2022	10:00 a. m.	Quibdó - Zona 9	Quibdó - Vigia del Fuerte - Sebarameño			Quibdó - Zona 9	Quibdó - Vigia del Fuerte - Isla de los Rojos		
2	26/04/2022	8:00 a. m.	Sebarameño	Sebarameño - Tadia (Campo Alegre)	6		Isla de los Rojos	Isla de los Rojos - San Alejandro	6	
3	27/04/2022	2:00 p. m.	Tadia (Campo Alegre)	Tadia (Campo Alegre) - Bella Luz	6		San Alejandro	San Alejandro - Villa Nueva	6	
4	28/04/2022	8:00 a. m.	Bella Luz	Bella Luz - San Bernardo (Murindó)	6		Villa Nueva	Villa Nueva - Vigia del fuerte	6	
5	29/04/2022	2:00 p. m.	San Bernardo	San Bernardo - Isla de los Palacios	6		Quibdó - Zona 8	Vigia del Fuerte - Pogué		
6	30/04/2022	8:00 a. m.	Isla de los Palacios - Pueblo Nuevo	Isla de los Palacios - Boca de Opogadó	6		Pogué	Pogué - Piedra Candela	6	
7	1/05/2022	2:00 p. m.	Boca de Opogado	Boca de Opogadó - Puerto Antioquia	6		Piedra Candela	Piedra Candela - Loma de Sojayá	6	
8	2/05/2022	9:00 a. m.	Puerto Antioquia	Puerto Antioquia - Mesopotamia	6		Loma de Sojayá	Loma de Sojayá - Cula	Taller ERP	6
9	3/05/2022	8:00 a. m.	Mesopotamia	Mesopotamia - Napipi	6		Cula	Cula - Calmanero	6	
10	4/05/2022	8:00 a. m.	Napipi - Carrillo - Anturibido - Briseño	Napipi	Taller ERP	6	Calmanero	Calmanero - Corazón de Jesús	6	
11	5/05/2022	2:00 p. m.	Napipi	Napipi - Vigia del Fuerte			Corazón de Jesús - (El Bella Vista)	Corazón de Jesús - Vigia del Fuerte	6	
12	6/05/2022	8:00 a. m.	Vigia del Fuerte	Vigia del Fuerte - Quibdó			Vigia del Fuerte	Vigia del Fuerte - Quibdó		
13	7/05/2022	8:30 a. m.	Quibdó				Quibdó			
14	8/05/2022	10:00 a. m.	Quibdó - Zona 6	Quibdó - Isleta			Quibdó - Zona 7	Quibdó - Vigia del Fuerte		
15	9/05/2022		Isleta	Recorrido de Camino desde Isleta a	6		Loma Murri	Vigia del Fuerte - Loma Murri	6	



Fecha del Recorrido	Biodiversidad	Días por comunidad
28/04/2022	Finca El Estero de la Cruz	5
29/04/2022	Finca El Estero de la Cruz	5
30/04/2022	Finca El Estero de la Cruz	5
01/05/2022	Finca El Estero de la Cruz	5
02/05/2022	Finca El Estero de la Cruz	5
03/05/2022	Finca El Estero de la Cruz	5
04/05/2022	Finca El Estero de la Cruz	5
05/05/2022	Finca El Estero de la Cruz	5
06/05/2022	Finca El Estero de la Cruz	5
07/05/2022	Finca El Estero de la Cruz	5
08/05/2022	Finca El Estero de la Cruz	5
09/05/2022	Finca El Estero de la Cruz	5
10/05/2022	Finca El Estero de la Cruz	5
11/05/2022	Finca El Estero de la Cruz	5
12/05/2022	Finca El Estero de la Cruz	5
13/05/2022	Finca El Estero de la Cruz	5
14/05/2022	Finca El Estero de la Cruz	5
15/05/2022	Finca El Estero de la Cruz	5
16/05/2022	Finca El Estero de la Cruz	5
17/05/2022	Finca El Estero de la Cruz	5
18/05/2022	Finca El Estero de la Cruz	5
19/05/2022	Finca El Estero de la Cruz	5
20/05/2022	Finca El Estero de la Cruz	5
21/05/2022	Finca El Estero de la Cruz	5
22/05/2022	Finca El Estero de la Cruz	5
23/05/2022	Finca El Estero de la Cruz	5
24/05/2022	Finca El Estero de la Cruz	5
25/05/2022	Finca El Estero de la Cruz	5
26/05/2022	Finca El Estero de la Cruz	5
27/05/2022	Finca El Estero de la Cruz	5
28/05/2022	Finca El Estero de la Cruz	5
29/05/2022	Finca El Estero de la Cruz	5
30/05/2022	Finca El Estero de la Cruz	5
31/05/2022	Finca El Estero de la Cruz	5

Fecha del Recorrido	Nombre del recorrido	Descripción Trayecto	GRUPO 1	GRUPO 2	Días por comunidad
Equipo Misionero					
Biomasa					
01/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
02/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	40		5
03/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	10.75	10.47	5
04/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
05/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	104	101	5
06/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	144.48	141.23	5
07/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
08/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	101	100	5
09/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	101.111.71	101.100.100	5
10/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
11/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	101.100.101	101.101.101	5
12/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
13/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
14/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	101.101	101.101	5
15/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
16/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
17/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
18/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
19/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
20/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
21/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
22/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
23/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
24/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
25/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
26/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
27/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
28/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
29/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
30/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
31/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5

Fecha del Recorrido	Nombre del recorrido	Comunidad Local	GRUPO 1	GRUPO 2	Días por comunidad
Equipo Misionero					
Biomasa					
01/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
02/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	40	40	5
03/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	10.48	10.41	5
04/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
05/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	101	101	5
06/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	104.104.104	104.104.104	5
07/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
08/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	101.101	101.101	5
09/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
10/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	101	101	5
11/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	101	101	5
12/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
13/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz	101.101	101	5
14/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
15/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
16/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
17/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
18/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
19/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
20/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
21/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
22/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
23/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
24/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
25/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
26/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
27/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
28/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
29/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
30/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5
31/05/2022	Finca El Estero de la Cruz	Finca El Estero de la Cruz			5

Figure 6. Biomass Plots and Biomass Measurement Schedule

10.4.2 General Regulation of COCOMACIA

From some time ago, there was a version of by-laws that were filed by COCOMACIA with the Chamber of Commerce. These were not the same as the regulation that COCOMACIA was using to govern itself. After exhaustively analyzing all the Colombian legislation regarding the exclusive competence that the Ministry of the Interior has in monitoring and supervising the registration and regulation of the Community Councils of Black Communities, the Internal Regulations of COCOMACIA are declared as the only regulatory documents, invalidating the Statutes that were part of the registration that COCOMACIA had made in the Chamber of Commerce of Quibdo, which has been canceled to date.

Considering the above, and with the authorization granted by the General Assembly of COCOMACIA in December 2021, the Internal Regulations, under chapter 2 Internal Control, include the way in which the community must manage, preserve and defend the use of natural resources, and the scope of the REDD+ Agreement was approved.

"The previous numerals must be based and substantiate their execution in the REDD+ Agreement - Agreement for the Development of Carbon, Carbon Rights and Distribution of Benefits with respect to Emission Reductions for COCOMACIA REDD+. The project seeks to jointly implement long-term forest conservation, natural resource management and livelihood programs, through the Project Actions detailed in the Project Implementation Work Plan COCOMACIA REDD+, which will generate carbon credits and improve the livelihoods of the Project communities in the Project Areas"

In the meantime, we had the opportunity to hold various meetings with the Board of Directors to delve into the next stages of the REDD+ Project to be developed.



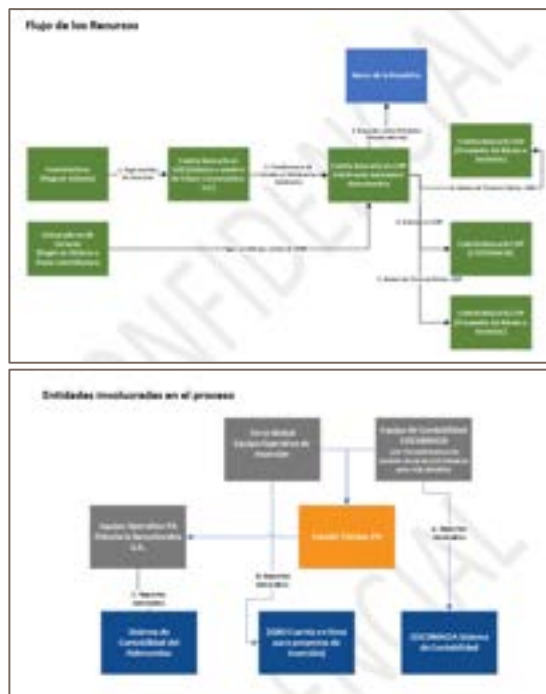
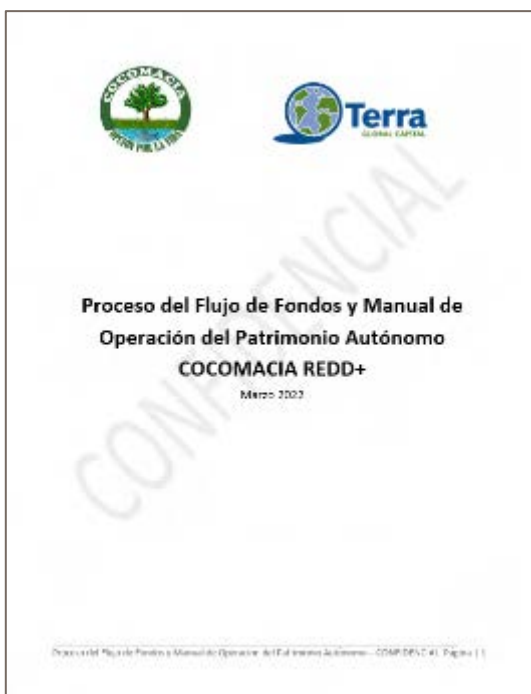
10.4.3 Practical Guide to the Production, Transformation and Commercialization of Cocoa

The purpose of this document is to serve as a guide for community members who want to continue or start with crops such as cocoa as an alternative for generating income in the medium term. The document explains in detail the characteristics of the crop, from its initial sowing stage, the maintenance of the crop, and the harvest. The cycles of the moon are considered as part of their customs in order to carry out the harvest. It explains everything in a simple a detailed way, from the preparation of the seed to the stage of adding the graft according to the variety that they want to obtain, fertilization, pest control, the different diseases that can affect the crop and how to control them, maintenance of the cultivation, harvest, fermentation and drying stage, marketing and production costs per hectare.



10.4.4 Fiscal Management and Operation Manual of the Patrimonio Autonomo (Trust Contract) COCOMACIA REDD+

The document describes the flow of funds that are being managed within the Patrimonio Autonomo. It covers all funds flows from the investment milestones being provided to the Patrimonio Autonomo, to the advance request process of each of the disbursements, and each of the accounts through which it must pass to reach the final recipient. It defines the necessary authorizations, the forms to fill out and the time that each entity takes to carry out its management, in addition to the reports that each party supplies and their frequency. It also describes the authorizations required at each stage and the execution of each payment decision. The following chart illustrates the flow of resources and the different parties involved.



