Gold Standard
for the Global Goals

TEMPLATE

KEY PROJECT INFORMATION & PROJECT DESIGN DOCUMENT (PDD)

PUBLICATION DATE **14.04.2023**

VERSION **v. 1.3**

RELATED SUPPORT

- TEMPLATE GUIDE Key Project Information & Project Design Document v.1.3

This document contains the following Sections

KEY PROJECT INFORMATION

GS ID of Project	4221
Title of Project	Vichada Climate Reforestation Project (PAZ)
Time of First Submission Date	16/06/2015
Date of Design Certification	29/08/2016
Version number of the PDD	4
Completion date of version	22/02/2024
Project Developer	FORLIANCE GmbH
Project Representative	Julian Ekelhof German Rodriguez
Project Participants and any communities involved	Inverbosques S.A. Aldea Forestal S.A.
Host Country (ies)	Colombia
Activity Requirements applied	☒ Land-Use and Forests Activity Requirements/Risks & Capacities
Scale of the project activity	☒ Large Scale
Other Requirements applied	
Methodology (ies) applied and version number	Methodology for Afforestation/Reforestation (A/R) GHG emission reduction & sequestration V 2.0
Product Requirements applied	☒ GHG Emissions Reduction & Sequestration
Project Cycle:	☐ ☒ Retroactive

Land-use & Forest Key Project Information[1]

Scope:	☒ Forestry
Silvicultural system:	☒ Conservation (no use of timber)
Project Area (ha):	73,835.87 ha
Eligible Area (ha):	19,208.4 ha
10% Set Aside Conservation area (ha):	7,582.19 ha
Evidence that Project Area Boundary is clearly distinguishable in the field:	Support_Info>GIS_Info
Planting Area	19,208.4 ha
How many Modelling Units (MUs) are included in the eligible area:	21 MU – 52 sub MU
Summary of New Areas added (copy and insert as needed):	
Size (ha):	4,743.59 ha
Date Added	2022

[1] Please refer to 0 for detailed information on LUF projects

Table 1 – Estimated Sustainable Development Contributions

SUSTAINABLE DEVELOPMENT GOALS TARGETED	SDG IMPACT (DEFINED IN B.6)	ESTIMATED ANNUAL AVERAGE	UNITS OR PRODUCTS
13 Climate Action (mandatory)	N/A	215,925 tCO_2	Emission Reductions
8 Decent Work and Economic Growth	Increased employment opportunities	32	jobs
	Enhanced opportunities for income generation –	32	employees earning above local minimum wage
15 Life on Land	Increased area under tree canopy cover	1,000	Ha of Trees Planted
	Enhanced biodiversity	56	Observed or monitored number of protected threatened species in the project area & conservation status of species
	Enhanced biodiversity	100	Ha of protected Land Area

SECTION A. DESCRIPTION OF PROJECT

A.1 Purpose and general description of project

The forestry project is implemented in the Eastern Colombian Department of Vichada, within and around the Bita River Basin. The applied measure to remove GHG from the atmosphere is the afforestation of degraded grasslands (baseline) with three main tree species: Acacia sp, Pinus sp. and Eucalyptus sp. Currently, the project participants are also investigating the seedling, development, and planting of native species in the region to support the transition from degraded areas into a forested area. The project boundary is defined as follows: the project region where all project areas are located and where future new areas may be added are the municipalities of Puerto Carreño, La Primavera, and Cumaribo. For the third performance review event, the project planted area is 19,208.4 ha (Aldea Forestal: 3,282.26; Inverbosques: 15,926.13 ha), whereas the project area is 73,835.87 ha.

Independently former managed by three project participants, Reforestadora La Paz, Aldea Forestal and Inverbosques, the project implemented and continues to establish forest plantations of *Eucalyptus urophylla, Eucalyptus tereticornis, Eucalyptus pellita, Acacia mangium*, and *Pinus caribaea.*

The project was validated and verified for the first time in 2016 under Gold Standard Version 0.9 requirements. Three years later in 2019, it was verified for the second time and transitioned to the GS4GG version. Nevertheless, only Inverbosques and Aldea Forestal verified the project SDGs's impacts on climate change mitigation. From 2022, the project continues as a standalone project with two participants, Inverbosques and Aldea Forestal, following a forestry conservation approach. Reforestadora La Paz will transition to a different GSID standalone project under a commercial harvesting approach. Lastly, the project went under a design change and design renewal in 2023.

A.1.1. Eligibility of the project under Gold Standard

I) Being a conservation project, the project type is pre-identified as eligible by the GS4GG Land Use and Forestry Activity requirements (Version 1.2.1.):

2.1.2 A/R projects:

(a) Can include planting trees

(b) Can include single-species plantations

(c) Can apply to all silvicultural systems. For example:

Conservation forests (no use of timber)

Forests with selective harvesting

Rotation forestry

II) The project meets the General Eligibility Criteria of the GS4GG Land Use and Forestry Activity requirements – Section 2 (Version 1.2.1.) as follows:

(a) The project belongs to the eligible project type category of Afforestation & Reforestation Projects (A/R).