10.4.5 Final Proposal on Protected Area Establishment Completed

COCOMACIA provided comments on the proposal to the Andes Amazon Fund that was submitted by Nature and Culture International, Codechocó and Rewild but the final version incorporating these comments has not been received yet. We are aware that a meeting was held between Codechoco and COCOMACIA, and although it had previously been agreed that all the parties involved would be invited, this was overlooked, and the Terra team was not included (not even our local Quibdo staff). We do not know the result of that meeting held on March 7, 2022, and we have not received any information related to the progress of the establishment of the protected area.

Due to the above, it has not been possible to align the plan of activities to be developed with the REDD+ project. We are moving forward with field data collection for the VCS and CCB, which should have been coordinated with data needed for the protected area but given the lack of coordination we are not able to leverage this work. We need to ask ReWild, who can be held accountable locally for full coordination with Terra.

10.4.6 Carbon Development Process Underway

In this first stage of carbon development, we have performed the following activities:

- Review existing data, information and satellite images of the project area

- Develop a detailed collaborative Work Plan with partners which outlines the roles and responsibilities of all project partners for PD and MR
- Acquisition of all the necessary equipment by the COCOMACIA REDD+ Team to start the training of all the contractors and to be able to instruct the communities on the work to be carried out.
- Started Field Data Collection for VCS+CCB
 - According to Terra's eligibility criteria for each of the RFPs related to Biomass, Biodiversity and Social, the most appropriate was chosen and the contracts and their annexes of the deliverables for each of them were drawn up.
 - Relocation of inaccessible biomass plots
- Submitted project to the RENARE system to request that the government provides the Maximum Mitigation Potential for the Project Area (which will determine the maximum number of VCUs from deforestation that the project can generate)
 - Given the lack of response from IDEAM to the request sent, we had to file a Right of Petition (legal action that requires a response within a maximum time of 15 days), with the aim of obtaining the necessary information for the project.

10.4.7 Employment Opportunities

The REDD+ program team in COCOMACIA consists of twelve full-time employees. In addition, Terra Global has two full-time local project coordinators in the project area.

At this stage of carbon development, it is necessary to hire more local people from different communities of COCOMACIA in order to train them in the different Biomass, Biodiversity and Social components.

Two people will be hired to strengthen the REDD+ Team, one person for Monitoring and another person as Agricultural/Environmental Technician. Four additional people will be hired, two people to support the Biomass contractor for the duration of the work and two people to support the Social contractor during the duration of the work. as well as the 372 environmental managers who are assisting this project. Environmental Managers will be accompanying the different teams in the field, with two objectives: to receive training from the different contractors and to strengthen the management of all the contractors in the field.

10.4.8 Trainings

The training sessions were focused on the presentation of advance payments with their ordered and numbered supporting documents in addition to emphasizing the importance of having all the information collected by all the members of the REDD+ Team in the cloud, which at the same time allows traceability of any event or relevant information collected in advance.

Attending Dates	Training Workshops	Presenter or Trainer	Audience or Attenders	# People Attended	Total People /Hours	Women to Men Gender Ratio
January, February, March 2022	Training in the liquidation of advances, preparation of Excel files and digitalization of the required supporting documents	Investment Manager	REDD+ Team - Accountant	1	20 hours	1:00

Attending Dates	Training Workshops	Presenter or Trainer	Audience or Attenders	# People Attended	Total People /Hours	Women to Men Gender Ratio
February 2022	Training in REDD+ Team procedures (eg. asset delivery certificates, asset resumes, reports, etc.)	Investment Manager	REDD+ Management Team	6	4 hours	2:04
March 2022	Training in some relevant aspects of document presentation in Word (format, insert images, tables, fonts, sizes, etc.)	Investment Manager	REDD+ Management Team	6	5 hours	2:04
	Total hours of training				74 hours	

10.5 April 1 to June 30, 2022

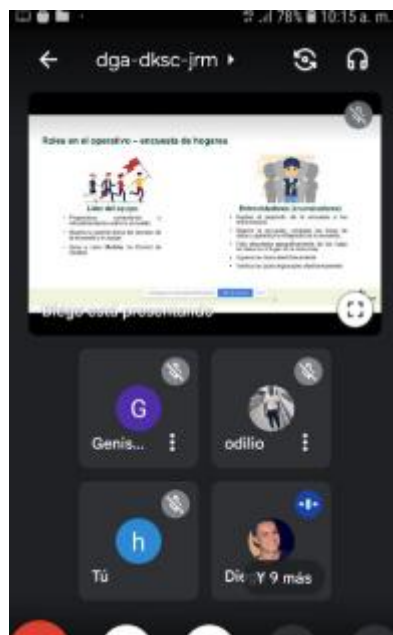
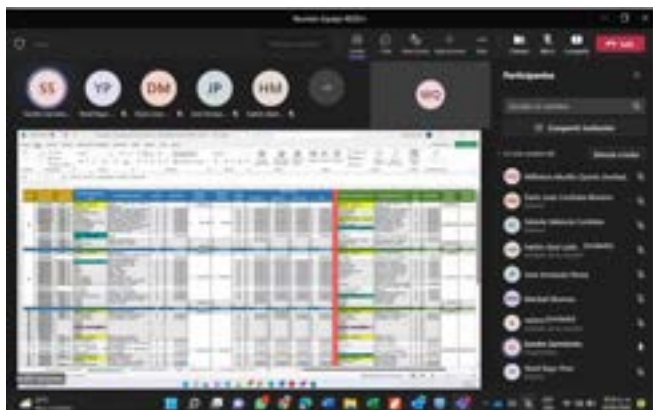
Over the second quarter of 2022, the REDD+ Team was focused on receiving training in preparation for the field data collection for the VCS and CCB PD. In addition, the second disbursement was [aid to the newly established Patrimonio Autonomo (Trust) account, and the resources were used to fund the operations of the REDD+ team, and start of the contract with sub-contractors for biomass, biodiversity and social.

The following was achieved in the fifth reporting period, see details in sections below:

1. Virtual training is carried out for the development of social and biodiversity components, fine-tuning of the last details, and getting the equipment ready to go out to the field
2. The REDD+ Team supported the zonal meetings with COCOMACIA communities
3. Annatto one of the agroforestry management crops in the REDD+ Project
4. Protected Area Establishment
5. Forest characterization, repopulation plan and associated nursery costs in progress.
6. Project Jurisdictional Approach

10.5.1 Virtual training is carried out for the development of social and biodiversity components, fine-tuning of the last details, and getting the equipment ready to go out to the field

Virtual meetings were necessary to train local people who were hired to carry out some of the social surveys. The contractor, Ingeobosque, prepared different presentations so that all the participants in the field activities, both social and biodiversity, had a clear understanding of the procedures to be followed and the equipment used in each tour. The activities will be started on July 11, 2022, and it is expected that with the participation of 3 teams in the field carrying out household surveys, 1 team carrying out the Participatory Rural Appraisals and 1 team in charge of biodiversity, the work can be done in about 40 days. The logistics of COCOMACIA being such a large area and is difficult to travel in required that the sampling design for social surveys be adjusted to meet the time requirements.





10.5.2 Zone Meetings

Training was conducted in the zone meetings to raise awareness of forest protection and climate finance from sale of verified emission reductions

ENCUENTROS ZONALES 2022		
Zona 7	CCL Svuelta Cortada	June 2 a 5
Zona 6	CCL Puerto Medellin	June 9 a 12



The technical team of the COCOMACIA REDD+ project had an active participation in the logistics of the meeting for the visibility of the COCOMACIA REDD+ project, where we carried out the installation of banners, video beam, electrical system and professional sound, as well as a speaker in the context analysis at the national level, regional and local of the agricultural, environmental and social situation for the territory of COCOMACIA. In this meeting we carried out the socialization of the progress of the COCOMACIA REDD+ program where the assembly was explained what the acronym REDD+ means since some of those present did not know its meaning, they were also informed that some social surveys to establish the baseline on

the behavior that the communities have with respect to the environment, they were explained how the surveys were going to be taken and the team in charge of carrying them out, they were informed that there is a probability that in the Biomass component Some helicopter flights are carried out over the territory to measure aerial and terrestrial plant cover. Finally, he explained that some environmental managers will be hired in the communities to carry out walks to monitor and collect environmental data on the state of the forests in terms of flora and fauna.

10.5.3 Annatto (Achiote) Agroforestry Systems to be Promoted in REDD+ Project

One of the main agroforestry crops to be strengthened as an alternative livelihood in the Project area is Achiote. Training on improved production of Achiote will leverage, a base a catalog developed by Bio Innova in 2014 “Catalogo de variedades de Bixa Orellana (Bija) y sus insectos asociados en el departamento del Choco”. It provides information on the number of varieties that are present in the department of Choco and their yield according to the place where the crop is located, in addition to the different pests, crop diseases, insects and other organisms used in biological control. The guide includes planting recommendations, as well as medicinal and cosmetic uses. This training is being supported by the REDD+ Team’s agronomy expert.

The REDD+ Team had the opportunity to visit the municipalities of Managru, Tanando and Yuto to collect the experiences that farmers have had based on the use of the catalog.





10.5.4 Final Proposal on Protected Area Establishment Completed

The follow-up to the establishment of the protected area has not been possible, because once CODECHOCO received the resources to start the activities, it went directly to the Board of Directors of COCOMACIA, ignoring all previous work coordination agreements that we had established. Taking this situation into account, the REDD+ Team wanted to support the Board with the work plan, but they were excluded from the planning and execution, making it impossible to coordinate any field activities related to data collection or training workshops. At present it has not been possible to follow up, nor has it been possible to support this process in any way, therefore we are not aware of its status.

10.5.5 Forest Characterization, Repopulation Plan and Associated Nursery Costs in Progress.

Forest characterization is started in the communities of COCOMACIA, to identify which are the most consumed timber species, and which is their main use. Based on the above, a restoration strategy will be proposed by zone and the establishment of nurseries with native species that will allow the gradual recovery of non-forest areas. The information is in the process of collection and subsequent tabulation. The actual plans for afforestation and reforestation, will be evaluated and implemented in the coming years as funding is available through net income.

ENCUESTA Y CARACTERIZACIÓN FORESTAL

Fecha: 01 de Febrero del 2014
 Proyectista: Lorena Chaves Operador: Miguel Angel BS

Comprenda que la información dada debe ser lo más reciente posible de acuerdo a la información suministrada por el propietario.

- ¿Cuál es el tipo de terreno con respecto al manejo que se le va a dar? Terreno de cultivo
- ¿Cómo ha sido el uso del terreno en el momento de la encuesta? Terreno de cultivo
- ¿Qué actividades se realizan en el terreno? Plantación de árboles
- ¿Qué tipo de árboles se plantan? Algarrobo, Cedro, Laurel, etc.
- ¿Cuál es el tipo de terreno con respecto al manejo que se le va a dar? Terreno de cultivo
- ¿Qué tipo de árboles se plantan? Algarrobo, Cedro, Laurel, etc.
- ¿Cuál es el tipo de terreno con respecto al manejo que se le va a dar? Terreno de cultivo
- ¿Qué tipo de árboles se plantan? Algarrobo, Cedro, Laurel, etc.
- ¿Cuál es el tipo de terreno con respecto al manejo que se le va a dar? Terreno de cultivo
- ¿Qué tipo de árboles se plantan? Algarrobo, Cedro, Laurel, etc.
- ¿Cuál es el tipo de terreno con respecto al manejo que se le va a dar? Terreno de cultivo
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- ¿Cuál es el tipo de terreno con respecto al manejo que se le va a dar? Terreno de cultivo
- ¿Qué tipo de árboles se plantan? Algarrobo, Cedro, Laurel, etc.

10.5.6 Project and Jurisdictional Hybrid Approach

The COCOMACIA REDD+ project was initially proposed as a AFOLU project under the VCS, however, the VCS Standard is migrating towards AFOLU project needing to use jurisdictional baselines which means that a baseline for the whole of Choco would be needed to meet the expected upcoming changes in the VCS standards. This would require that the land use change analysis for the whole department and biomass estimates be developed for the whole department. There would be a jurisdictional baseline registered with a government entity as one of the proponents, which would apply to the COCOMACIA project, but the monitoring and carbon credits for the project would be only on the project area and thus the project in terms of generation and marketing of carbon certificates would be a standalone.

Making the decision to use a Jurisdictional baseline for the project protects the project from sudden changes that have arisen in the last months and appear something that the VCS is seriously about adopting even though it will have a negative impact on climate finance for projects around the world. This decision has been analyzed with time and care, and then review the different scenarios, it is concluded it would have a net positive impact on the project, and for any other community groups who are seeking to develop carbon projects in the department. But by making this decision, it required that we find an approach to biomass sampling that would leverage LIDAR and carbon stock modeling to reduce the number of biomass plots that are needed. We are engaging support from Dr. Sassan Saatchi is a senior scientist at the Jet Propulsion Laboratory, California Institute of Technology and we have developed a cost benefit analysis for use of LIDAR and fewer biomass plots. However, this has caused the start of the Biomass component to be

delayed for approximately 4 months, which affects the entire process of validation, verification and subsequent sale of carbon certificates.

10.5.7 Employment

The REDD+ team continues to support full time employment twelve people. In addition, Terra Global has two full-time local project coordinators in the project area. The sub-contractors for field data collection are local entities which provides income to the Colombian economy.

10.5.8 Trainings

The trainings were given by the Ingeobosque contractor, supporting the collection of the social and biodiversity field data and will be based on a detailed review of the SOPs and PRAs, the use of the application in the field, and the review of which questions may cause difficulty in being understood or explained. As well as an analysis of the characteristics of the areas to be evaluated in biodiversity, taking into account the access and the difficulty of the territory.

Attending Dates	Training Workshops	Presenter or Trainer	Audience or Attenders	# People Attended	Total People /Hours	Women to Men Gender Ratio
May, June 2022	Training in household surveys and biodiversity transects	Ingeobosque	REDD+ Team - Accountant and pollsters	17	20 hours	7:10
May, June 2022	Construction and budget follow-up	Investment Manager	REDD+ Management Team	1	8 hours	1:01
June 2022	Community training on REDD+ concepts at Zonal Meetings	REDD+ Management Team	Communities	70	6 hours	30:35
	Total hours of training				768 hours	

10.6 July 1 to September 30, 2022

Over the third quarter, the REDD+ Team was focused on carrying out the necessary field work to complete the social component and the biodiversity component. In addition, and simultaneously, the Team was carrying out the socialization of the REDD+ project in the communities where the activities were carried out, in advance to generate a clear understanding of the project and the activities to be carried out in the field. The Participatory Rural Appraisals were also completed, having chosen 5 strategic communities for its implementation.

The following was achieved in the sixth reporting period, see details in sections below:

1. Zonal Conservation Committees trained
2. Social assessments (household surveys and participatory rural appraisals) field data collected
3. Biodiversity field data collected
4. Socialization of the REDD+ project in the communities of COCOMACIA
5. Biomass field and LIDAR based measurement process defined and sub-contractors identified
6. Related activities in Milestone 3 have been completed

10.6.1 Zonal Conservation Committees trained

An agenda was developed that included 2 days of continuous training for the 45 people who make up the zonal conservation committees (5 people for 9 zones), in order to provide a clear understanding of a) their organizational process as a black community, b) environmental regulation, c) route and context of territorial security and d) socialization of the COCOMACIA REDD+ project. His training also included a clear explanation of his responsibility to the community to be able to answer the questions that are generated on a day-to-day basis in the communities and to be a continuous support for the environmental managers in charge of doing the patrols in the field and reporting on their findings.

Zone Meeting Dates 2022		
Zone 1	CCL Pacurita	Oct 13 to 16
Zone 2	CCL Mojaudo	June 30 to July 3
Zone 3	CCL Angostura	Aug 25 to 28
Zone 4	CCL San Roque	Aug 31 to Sept 4
Zone 5	CCL Campo Alegre	Aug 4 to 7
Zone 6	CCL El Tigre	Sept 25 to 28
Zone 7	CCL Veracruz	Sept 29 to Oct 2
Zone 8	CCL Pogue	Aug 25 to 28
Zone 9	CCL Bellaluz	Sept 15 to 18



10.6.2 Social assessments (household surveys and participatory rural appraisals) field data collected

The Social assessments were successfully completed, having carried out a total of 474 household surveys in 41 communities of COCOMACIA that were chosen for their socio-cultural dynamics in addition to the number of people who live in them. Local people trained to manage household surveys on tablets participated in the collection of information. Through these surveys, improvements in livelihoods that the project can propose and implement activities related to this can be identified. their behaviors, uses and customs. In addition to household survey, the PRAs were undertaken, which required active participation of the community and allowed information to be provided to the community on environmental and social issues and allows identifying the underlying factors and causes of change in land use, in addition to, Socioeconomic impacts of activities of the project on livelihoods and verification of improvements in livelihoods.

Field Trip Date	Local Community Council	Local Community Council	Local Community Council
13/07/2022	Tadía (Campo Alegre)	Pogué	San Jose de Purré - Taller ERP
15/07/2022	Isla de los Rojas - Taller ERP	Piedra Candela	Villa del Rosario
17/07/2022	Isla de los Palacios - Pueblo Nuevo	Loma de Bojayá - Taller ERP	Santa Lucia el Fuerte
19/07/2022	Napipí - Carrillo - Amburibidó - Briseño	Cuía	San Rafael de Negua
22/07/2022	Boca de Bebara	Puerto Conto	San Antonio de Icho (Puerto Murillo)
23/07/2022	Palo Blanco	Napipí - Carrillo - Amburibidó - Briseño	Campo Alegre
24/07/2022	El Tigre	Puerto Conto - Taller ERP	Baudo Grande
25/07/2022	San Antonio de Padua	Loma Murri	Tanguí
26/07/2022	Puerto Medellín	Playa Murri	Las Mercedes - Taller ERP
29/07/2022	Punta de Ocaido - Taller ERP	Vuelta Cortada	Barranco
30/07/2022	Isleta	San Jose de la Calle	San Francisco de Icho
1/08/2022	Véguez	Buchado	Tutunendó
2/08/2022	Puerto Palacio	Tagachí	Guadalupe
3/08/2022			La Troje
16/09/2022	Auro Buey	Pueblo Viejo	Jaguo
17/09/2022	San Antonio de Buey	Peña de Bebará	Villa Nueva
18/09/2022	Curichí	Villa de Bebará	Guarandó
19/09/2022	La Vuelta	Llano de Bebará	Jitrado
20/09/2022	San Jose de Buey	Tagachí - Taller ERP	Winandó
21/09/2022	Chibuga	Boca de Aguaclara	Mojaudó
22/09/2022	La Manza	San Francisco de Tauchigado	Calahorra - Taller ERP
23/09/2022	Puerto Salazar	Playón	Bellaluz
24/09/2022	Boca de Amé	Tumaco	La Divisa
25/09/2022	San Roque	Platina	Campo Bonito
26/09/2022	Medio Beté	Llano de Bebaramá	Altagrcia
27/09/2022	Beté	Campo Alegre (Limón)	Puerto Aluma
29/09/2022	Puné Taller ERP		La comunidad
30/09/2022	Baudocito		



EQUIPO 4 (Vicely, Alexander Moreno)				
#	Fecha de Taller	Fecha de Salida	Consejo Comunitario Local	Descripción Trayecto
Segunda Salida				
		21/05/2022	Llegada a Tagachi - Zona 5	Salida a las 10 am desde Quilichó hasta el Consejo Comunitario Local de Tagachi.
10	22/05/2022	22/05/2022	Tagachi - Taller ERP	Desarrollo del taller de 10 am a 3 pm, dado que Tagachi realiza la actividad de pesca en los molinos.
		23/05/2022	Llegada a Puerto Conto - Zona 7	Salida a las 10 am desde la Tagachi hasta Puerto Conto.
	23/05/2022	24/05/2022	Puerto Conto - Taller ERP	Desarrollo del taller de 8 am a 12 pm.
		24/05/2022	Llegada a Parí - Zona 4	Salida a las 3 pm desde Quilichó hacia Parí.
	27/05/2022	27/05/2022	Los Parí - Taller ERP	Desarrollo del taller de 10 am a 3 pm, dado que la comunidad de Parí realiza la actividad de pesca en los molinos.
		27/05/2022	Llegada a Las Mercedes	Salida a las 4 pm desde Parí - Las Mercedes.
	28/05/2022	28/05/2022	Las Mercedes - Taller ERP	Desarrollo del taller de 10 am a 3 pm, dado que la comunidad de las Mercedes realiza la actividad de pesca en los molinos.
		29/05/2022	Llegada a las Calaberas	Salida a las 7 am desde Quilichó hasta Calaberas.
	29/05/2022	30/05/2022	Calaberas - Taller ERP	Desarrollo del taller de 10 am a 3 pm.
	1/10/2022		Quilichó	Calaberas hasta Quilichó - Desayuno hasta el 1 de Octubre de 2022.

10.6.3 Biodiversity field data collected

The biodiversity assessment was carried out in 5 community areas that were chosen for their ecosystem importance, they are places that have not been significantly impacted by human activity and it is considered that there may be a great diversity of species to be identified or to confirm their permanence in forest areas. People from each community familiar with their territories participated in the field trips to guide the team of experts and also received training in the handling of camera traps and other required instruments.