(b) No Deforestation: All the eligible areas at the beginning of the project were classified as non-forest areas and have therefore not been a forest before the project start date and at the project start date. Landsat images were used from 1996 to 2006 to demonstrate the vegetation existing before planting in comparison with ten years before the date. Supporting documentation is available to the auditor from the validation and subsequent performance review events[2].

(c) Not applicable since no eligible and non-eligible area have been deforested.

(d) The project is implemented in Colombia. The country has submitted an NDC under the Paris Agreement and is implementing measures to achieve its emission targets related to deforestation and forest degradation. More specifically, the mitigation strategy includes reforestation of areas for commercial purposes i.e.,

[2] Support information at 03_GIS_info>Eligibility Analysis

in Vichada[3]. The present project would not be accounted for under these efforts due to the project operating as a conservation system.

In 2018, through Resolution No. 1447[4], the Colombian government introduced the National Emission Reduction Registry (RENARE by its acronym in Spanish). RENARE controls and monitors activities contributing to the country's emission reduction goal via a national carbon market. Currently, sectors under the country's carbon tax scheme can offset parts of their emissions using carbon credits from the registry to avoid the tax. The country is also planning to introduce a national ETS for compliance sectors, excluding the LULUCF sector but allowing internal compensation with projects registered in RENARE. The so-called "RE System" will enter a pilot phase in 2024 before entering full operation in 2025.

III) The project is not registered with any other voluntary or compliance scheme.

IV) The compliance with Colombia's legal, environmental, ecological and social regulations is demonstrated.

Design change: The change from a rotation to a conservation scheme does not impact eligibility since both project types are equally pre-identified as eligible under the applied methodology. All other eligibility criteria are not impacted by the design change.

A.1.2. Legal ownership of products generated by the project and legal rights to alter use of resources required to service the project.

In Colombia, land is regulated by Law No. 160 of 1994 and managed by the National Cadaster System (SNIC) and the Superintendence of Notaries and Registry. The former oversees spatial boundaries and property appraisals, and the latter is responsible for keeping updated properties characteristics and legal status on a national registry.

[3] https://unfccc.int/sites/default/files/NDC/2022-06/Adjunto%202.%20%20Medidas%20de%20mitigaci%C3%B3n_NDC%20de%20Colombia%202020.pdf
[4] https://www.minambiente.gov.co/mercados-de-carbono/instrumentos-economicos-y-de-mercado-para-la-mitigacion-de-los-gases-de-efecto-invernadero/#tabs-1

According to the regulatory framework, project participants Inverbosques and Aldea Forestal have legal ownership of the forest plantations overall and where CO_2e is sequestered[5].

A.2 Location of project

The project is in Vichada department, southeastern Colombia. It borders with Venezuela by the east, Meta department by the west, Casanare and Arauca departments by the north, and Guainía department by the south. The project region where all project areas are located and where future new areas may be added are the municipalities of Puerto Carreño, La Primavera, and Cumaribo (Figure 1).