Fecha del Recorrido	Biodiversidad	Descripción de la Movilidad
1/10/2022	Traslado Quibdó - Tadia (Campo Alegre)	Traslado de los 3 integrantes de Ingeobosques y 2 técnicos de COCOMACIA desde la ciudad de Quibdó hasta la cabecera municipal de Vigía del Fuerte
1/10/2022	Biodiversidad avanza con el Equipo REDD+	Flute desde la cabecera municipal de Vigía del Fuerte hasta el Consejo Comunitario Local de Tadia
2/10/2022	Tadia (Campo Alegre)	Cinco días de recorridos al interior del Consejo Comunitario Local de Tadia en los sitios que se definen con la comunidad.
7/10/2022	termina el trabajo de 5 días	
9/10/2022	2 días de traslado de Tadia a Punta de Ocaído	Traslado de los 3 integrantes de Ingeobosques y 2 técnicos de COCOMACIA desde la comunidad de Tadia - Vigía del Fuerte - Tagachi - Isleta hasta Punta de Ocaído
10/10/2022	Punta de Ocaído	Cinco días de recorridos al interior del Consejo Comunitario Local de Punta de Ocaído en los sitios que se definen con la comunidad.
15/10/2022	termina el trabajo de 5 días	
Regreso a Quibdó de		
17/10/2022	2 día de traslado de Punta de Ocaído a Auro Buey	Traslado de los 3 integrantes de Ingeobosques y 2 técnicos de COCOMACIA desde la ciudad de Quibdó hasta la comunidad de San Roque
18/10/2022	Auro Buey	Cinco días de recorridos al interior del Consejo Comunitario Local de San Roque en los sitios que se definen con la comunidad.
23/10/2022	termina el trabajo de 5 días	
24/10/2022	1 día de traslado de San Roque a Quibdó	Regreso desde la comunidad de San Roque a la Ciudad de Quibdó



10.6.4 Socialization of the REDD+ project in the communities of COCOMACIA

The socializations of the REDD+ Project in each community are necessary for the communities to develop a clear understanding of the scope of the project and the expected results depend on their actions over time. These meetings were very important because the community answered the surveys calmly, understanding what the information would be used for, and received the experts with gratitude, recognizing their valuable work on the project.

Below is a breakdown of the number of meetings and number of people that were held during the months of July, August, September, and October

Total Socialized Communities 74

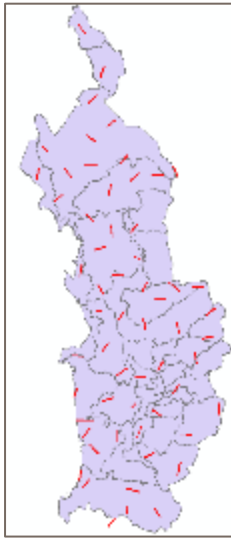
Zona	Consejo Comunitario Local	# Participantes	Zona	Consejo Comunitario Local	# Participantes	Zona	Consejo Comunitario Local	# Participantes	Zona	Consejo Comunitario Local	# Participantes
Zona 1	Guadalupe	25	Zona 3	Campo Alegre	25	Zona 5	Llano de Bebará	40	Zona 8	Puerto Conto - Taller ERP	50
	La Troje	30		Baudo Grande	30		Boca de Aguacalara	30		Loma Murri	50
	San Jose de Purré - Taller ERP	50		Tanguí	50		San Francisco de Tauchigado	30		Playa Murri	50
	Villa del Rosario	40	Las Mercedes - Taller ERP	30	Playón	40	San Jose de la Calle	50			
	Santa Lucia el Fuerte	35	Barranco	30	Tumaco	35	Zona 9	Tadia (Campo Alegre)	60		
	San Antonio de Icho (Puerto Murillo)	30	Zona 4	Auro Buey	30	Platina		40	Isla de los Rojas - Taller ERP	45	
Zona 2	Villa Nueva	30	Zona 4	Curichi	30	Llano de Bebaramá		40	Isla de los Palacios - Pueblo Nuevo	60	
	Gurandó	45		La Vuelta	30	Pueblo Viejo		30	Napipi - Carrillo	80	
	Jitrado	50		Chibuga	30	Villa de Bebará		40	Amburibidó - Briseño	35	
	Winandó	45		La Manza	30	Tagachi - Taller ERP	50	Boca de Bebara	35		
	Bellaluz	25		Puerto Salazar	30	Campo Alegre (Limón)	30	Palo Blanco	30		
	La Divisa	25		Boca de Amé	40	Zona 6	Islota	35	El Tigre	25	
	El Tambo	30		Medio Beté	40	Zona 6	Végaez	40	San Antonio de Padua	30	
	Altargcia	25		Beté	50		Puerto Palacio	30	Puerto Medellín	35	
	Puerto Aluma	20		Baudocito	25	Zona 7	Peña de Bebará	30	Punta de Ocaido - Taller ERP	70	
	La comunidad	30		Buchado	40	Zona 8	Pogué	40	Zona 9	Loma de Bojayá - Taller ERP	
Jaguo	45	San Antonio de Buey	45	Piedra Candela	35						
Mojaudó	50	San Jose de Buey	40	Loma de Bojayá - Taller ERP	50						
Calahorra - Taller ERP	50	San Roque	40	Cuía	40						
Campo Bonito	45	Puné Taller ERP	50	Vuelta Cortada	40						

Total people attending 2855

10.6.5 Biomass field and LIDAR based measurement process defined and sub-contractors identified

AS the decision was made a number of months back to develop the baseline for the COCOMACIA project using a jurisdictional department level baseline, it was required that we had biomass measures for the whole department. However, given the size of the department and the difficult access due to remoteness and security issues, it was not possible to use 100% field-based biomass plots. Thus, it was decided that the biomass component will be developed through using limited ground data plots to model biomass through Lidar. Initially, when we were planning only on COCOMACIA's baseline (not the jurisdictional) it required measuring 215 plots within the territory of COCOMACIA but with Lidar, the number was reduced to 24 plots that will be installed at the points where the Lidar lines fall to perform validation and

measurement of the carbon stock model. The lines are defined by ecosystem type (forest, non-forest, degraded forest) and are identified below. But given the change of the scale of the baseline to cover the whole department, it will require that we collect biomass plots outside of COCOMACIA. The target is to have an equal number of plots outside of COCOMACIA and we are now working with community groups and others to secure approval to measure plots in their areas.



10.6.6 Related activities in Milestone 3 have been completed

- Evaluate whether the activities to strengthen production activities have continued to be developed in the communities that practice mining and measure the impacts on the community (income, quality of life)
- Identify key food crops and implement efficient agricultural technology necessary for intensification and diversification.
- Develop agreements for producers with objectives linked to the production and quality of the crop.
- Establishment of a data collection and monitoring system for the project, with all participants trained and with sufficient capacity. The reports must contain the source of information and be traceable in time
- Support the development of templates and tools to capture data from communities and areas.
- Provide training to RMU . REDD+ Community Monitoring Units
- Select, train and prepare local community representatives for community monitoring.

10.6.7 Employment

The REDD+ team continues to support full time employment twelve people. In addition, Terra Global has two full-time local project coordinators in the project area. The sub-contractors for field data collection are local entities that also hired local people to be able to carry out activities in the field.

10.6.8 Trainings

The trainings were given by the REDD+ team, they were made to the people who are part of the zonal conservation committees, and during the socialization of the REDD+ project, the people of the community who attended the call were trained, in addition, they had the opportunity to train environmental managers (patrol officers).

Attending Dates	Training Workshops	Presenter or Trainer	Audience or Attenders	# People Attended	Total People /Hours
May, June 2022	Training to the Zonal Conservation Committees	REDD+ Management Team	Zonal Conservation Committees trained	50	800 hours
July, August 2022	Environmental managers Training	REDD+ Management Team	Environmental managers	186	1488 hours
July, August 2022	Community training	REDD+ Management Team	Communities	2855	22840 hours
	Total hours of training				25128 hours

10.7 October 1 to December 31, 2022

During the last quarter of 2022, the following was achieved in the seventh reporting period, see details in sections below:

1. Community Patrolling
2. Biodiversity Field Data collected and QA/QC complete.
3. Household Surveys and Participatory Rural Appraisals Collected
4. Contractors for LIDAR and Biomass field plots were selected.
5. Assembly of elections, and the progress of the project was presented.
6. Challenges and Delay

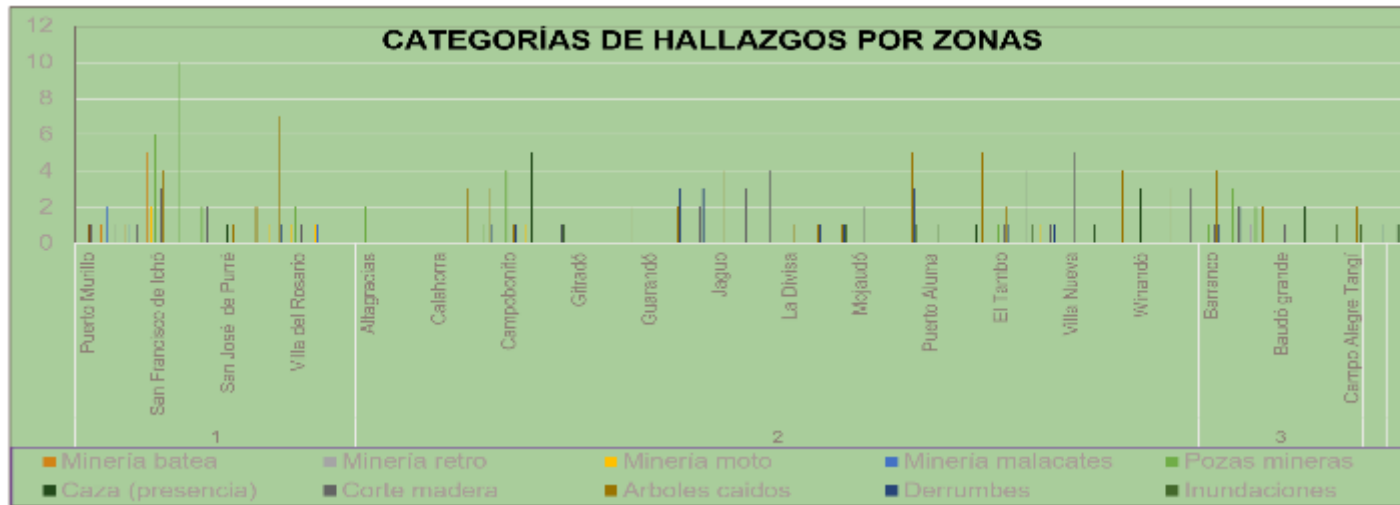
10.7.1 Community Patrolling

Below is an example of the reports of the REDD+ team on the socialization of the project to the environmental managers in the different communities that make up the zones and the delivery of the endowment.

El equipo número 1 que lo encabezó el director del proyecto Willinton Murillo Quinto realizó la gira de socialización y capacitación de los gestores ambientales del proyecto comunitario COCOMACIA REDD+ en la zona 4 en 9 CCL del área de influencia de COCOMACIA distribuido en los siguientes CCL.

TEMA	SUBTEMA	FECHA	PARTICIPANTES	METODOLOGIA	RESULTADOS
Socialización del proyecto REDD+	Capacitación y entrega de dotación a los gestores ambientales del proyecto COCOMACIA REDD+ CCL de <u>Auro bucy</u>	16 de septiembre 2022	1 equipo REDD+ 1 pasante universidad 1 líder de COCOMACIA 1 directivo de COCOMACIA 2 comité zonal de conservación 3 gestores ambientales	Una vez terminada la reunión de socialización del proyecto comunitario COCOMACIA REDD+ en el consejo comunitario de Palo blanco se procedió a capacitar a los gestores ambientales designado por la comunidad donde primeramente se les dijo que los Gestores Ambientales realizarán 3 recorridos mensuales dentro del área forestal de la comunidad a la que pertenecen, se les dio a conocer la labor tan importante que van a desempeñar como gestores ambientales para que la propuesta que COCOMACIA está adelantando como lo es el proyecto REDD+ sea viable, se les dijo que deben de tener objetivos claros para realizar los recorridos, es decir, estar bien planificado definir el día, hora de salida, ruta definida para el recorrido y hora de llegada.	Comunidades socializadas y gestores ambientales seleccionados y capacitados.
	Capacitación y entrega dotación a los gestores ambientales del proyecto COCOMACIA REDD+ C.C.L San Antonio de bucy	17 de septiembre 2022	1 equipo REDD+ 1 pasante universidad 1 líder de COCOMACIA 1 directivo de COCOMACIA 2 comité zonal de conservación 3 gestores ambientales		

The first reports of the tours have been received by the environmental managers, the main findings have been characterized by reflecting artisanal mining activity and by other means, isolated cuts of wood, landslides, floods, among others. In addition to the identification of several species identified in the development of the biodiversity component. To date, 213 environmental managers belonging to 83 communities have been selected and trained, they have also been given the uniform and material necessary for their tours. When activities start again, the remaining 41 communities will be reached. It is important to mention that the training of the environmental managers is permanent, and they have the support of the zonal conservation committees (9 zones) made up of 5 people each one



The team is in the process of tabulating all the information collected, and looking for the best mechanism that allows the information to be collected in the most efficient way. The environmental managers are located in areas where there is no internet signal and an application cannot be used to enter the information directly, also as the project seeks to involve the entire community, many of the environmental managers are illiterate and for that reason we use visual tools that are later transcribed by other leaders. Each patroller makes 3 tours a month, and in total there are 372 environmental managers, which generate 372 report sheets 3 times a month, for a total of 1116 formats per table per month.



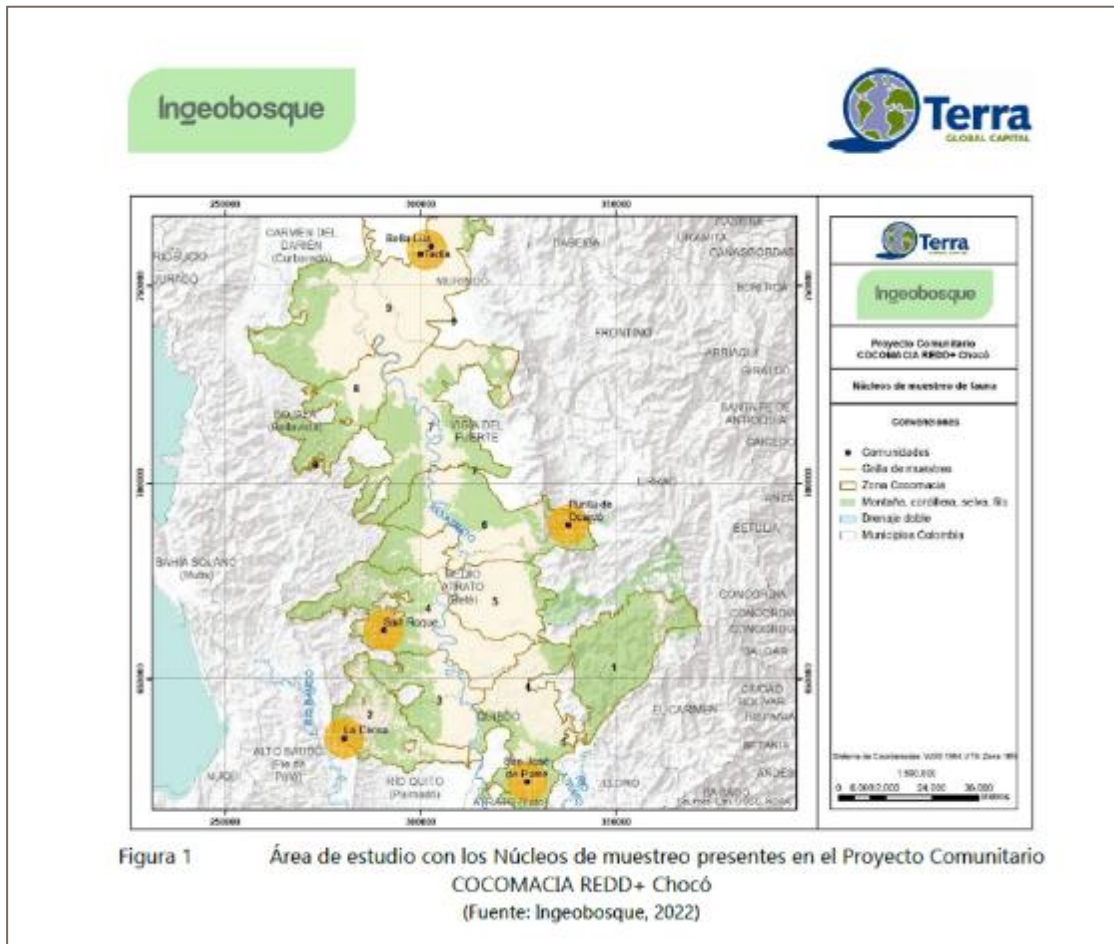
10.7.2 Biodiversity Field Data Collected and QA/QC Complete

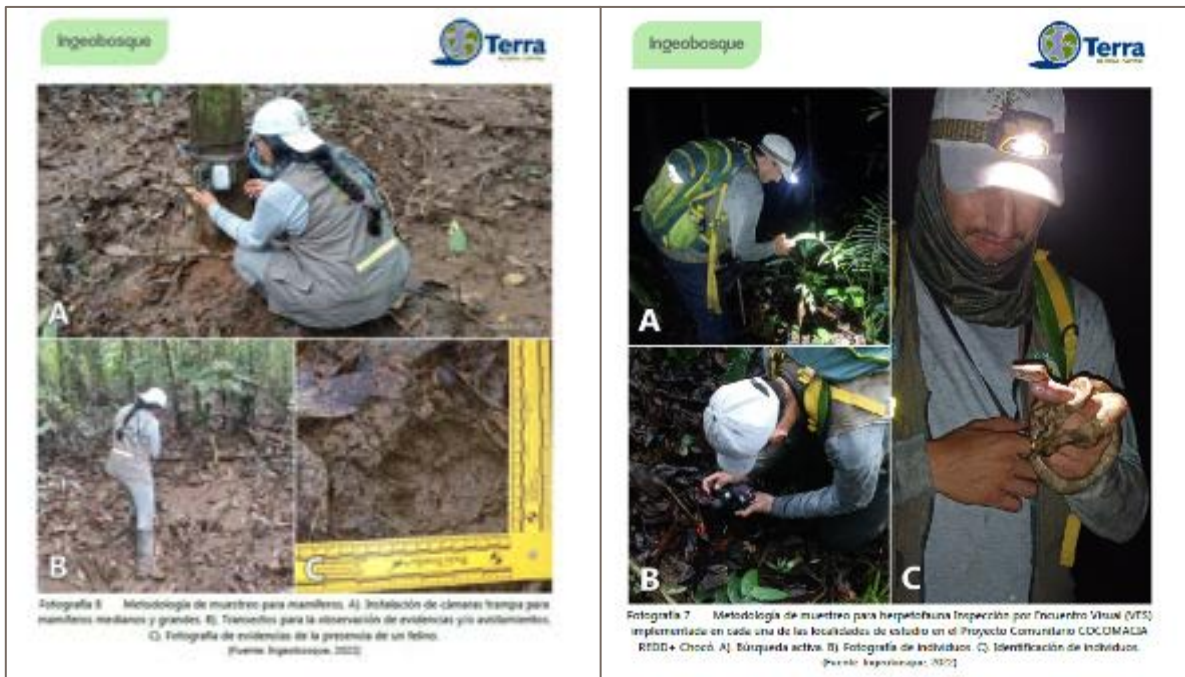
The QA_QC process involves a preliminary analysis of the quantity and quality of usable data generated from the survey. This process is the foundation of ensuring that the data from the survey is acceptable and usable for monitoring impact in the future and for any further analysis that may be required, in establishing baseline conditions.

The first step was checking for completeness from the raw data, where we confirmed that all questions from the survey had been answered, which was achieved by an initial calculation of the response rate for each question. This will be used to determine response bias in the monitoring report. In cases where gaps or inconsistencies were detected, the contractor was contacted, and the issues were addressed and resolved. In cases where the gaps resulted from measurement, The second step was to examine the quality by comparing the survey report from the contractor with an in-house preliminary analysis. This was achieved

through a comparative analysis of the major impact areas with the 9 zones used as the grouping variable. Any errors detected were presented to the subcontractors and addressed accordingly. The whole process was documented by tracking the issues arising from Terra Global's side and the response from the contractor's side.

In the Biodiversity field data on the 5 areas chosen for monitoring was collected, there was a wide identification of different species, it is noteworthy that the socio-political conditions of the communities and the climatic dynamics of the area, among others, were taken into account. The avifauna sampling, the transects were carried out during the day with repetition at night on the same route, in addition to the auditory records, the methodologies included non-invasive methods such as camera traps and transects.





10.7.3 Household Surveys and Participatory Rural Appraisals Collected

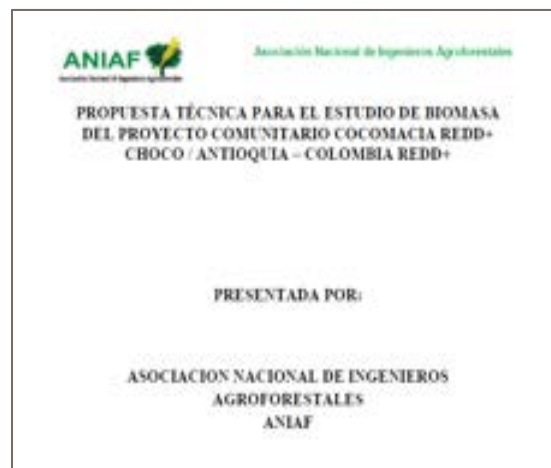
The field work of the social component was completed to establish baseline of the household in the project area. This included levels of well-being, education, income sources, and a comprehensive set of questions regarding use of natural resources. There were 474 household surveys conducted across 40 different community groups. There were participatory rural appraisals done with all nine zones the included 193 people.