[5] Support Info>08_Land Tenure

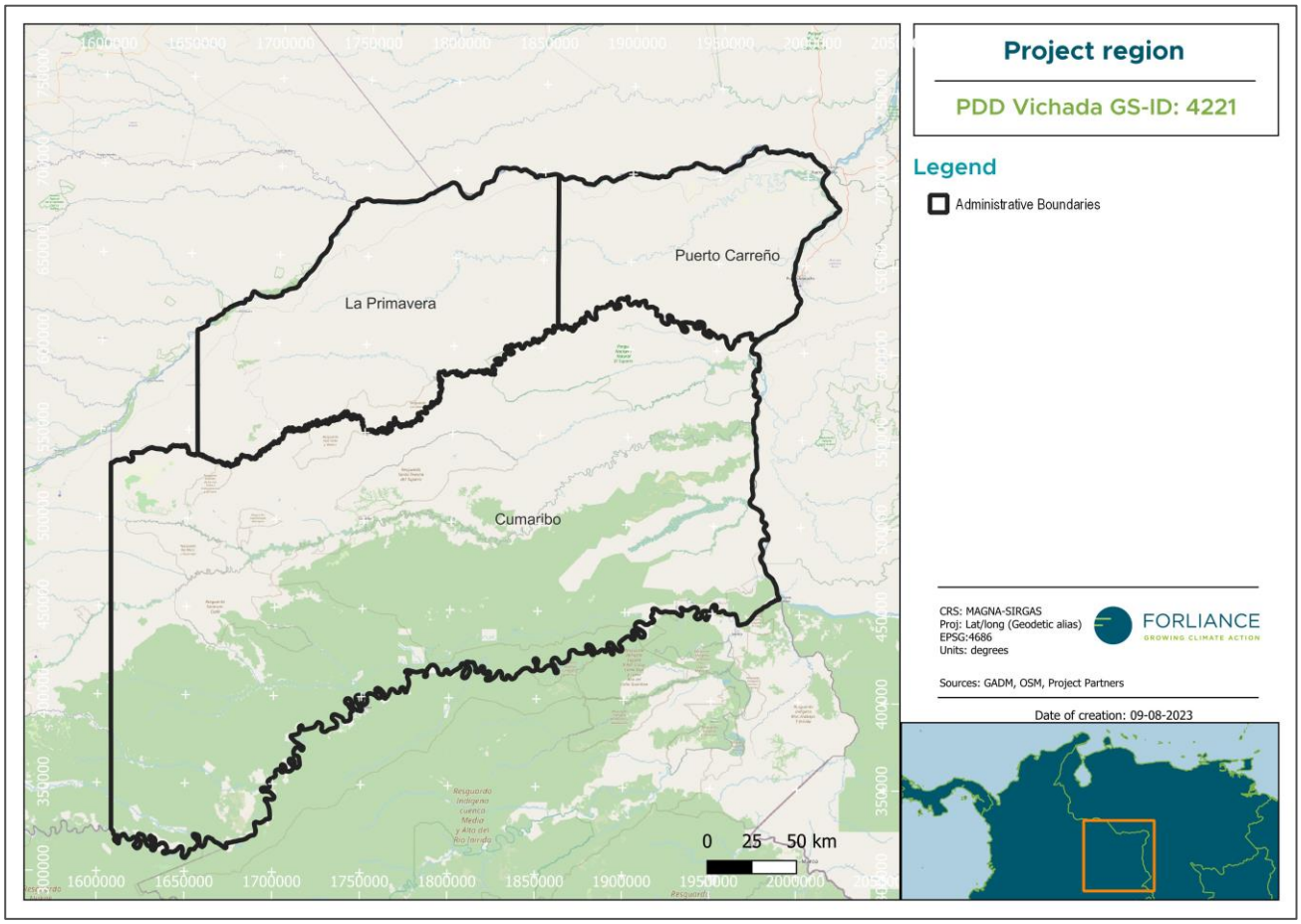