10.7.4 Contractors for LIDAR and Biomass field plots were selected

As the Verra accounting standards for avoided unplanned deforestation and degradation (AUDD) are being changed and will now require the validation of a jurisdictional baseline, this required the project to move completing the baseline over the entire department of Choco (and a small area of Antioquia). Given the large forest area in Choco, there was no way use only traditional ground-based biomass samples for the emission factors needed for carbon quantification. Thus, we needed to deploy a VCS tool that Terra Global developed to use remote sensing data calibrated with ground data to estimate carbon. This process combined use of airborne LIDAR data that is calibrated using much fewer ground-based plots. But approach this required that the biomass plots be taken from points both inside and outside COCOMACIA a sensitive process which is vital for an accurate assessment of the carbon stocks and emission factors. Terra Global had previous experience working with Prf. Sassan Sachi, who for the BioREDD projects used this similar method for emission factors. The project is contracting Dr Sachi, under his recently launched NGO organization CTREES to develop the model to estimate carbon . In addition, the LIDAR flights which will be conducted by GEO1, who has experience in Colombia, and who will fly and estimated. The project area will consist of approximately 50 paths of 8 km x 1 km transects for a total of 50,000 hectares which are aligned with the biomass ground plots.

The contractor selected for the establishment of the biomass plots inside and outside the COCOMACIA territory has experience in the project area, knows the area and the characteristics of the ecosystem, which is considered an advantage, and will also have local professionals to carry out the work, who have knowledge of the day-to-day life of the communities and facilitate access and communication. Having changed the methodology to measure biomass does not imply an increase in the capital required for the developments of the project, we had some delays at the beginning of the project, and we could not start with the activities in the field and therefore we did not incur expenses, this originated that the resources be They will reallocate another item, in this case in the biomass component.



10.7.5 Assembly of elections and the progress of the project was presented.

The General Assembly of COCOMACIA was held from December 7 to 11, 2022, in the community of Buchado, it was the election of the new Legal Representative and all the members of the Board of Directors. The REDD Team had the opportunity to present the achievements and progress of the project and the next stages to be developed.



10.7.6 Employment

The REDD+ team continues to support full time employment twelve people. In addition, Terra Global has two full-time local project coordinators in the project area. The sub-contractors for field data collection are local entities that also hired local people to be able to carry out activities in the field.

10.7.7 Trainings

The trainings were given by the REDD+ team, they were made to the people who are part of the zonal conservation committees, and during the socialization of the REDD+ project, the people of the community who attended the call were trained, in addition, they had the opportunity to train environmental managers (patrollers).

10.7.8 Livelihoods

The livelihoods of the communities have been positively impacted, the commitment of the environmental managers is reflected in the activities they carry out, now they are receiving payment for the tours they make, they have been trained and are in a continuous process of training in the presentation of the reports and also in the formalization of the payments they receive (eg, present a collection account, be registered with the DIAN to present their RUT, among others). The training process will continue throughout the life of the project.

10.8 January 1 to March 31, 2023

During the first quarter of 2023, the following was achieved in the eighth reporting period, see details in sections below:

1. First socialization with the new board
2. Second meeting with the new board
3. Third and fourth meeting with the new board
4. Challenges and Delay

10.8.1 First socialization with the new board

The first meeting that we held with the Board of Directors, on January 30 and 31, was in Quibdo, in order to give a broad and clear explanation of the RED+ project in technical aspects, such as the development of the project in the field and in administrative and administrative aspects. Financial



10.8.2 Second meeting with the new board

The conversations with the new board advanced, we held a first virtual meeting on February 28 with the legal advisers of COCOMACIA and Terra, and the result of that meeting is to hold a face-to-face meeting in Quibdo on March 23 to specify some points that were pending.

This scenario is generated because the new Board requests a change in the language of some of the paragraphs that do not affect the structure of the project, in addition, this new board must be educated in the language that is used when a loan is granted and its characteristics in terms of participation, responsibility and obligations of the parties.

COCOMACIA is willing to move forward with the REDD+ project, It is a matter of time for the training process to take place.

10.8.3 Third and fourth meeting with the new board

We held 3 face-to-face meetings in Quibdo (March 23, 24, 30) between the COCOMACIA Board of Directors, its legal representative, its team of legal advisors and on behalf of Terra there was the lawyer, carbon

development manager and me. COCOMACIA came to the meeting with a lot of ignorance, bad information, and a very skeptical attitude. The meetings were quite tense; however, we did our best to build the relationship and trust again from scratch, explaining the entire structure in great detail of the project, and the way in which the community and many COCOMACIA leaders have been involved in the development and implementation from the beginning and to date.

This whole process, although quite difficult, ended with a full understanding of the project and its structure. The REDD+ Agreement has an amended (OTROSI) that allows a change in the language and more precisely involve COCOMACIA in the project, however, it should be noted that all these meetings have caused a new delay in the project of approximately **4 more months**, and we consider It is important to convey this information to the investor.



10.8.4 Trainings

The training was provided to the new board of directors, its legal representative and various community leaders. Emphasis was placed on the activities that take place around the project, on the benefit distribution plan, on the management of the trust and on the need to keep informed and committed to the whole community.

10.9 April 1 to June 30, 2023

10.9.1 Final Signature Amended REDD+ Agreement

As reporting in the last period, the new elected board of COCOMACIA came in making demands to change the REDD+ Agreement, which supports the investment agreement with COCOMACIA. This started out as a very difficult issue which took months to work through with them. The signing of the Addendum to the

REDD+ Agreement was achieved in July, which in the end mostly included a change in the non-critical language used in the document, but not key terms of the agreement established from the beginning. The document of the Loan Agreement did not have any modification; it remained the same. COCOMACIA and its Board of Directors issued an act of approval of the signature of the “otrosi”, aka and amendment. In addition, COCOMACIA issued a communication reiterating the excellent relationship with Terra and the gratitude for working together on this project. (The letter is from July; however, I consider it important to attach it to highlight the satisfaction that COCOMACIA has in the development of the REDD+ project and that all possible concerns or disagreements have been resolved).



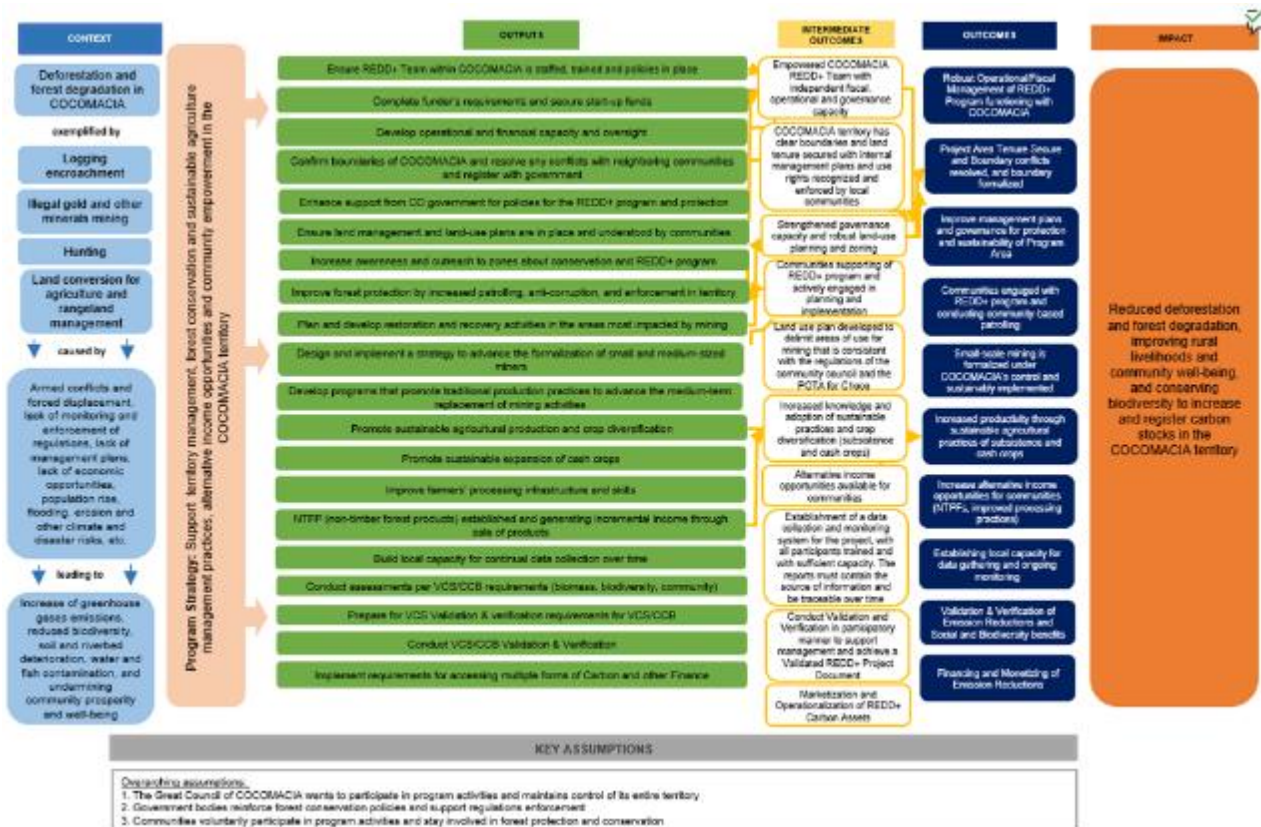
10.9.2 Market Standards Documents Under Development

In the VCS+CCB PD (Project Description) the baseline conditions of the project are drafted for all the general, biodiversity and social components, it also describes the monitoring plan and the indicators that measure the success of the project in each of the components.

All the information from the household surveys, the PRA and biodiversity went through the QA/QC process and after that the data was analyzed and recorded in the PD.

This is a part of the theory of change applied to the COCOMACIA REDD+ project:

A result chain or theory of change was developed explaining how the outputs are expected to lead to intermediate outcomes and how this will achieve the long-term outcomes to lead to the program goal. This COCOMACIA and REDD+ specific program seeks to improve rural incomes and minimize deforestation and degradation by providing technical and financial assistance for a better community. The Long-Term (30 years) Implementation plan is designed around a sound theory of change (ToC) that reflects the specific objectives desired by the Program, and maps activities and outputs needed to achieve:



All the sections that are required for their final presentation are 90% complete, the only missing section is the one related to carbon, because given the changes in the standard that are explained later, the establishment of biomass plots in the field has been delayed as well as the contracting of Lidar.

10.9.3 Participation in Zonal Meetings

The REDD+ team has accompanied the Board of Directors in the 3 zonal meetings that have been held this period. In these meetings the project activities and characteristics of the REDD+ Project were reviewed again to keep the community informed and motivated about the progress.



ACTIVIDAD 2: Participación en el encuentro zonal de la zona 1



DESARROLLO DE ACTIVIDAD: En esta actividad participamos 3 integrantes del equipo REDD con el objetivo de dar a conocer los avances que ha tenido el proyecto REDD hasta la fecha.