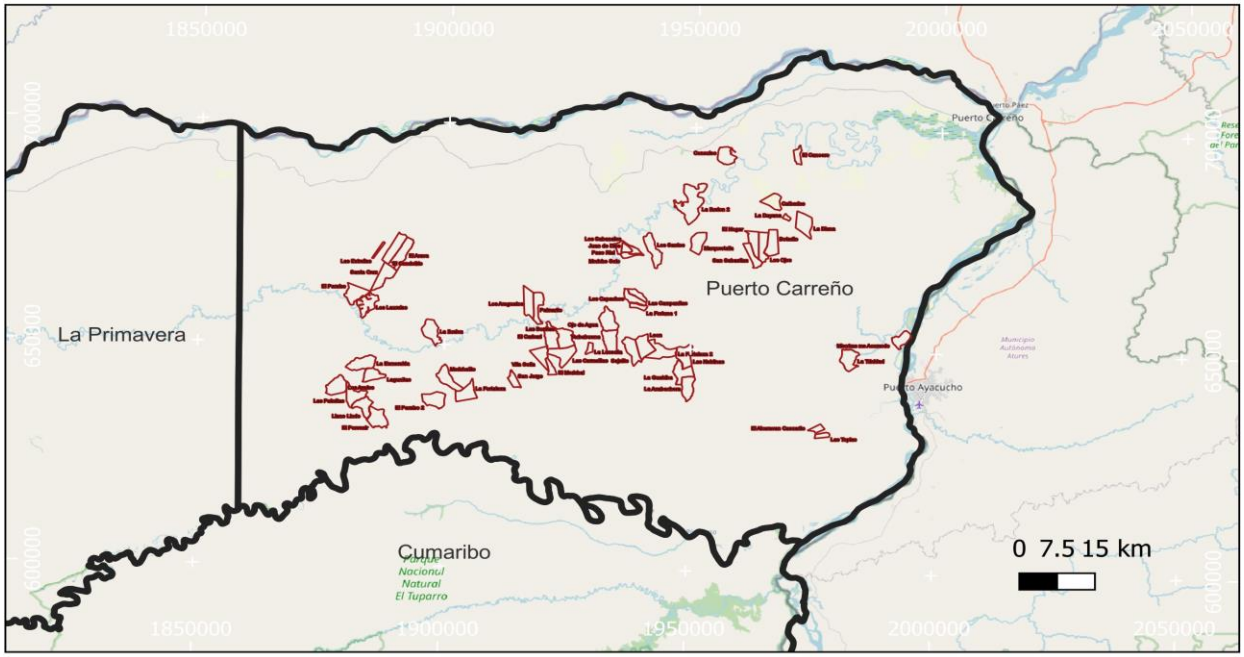
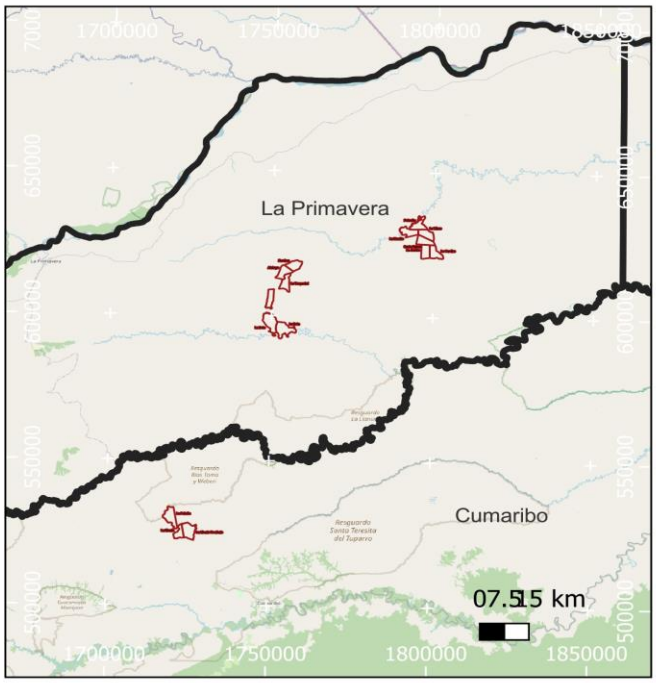


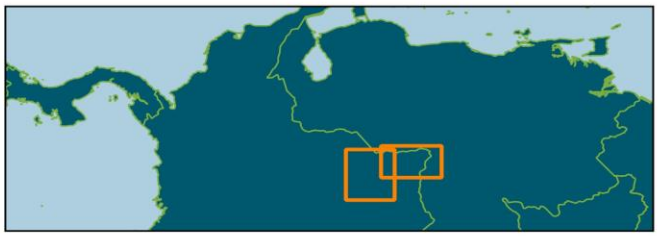
Figure 1. Project region

The whole project area spreads from -70.0892904239815948°East, 4.6388864859050800° North to -67.7133614723530854° East, 6.1806146130301522° North (EPSG:4326).

The project area is spread over 69 properties located in the project region (Figure 2). Out of them, Inverbosques is responsible for managing 63 properties in Puerto Carreño, La Primavera and Cumaribo, while Aldea Forestal manages 6 properties in La Primavera and Cumaribo.







Project area

PR 2023 Vichada GS-ID: 4221

Legend

- Project Properties
- Administrative Boundaries

Company	Property area (ha)
Inverbosques	66,464.61
Aldea Forestal	7,371.26
Total	73,835.87

CRS: MAGNA-SIRGAS
Proj: Lat/long (Geodetic alias)
EPSG:4686
Units: degrees

FORLIANCE
GROWING CLIMATE ACTION

Sources: GADM, OSM, Project Partners

Date of creation: 25-10-2023

Figure 2a. Project area

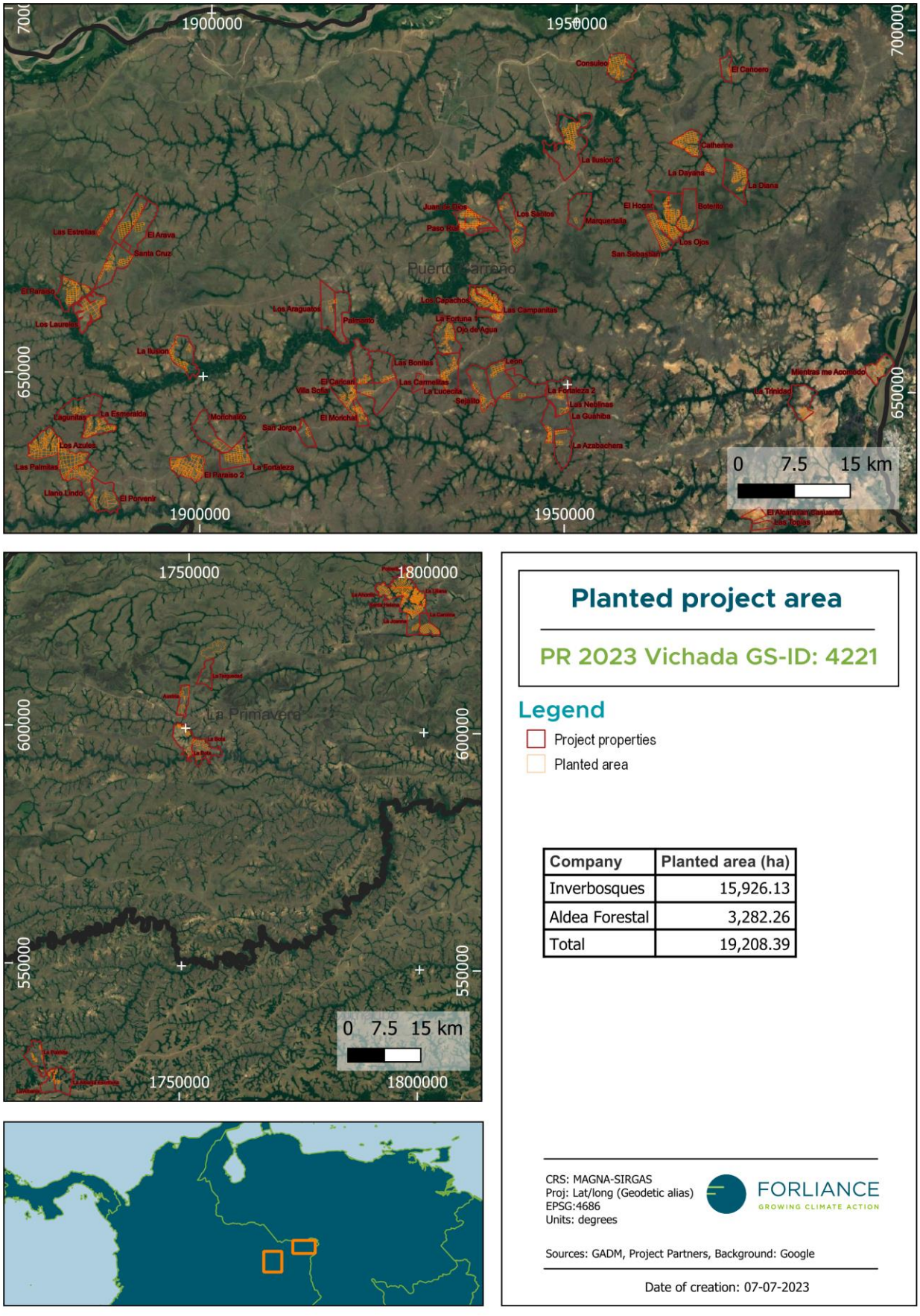


Figure 2b. Project planted area

A.3 Technologies and/or measures

The applied measure to remove GHG from the atmosphere is the afforestation of degraded grasslands with three main tree genera: Acacia sp, Pinus sp. and Eucalyptus sp. This section presents the history and approach of both project participants, and briefly describes activities implemented as part of the project activities.

Project history and approach

- Aldea Forestal

Between 2009 and 2015, an average of 500 hectares were established annually, with a certified nursery and farms registered in the Colombian Agricultural Institute (ICA). The total project area of the six properties for the respective Management Unit is 7,371 ha. The planting area covers 3,282.26 ha, of which ~85% are planted with *Pinus caribaea*, ~10% with *Acacia mangium* and ~5% *Eucalyptus pellita*. The exact areas per species and year are given in the document VICH22_MUs_Overview[6].

Since 2011, the unit has had an Environmental Management Plan adopted by the environmental authority CORPORINOQUIA; it is in effect and includes environmental permits.

In the year 2020, the organization declared to dedicate the afforested areas for conservation and protection and that its activities shall be of low impact. It was reclassified under FSC as SLIMF (Small or Low Intensity Managed Forest). The reclassification was also requested with the corresponding national entities.

Through the years and its experience, the organization has its own internationally certified Forestry Business Model, which can be replicated in the region and contributes to the United Nations Sustainable Development Goals (SDGs). After planting, the main forest management activities include pest and disease monitoring, and fire management.

[6] Support Info>01_Climate_SDG13

- Inverbosques

The forestry project managed by Inverbosques S. A. began in 2009. The company is equally following a forest management plan to ensure the sustainability and management of the forestry project. It performs forestry operations with appropriate quality standards, protect the physical integrity of workers and / or collaborators, and effectively and efficiently use financial, natural and technological resources in the development of the forestry operations. Thus, due to management and technical actions, Inverbosques has established an average annual planting of more than 1,000 new ha. By 2023, Inverbosques has planted 15,926.13 ha with *Acacia mangium, Eucalyptus pellita, Eucalyptus sp. and Pinus caribaea.* Similar to Aldea Forestal, Inverbosques transitioned to a SLIM certification under the FSC, which means the project transitioned from a rotation to a conservation model.

Silvicultural activities implemented

The forest management plans verified by FSC are available as supporting documentation[7].

The main activities implemented in Aldea Forestal, which are part of the current silvicultural management system (conservation with a FSC SLIM certification) consists of surveillance, maintenance, permanent plots' monitoring, pests and weed control, and forest fires preventive measures.