RESULTADO: El equipo técnico del proyecto COCOMACIA REDD+ tuvo una participación activa en la logística del encuentro para la visibilización del proyecto COCOMACIA REDD+, donde realizamos instalación de pendones, video beam, sistema eléctrico y sonido profesional, además ponente en la socialización de los avances del programa COCOMACIA REDD+ donde se les explico a los asambleístas lo que significa la sigla REDD+ y los alcances del proyecto, ya que algunos de los presente desconocían el significado de este, se les dio a conocer los hallazgos tan importante que hasta el momento a registrado el estudio de biodiversidad al interior del territorio de cocomacia, en los 5 C:C.L donde se realizó: en la zona 1, C.C.L de San José de Purre, en la zona 2 C.C.I Divisa, zona 4 C.C.L San Roque, zona 6 C.C.L Punta de Ocaido y zona 9 C.C.L Campo Alegre Tadia. se les dio a conocer que en la realización de este estudio participaron los gestores ambientales de los diferentes C.C.L



10.9.4 Arrival of the Boat Purchased for the Project to Quibdo

After waiting several months, the a new boat purchased for the REDD+ team to move around the Atrato river finally arrived. Now the REDD+ team can easily reach all the communities in the territory more easily. It is a model with the latest technology, efficient use of energy and fuel, in addition to having more comfortable benches and carrying capacity up to 25 people.



10.9.5 Navigating Changes to Carbon Market Standard to Generate Carbon Revenue for COCOMACIA

Terra Global has been aware for some time about the nature of changes that Verra was considering for Avoided Unplanned Deforestation and Degradation (AUDD) REDD+ project methodologies. But only 2 months ago when they released the Law 2294 of 2023 in its article 230, it became clear the impact that these changes would have on COCOMACIA's ability to generate VERRs in the short and long-term. For AUDD REDD+ projects, there are two main options for markets standards approaches under Verra 1) Jurisdictional and Nested REDD+ Rules and Requirements ("JNR"), and 2) AFOLU Methodology for Reducing Emissions from Deforestation and Forest Degradation ("AFOLU CM"). The AFOLU CM has only recently been released and it is still incomplete and untested.

Terra Global has engaged with Verra to understand these options for COCOMACIA VERRs generation and how best to move forward.

10.9.6 Trainings

The trainings are carried out continuously, in order to emphasize the correct process of making the settlements, several sessions have been held with different members of the REDD+ team to carry out detailed monitoring of the expenses and emphasize the importance of the use of resources in the project activities.

The REDD+ Team has been in charge of permanently training the environmental managers who come to the office when they go to Quibdo, it is easier for those who are located in zones 1,2 and 3 due to their proximity, with the other zones maintains permanent communication through WhatsApp, when the signal allows it.

10.10 July 1 to September 30, 2023

10.10.1 Collaborative FREL Agreement

This agreement covers the development of a market standards recognized Jurisdictional Forest Reference Emissions Level (referred to as "FREL" hereinafter) for the Choco Department of Colombia (this "Agreement") between COCOMACIA, Codechoco and Terra, that can support the Issuance of Verified Emission Reduction and Removals ("VERRs") for Avoided Unplanned Deforestation and Degradation ("AUDD") in the Project Areas. The JNR FREL will be designed to provide the CODECHOCO with a market accepted FREL that is Nested which can support the Issuance of VERRs for both the Project Areas and if desired at a Jurisdictional scale for other carbon projects in the JNR Area ("Other Project Areas"). The JNR FREL will be developed to support spatially explicit allocation of the JNR FREL to each unique area in the JNR Area, including the Project Areas, and to be able to monitor, report and verify VERRs for the Project Areas within the JNR Area. The JNR FREL will be registered under the Market Standard with three Jurisdictional Proponents which are COCOMACIA, CODECHOCO and Terra Global. Initially, the JNR FREL will

be Validated under JNR Rules and Requirements Scenario 1. This document was reviewed, explained and commented on with COCOMACIA and is in the process of being signed at Codechoco.



10.10.2 [Reevaluation of the Project Budget](#)

The budget was reconstructed for the project accreditation period and the detailed monthly budget was reviewed and adjusted as needed for the Sep 2023 to August 2025. Includes key activities for the project such as a small program to support productive activities for a group of farmers (170 current and a group of 40 women and 40 young people who want to join). These estimates all the costs to run the program, which are in line with the original budget. These monthly estimates include the costs to complete the development and validation of the Choco Department FREL, the COCOMACIA VCS+CCB PD and first monitoring report. They also include the next year verification of the second COCOMACIA VCS+CCB monitoring report.

10.10.3 [Bridge/Gap Funding Covering Costs Due to Delayed Verification](#)

Given the delay in expected verification date, it was necessary for Terra Global to secure the additional upfront investment needed for gap funding of \$600,000 to \$1,100,000.

10.10.4 [Trainings](#)

The trainings are carried out continuously, in order to emphasize the correct process of making the settlements, several sessions have been held with different members of the REDD+ team to carry out

detailed monitoring of the expenses and emphasize the importance of the use of resources in the project activities.

The REDD+ Team has been in charge of permanently training the environmental managers who come to the office when they go to Quibdo, it is easier for those who are located in zones 1,2 and 3 due to their proximity, with the other zones maintains permanent communication through whatsapp, when the signal allows it.

The people from the REDD+ team have attended the zonal meetings, where they have had the opportunity to be close to the communities and provide them with information about the progress of the project and the next stages.

10.11 October 1 to Dec 31, 2023

During October and November of 2023 (this month the end date of the quarter report was shifted to one month earlier to match investor reporting), the following was achieved in the tenth reporting period, see details in sections below:

1. Training, establishment, and measurement of biomass plots within COCOMACIA
2. First analysis of land change images in the entire Department of Choco
3. COCOMACIA Assembly
4. Present the new investment structure to COCOMACIA.
5. Present the Collaborative FREL Agreement to CODECHOCÓ

10.11.1 Training, establishment, and measurement of biomass plots within COCOMACIA

The biomass training by Terra was carried out with the assistance of the COCOMACIA REDD+ Team, all the contractor's staff, members of the board of directors and several community leaders. The objective was to explain the Standard Operating Procedures and then do practice plots nearby place to ensure that the processed were clear and could be carried out in the field consistently. The training lasted 3 days.



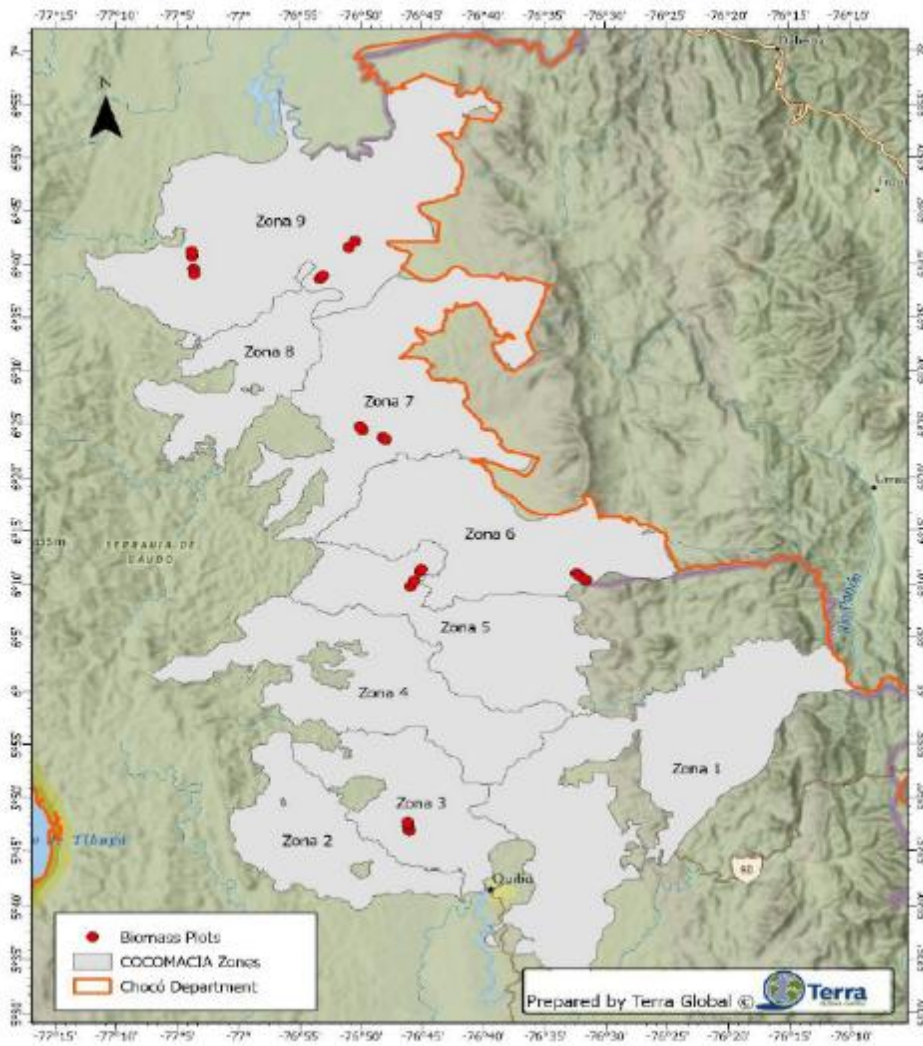
Figure 7. Biomass field data training

Then the field work began on October 2023, 24 plots were established (4 plots for each lidar line) that could provide information on the areas of Primary Forest, Non-Forest and Degraded Forest. Results were information is in progress by the contactors and then Terra will complete the final review before developing the emission factors.

5.2.2.5. Muestreo PPM 17, 18, 19 y 20 ISLETA

Se pudo realizar favorable los resultados de la salida de campo en el mejor termino posible facilitando el desarrollo de todas las actividades contempladas en el POE. Donde se describen a continuación los resultados.

- Se establecieron 4 parcelas en los puntos exactos fueron No Bosque, Bosque Primario, Bosque Degradado, el otro punto se relocalizo según indicaciones del POE porque quedo dentro de un potrero, Bosques Primario.
- Se montaron las 12 Subparcelas
- Biomasa no Arbórea; se tomaron las 12 muestras en las subparcelas
- Árboles juveniles: 10
- Hojarasca peso fresco 100 gr – Peso seco de todas las muestras
- Muestras de suelo 12 muestra en las cuatro parcelas
- Árboles vivos mayores de 10 cm de DAP: 286
- Árboles vivos mayores de 5 cm de DAP: 27
- Árboles muertos en Pie: 130
- Árboles muertos en Caída: 31
- Cobertura del Dosel; se tomaron las 64 lecturas de dosel en las 4 parcelas 16 lecturas por parcela.