In the case of Inverbosques, silvicultural activities comprise saplings production at the company nursery, site preparation and planting, silvicultural maintenance, forest fires preventive measures, pests and diseases control, and selective thinning. A summary of silvicultural activities implemented over the project history is given in the Support Information folder[8].

[7] Support Information>09_Forest Management
[8] Support Information>09_Forest Management>Inverbosques

- Nursery

Inverbosques has a nursery in the zone "Esmeralda" in the property Las Bonitas with a capacity of 3,000,000 seedlings per year. Seeds are purchased directly from seed orchards that offer a certain degree of guarantee in genetics, purity, germination, health and quality. The nursery has an irrigation system and applies limited fertilization.

- Site preparation and planting

Site preparation is also defined by the forest management plan. After an initial risk evaluation, the project proceeds to the site preparation considering its land cover. It is important that the residues remain on site so that they are incorporated into the soil through decomposition processes. No intervention is carried out in the natural forest, nor in the margins of water sources. The density of the plantation is determined by the geometric distribution of the trees in the field, generally using spacing of 3.5 m X 2.55 m for a density of 1,111 trees per hectare; or 3.5 m X 2.14 for an average density of 1,333 trees per hectare.

- Management

Fertilization with important nutrients like nitrogen, phosphorus, potassium and some other nutrients is done in the first months after plantation. Eight days after planting, it is done through base application and later surface banding is applied. Weeding is done using mechanical and chemical methods depending on the size and location of the weeds and trees. Pruning is applied in the early growing years to encourage the growth of high trunks. Phytosanitary health is ensured by following the integrated pest management approach (IPM) building on resilient species, capacity building of workers, pest monitoring and biological and mechanical control mechanisms.

Another key process in forest plantations is forest fires. Inverbosques approach for this process is the preventive management in two areas: 1) The creation of the fire brigade and 2) Firebreak barriers around the plantations.

Social Aspects

As a project with the goal to boost development and fair labor in a remote region, the social aspects of the project are nearly equally important to the project owner as the

forest management activities themselves. Some of the activities carried out for this purpose are:

- Socialization of Inverbosques Social Policy
- Outreach and relationship building with neighbors
- Approaching and establishing relationships with local authorities
- Socialization of the Inverbosques hotline
- Follow-up on community relations and training strategies
- Awareness-raising workshops on issues of general interest
- Community integration workshops
- Play and recreational activities
- Contests related to topics of social and environmental interest
- Visits to identify impacts derived from forestry operations

Additionally, the project is promoting equal opportunities for men and women in access to employment, working conditions, professional development, training and participation in decision-making processes.
By reinvesting the income from carbon finance into these measures, the longevity and sustainability of the project is ensured.

Project areas and Modelling Units

Between 2006 and 2022, project participants have afforested 19,208.4 ha. Out of them, Inverbosques manages 15,926.13 ha and Aldea Forestal 3,282.26 ha (Figure 3).