Map 5. Biomass Plot Locations (inside COCOMACIA)



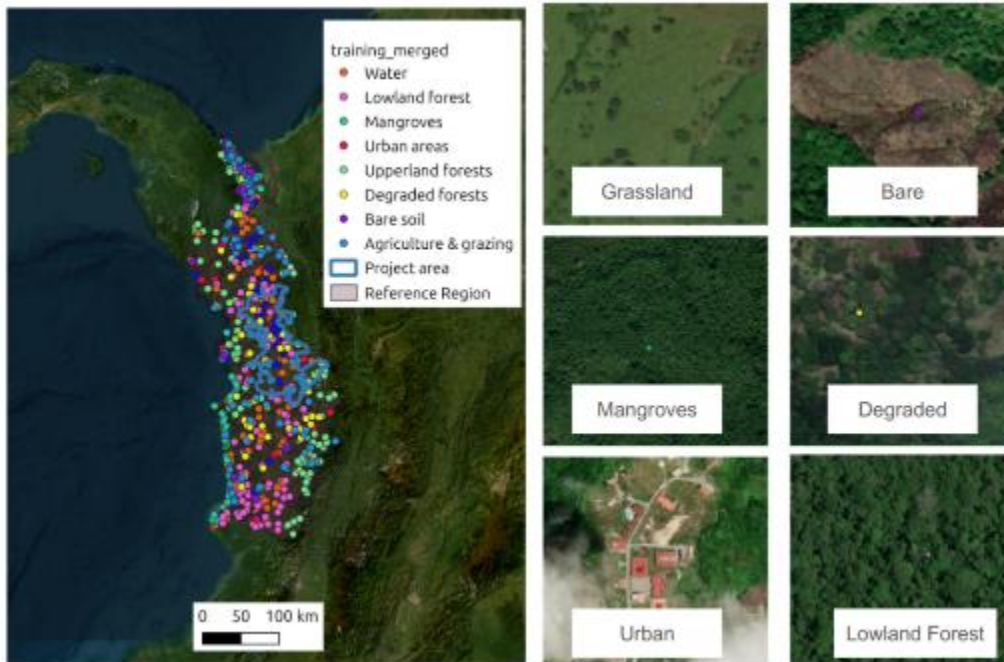
Figure . Training data collection points



Figure . Biomass Data Collection (inside COCOMACIA)

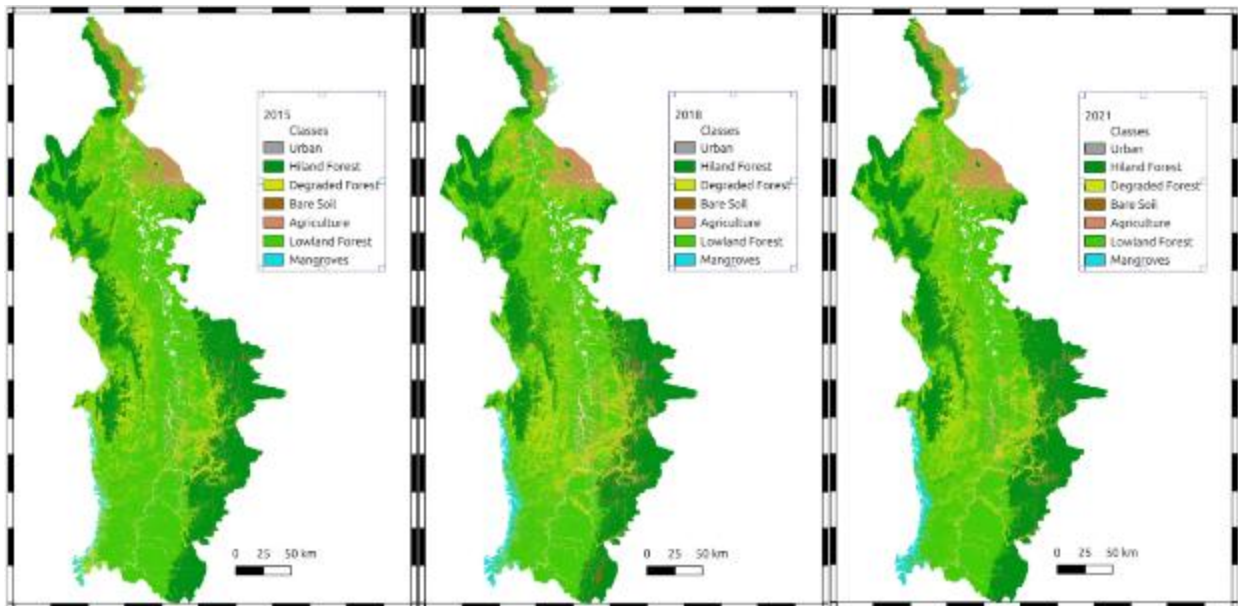
10.11.2 First analysis of land change analysis the entire Department of Choco

The first draft of the land use classification analysis was completed for the historical reference period between 2014 and 2021. Due to the number of clouds permanently present in Choco, the Terra Technical team used a approach to minimize the effect of the large amount of clouds by generating composite images from annual time series spanning 1 year. This produced 3 composite images for each collection (Landsat-8, Sentinel-1, data Hansen), one for 2015, one for 2018 and one for 2021 (*Map 2*). Figure 2 Map 6 shows the initial set of training points used to train the classification algorithm.



Map 6. Initial Training Points for Classification

This produced 3 composite images for each collection (Landsat-8, Sentinel-1, data Hansen), one for 2015, one for 2018 and one for 2021 (Map 7). These initial classifications have of accuracy 90%, we are working to get the degradation accuracy higher.



Map 7. Reforestation, deforestation and degradation from 2015 to 2021 (initial classification)

Note that the project area appears to have lower deforestation and degradation as opposed as the rest of the jurisdiction. Under the requirements of JNR rules and requirements a risk modeling process will be undertaken to quantify the based on risk factors how much of the deforestation and degradation is on the project area of COCOMACIA.

10.11.3 COCOMACIA Assembly Held

Terra was invited to the COCOMACIA Assembly, which was held in the community of Puerto Conto (Bojaya) from November 9 to 12, 2023. We had the opportunity to talk with the community about the expectations they have about the project, and about the positive impact it has generated on community environmental managers, in terms of income and commitment to the project. The development of the different components (biodiversity, social and biomass) has generated interest in the community in acquiring different knowledge and being able to support its young people in the study of the professions that the project requires. The current status of the project and the following stages were explained. We were received with much appreciation and kindness by the community.

Next Steps:

- LIDAR Flights
- Biomass - established and measurements plots outside COCOMACIA.
- CODECHOCO signing of the FREL Agreement
- PD (VCS + CCB)
- Monitoring Report 1 for the VCS+CCB
- VVB RFP and contracted.
- Community Outreach
- OVV field visit
- Validation and Verification Report
- Carbon Standard Review (Verra)
- VCS+CCB PD
- VCS+CCB MR1
- VVB report (NREF Val), (VCS+CCB Val), (VCS+CCB Ver)



Figure 8. Terra Team Attending COCOMACIA Assembly

10.11.4 Presented “Add-on” Investment Structure to COCOMACIA

The COCOMACIA project delays and the requirements to move to a department level for the GHG accounting has required that the project needs additional funds to complete the validation and first verification. A detailed financial plan was provided to Re:Wild showing the updated budget and the proposed follow-on investment for \$600,000 to \$1,100,000 that was needed. The Terra NBS Carbon Pool Investment Committee approved the investment in COCOMACIA on Sep 15th and the Project Investment Agreement and supporting documents were translated into Spanish to be presented to COCOMACIA. After several days of working together, some suggestions from COCOMACIA were added and then the Term Sheet and the PIA - Project Investment Agreement were sent.

The materials provided, also explained in detail what COCOMACIA's cash flow with the new investment and how the payment of the first and second investment will be made in terms of carbon credits. It is clarified that the investment payments do not endanger the cash flow and that the budget to carry out the project activities that allow the generation of more carbon certificates are sufficient over time. The PIA document is being reviewed and comments by COCOMACIA, and it is expected that it can be signed in January 2024.

10.11.5 Present the Collaborative FREL Agreement to CODECHOCÓ

Due to the changes in the Verra standard, the transition to using a JNR FREL was discussed many months back with CODECHOCÓ and COCOMACIA was formally presented in August 2023 as the approval of CODECHOCÓ is needed to validate a JNR FREL. This was followed by another meeting with CODECHOCÓ, in order to explain in detail, the technical aspects of the development of a jurisdictional baseline (FREL) and the implications for CODECHOCÓ, what would be its opportunity for participation, and how the necessary approaches could be made to other projects. REDD+ that are being developed in Choco. The result of the meeting was very positive, now the technical team must pass the document to the legal area for review and comments, if any. Due to the process of re-election of the Director of CODECHOCÓ and due to the circumstances, that have arisen around his re-election¹³, it has not yet been possible to consolidate the signature of the document. It is hoped that it can be signed as soon as possible. This agreement was signed in February 2024 after the end of this monitoring period.



10.11.6 Trainings

The trainings are carried out continuously, in order to emphasize the correct process of making the settlements, several sessions have been held with different members of the REDD+ team to carry out

¹³ <https://www.radionacional.co/noticias-colombia/demandaran-reeleccion-del-director-de-la-car-en-choco>

detailed monitoring of the expenses and emphasize the importance of the use of resources in the project activities.

The REDD+ Team has been in charge of permanently training the environmental managers who come to the office when they go to Quibdo, it is easier for those who are located in zones 1,2 and 3 due to their proximity, with the other zones maintains permanent communication through whatsapp, when the signal allows it.

The people from the REDD+ team have attended the zonal meetings, where they have had the opportunity to be close to the communities and provide them with information about the progress of the project and the next stages.

10.11.7 Patrolling Impacts

This is an example of the monthly reports (Sept 2023) provided by the environmental managers' reports, where it can be seen what the greatest pressures are generated in community forests and the importance of keeping the community linked is reaffirmed. However, due to the lack of signal for data transmission and the distance from the communities, the reports do not always arrive on time. It is expected that at the beginning of next year, smartphones can be provided with the application that allows the collection of information and reports more efficiently.

FICHA DE RECOLECCION DE DATOS PARA SEGUIMIENTO DE ACTIVIDADES DE CAMPO DE LOS GESTORES AMBIENTALES PROYECTO COCOMACIA REDD+ CHOCO/ ANTIOQUIA													
ZONA	Total de Horas	Minería				Tala				Cacería	Amenazas naturales		
		Con batea	Malacate	Motobomb a	Retroexcab adora	Arreglo Agrícola (Socola)	Aprovecham iento Forestal	Quemas	Aprovecham iento Domestico	Uso Domestico	Inundacion es	Deslizamiento de tierras	Volcamiento de Árboles
ZONA 1	31	7	1	5	1	0	5	0	2	0	1	1	22
ZONA 2	78	0	0	0	0	2	9	6	4	4	0	4	19
ZONA 3	32	0	0	1	0	0	6	0	0	0	2	0	1
ZONA 4	132	1	0	7	0	0	122	5	0	19	26	16	46
ZONA 5	91	14	1	20	4	9	41	1	11	3	7	9	30
ZONA 6	76	11	5	7	3	0	49	3	1	0	10	6	18
ZONA 7	34	0	0	2	0	1	10	5	2	3	5	7	2
ZONA 8	0	0	0	0	0	0	0	0	0	0	0	0	0
ZONA 9	36	0	0	1	0	0	7	1	6	4	4	2	6
TOTAL ZONAS	510	33	7	43	8	12	249	21	26	33	55	45	144