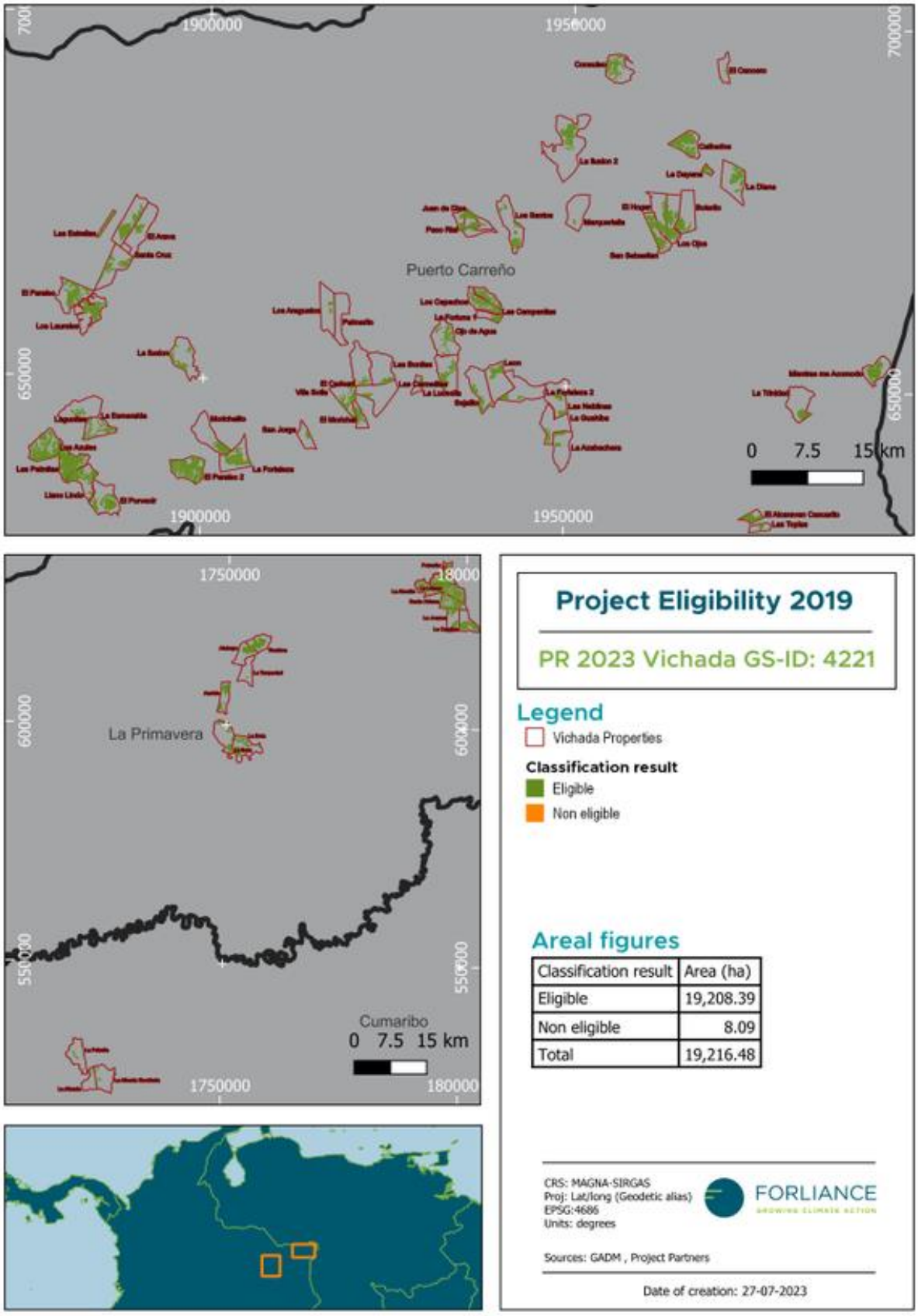


Figure 3. Project eligible areas

As part of the project design change and the renewal design certification, the project's MUs were updated by following a different criterion for their definition. Until 2019, the project had 17 MU defined by company and establishment year[9]. From 2022 on, a sub -MU was added based on species as part of the project design change and renewal design certification[10]. Based on that, the project has a total of 21 Modelling Units (MU) and 52 sub-MU, defined as a coherent area of one planted species of the same planting year belonging to one company (e.g., the MU "AF-Am-2009" is managed by Aldea Forestal with the species Acacia mangium - planted in 2009 (see Table 2). A MUs comparative table is provided on the Support Information[11] for better understanding of MUs changes.

Table 2: Updated Modelling Units in 2023

MU1_ID	MU1_Code	MU2_ID	MU2_Code	Eligible area (ha)
1	AF-2009	1.1	AF-Am-2009	270.07
2	AF-2010	1.2	AF-Pc-2009	238.07
3	AF-2011	2.1	AF-Pc-2010	532.74
4	AF-2012	3.1	AF-Pc-2011	351.88
5	AF-2013	4.1	AF-Pc-2012	443.81
6	AF-2014	5.1	AF-Pc-2013	564.25
7	AF-2015	6.1	AF-Ep-2014	129.27
8	IB-2009	6.2	AF-Pc-2014	504.53
9	IB-2010	7.1	AF-Pc-2015	232.32
10	IB-2011	7.2	AF-Ep-2015	15.26
11	IB-2012	8.1	IB-Am-2009	88.05
12	IB-2013	8.2	IB-Ep-2009	30.34
13	IB-2014	8.3	IB-Pc-2009	0.62
14	IB-2015	9.1	IB-Am-2010	691.58
15	IB-2016	9.2	IB-Ep-2010	428.05
16	IB-2017	9.3	IB-Et-2010	143.91
17	IB-2018	10.1	IB-Am-2011	1471.13
18	IB-2019	10.2	IB-Ep-2011	763.06
19	IB-2020	10.3	IB-Et-2011	42.78
20	IB-2021	10.4	IB-Eu-2011	3.86

[9] Support Information>11_GS-VVB_Docs>Previous_Carbon_Models
[10] Support Information>01_Climate_SDG13>VICH22_MUs_Overview
[11] Support Info>01_Climate_SDG13>4. Projet area&MUs

21	IB-2022	11.1	IB-Am-2012	882.09
		11.2	IB-Ep-2012	104.20
		11.3	IB-Et-2012	10.15
		12.1	IB-Am-2013	741.13
		12.2	IB-Ep-2013	181.47
		12.3	IB-Et-2013	10.03
		12.4	IB-Eu-2013	3.83
		13.1	IB-Am-2014	971.19
		13.2	IB-Ep-2014	301.43
		14.1	IB-Am-2015	570.49
		14.2	IB-Ep-2015	313.05
		14.3	IB-Eu-2015	18.99
		15.1	IB-Am-2016	800.35
		15.2	IB-Ep-2016	695.25
		16.1	IB-Am-2017	250.43
		16.2	IB-Ep-2017	749.37
		17.1	IB-Am-2018	124.55
		17.2	IB-Ep-2018	662.93
		17.3	IB-Eu-2018	3.65
		18.1	IB-Am-2019rep	100.62
		18.2	IB-Ep-2019rep	19.14
		18.3	IB-Pc-2019rep	4.69
		18.4	IB-Am-2019	98.68
		18.5	IB-Ep-2019	665.72
		18.6	IB-PE-2019	845.42
		18.7	IB-Pc-2019	5.84
		18.8	IB-Pt-2019	0.25
		19.1	IB-Ep-2020	605.91
		19.2	IB-Pc-2020	1071.11
		19.3	IB-Ep-2020rep	7.18
		20.1	IB-Ep-2021	756.70
		21.1	IB-Ep-2022	686.72
	Total			19,208.4

A.4 Scale of the project

The project eligible area covers 19,208.4 ha which is considered a large-scale project, as stated by Land Use & Forest Activity Requirements. V 1.2.1. The project can be defined as a grouped project being the project region the expansion areas as it is expected that new areas are incorporated.

A.5 Funding sources of project

The project has the support of some investment to initiate the plantation, with a legal contract allowing them to clearly identify the part and percentage of their share inside the project. This includes a transparent process to provide land tenure titles, specify the owners of the resources inside the project (wood, $CO_{2,}$ and other resources). Further, the group cooperates directly with different organizations in the area. The management expertise of this cooperation is a must to administrate the forestry operations effectively, choose wisely the technical team for operational management and guarantee the permanence of the project, and therefore guarantee the predicted revenue from the project carbon sequestration potential -that is the main source of income for the project development.

SECTION B. APPLICATION OF APPROVED GOLD STANDARD METHODOLOGY (IES) AND/OR DEMONSTRATION OF SDG CONTRIBUTIONS

B.1. Reference of approved methodology (ies)

>> This project was certified in 2016 under the Gold Standard V 0.9. In 2019, it transitioned to the GS4GG, and in 2023 is conducting a Design Certification Renewal, under the methodology Gold Standard Afforestation/Reforestation (A/R) GHG Emissions Reduction & Sequestration Methodology – Version 2.0.

B.2. Applicability of methodology (ies)

>> The Gold Standard Afforestation/Reforestation (A/R) GHG Emissions Reduction & Sequestration Methodology V 2.0 names six criteria for projects to apply the methodology. Their compliance is described below:

a. Projects can apply all silvicultural systems:

- *i. Conservation forests (no use of timber)*
- *ii. Forests with selective harvesting*
- *iii. Rotation forestry*

The project applies a conservation system (i).

b. All projects can include agriculture (agroforestry) or pasture (silvopasture) activities.

The project does not include agroforestry nor silvopastoral activities.

c. Project Areas shall not be on wetlands.

The project areas are not on wetlands. An eligibility analysis was developed from the project start date and also 10 years prior the start date. See Figure 4.

In June 2018, after the project start date, the Bita River basin declared a Ramsar wetland area. It protects 822,600 ha. Since the declaration, a management plan has been developed for the Ramsar site by the Omacha Foundation, Orinoquia Foundation, National University of Colombia, and RESNATUR (a private nature reserve network). The plan focuses on fisheries but also splits the whole basin into three zones:

Conservation, Restoration and Production[12]. Additionally, an agreement has been made to create within the Ramsar site an ecological corridor (228,000 ha) -the largest in Colombia- that connects the Upper and Middle Bita rivers and allows movement of 34 species of medium- and large- sized mammals including tapir, jaguar, puma, river dolphins, otters and migratory fishes. Among others, the agreement was signed between the Ministry of Environment, the Omacha Foundation, the Project Design Developers-Folgers Inc., the Tapirs Specialist Group of IUCN SCC, the forestry sector, and the farmers who are located within the ecological corridor in the Ramsar site. These parties committed to undertake sustainable agricultural practices and livestock production, forestry and responsible fruit production within the corridor and support the monitoring of flagship wildlife populations[13]. The Vichada Reforestation Project was part of this agreement and of the overall planning process[14].

[12] https://www.ramsar.org/sites/default/files/colombia_-_agriculture_and_bita_ramsar_site.pdf
[13] https://conservationcorridor.org/ccsg/what-we-do/projects-and-activities/guidelines/case-studies/bitariver/
[14] See VICH22_AF_Omacha_Foundation, VICH22_INV_Omacha_Foundation_Presentation and https://www.ramsar.org/sites/default/files/colombia_-_agriculture_and_bita_ramsar_site.pdf

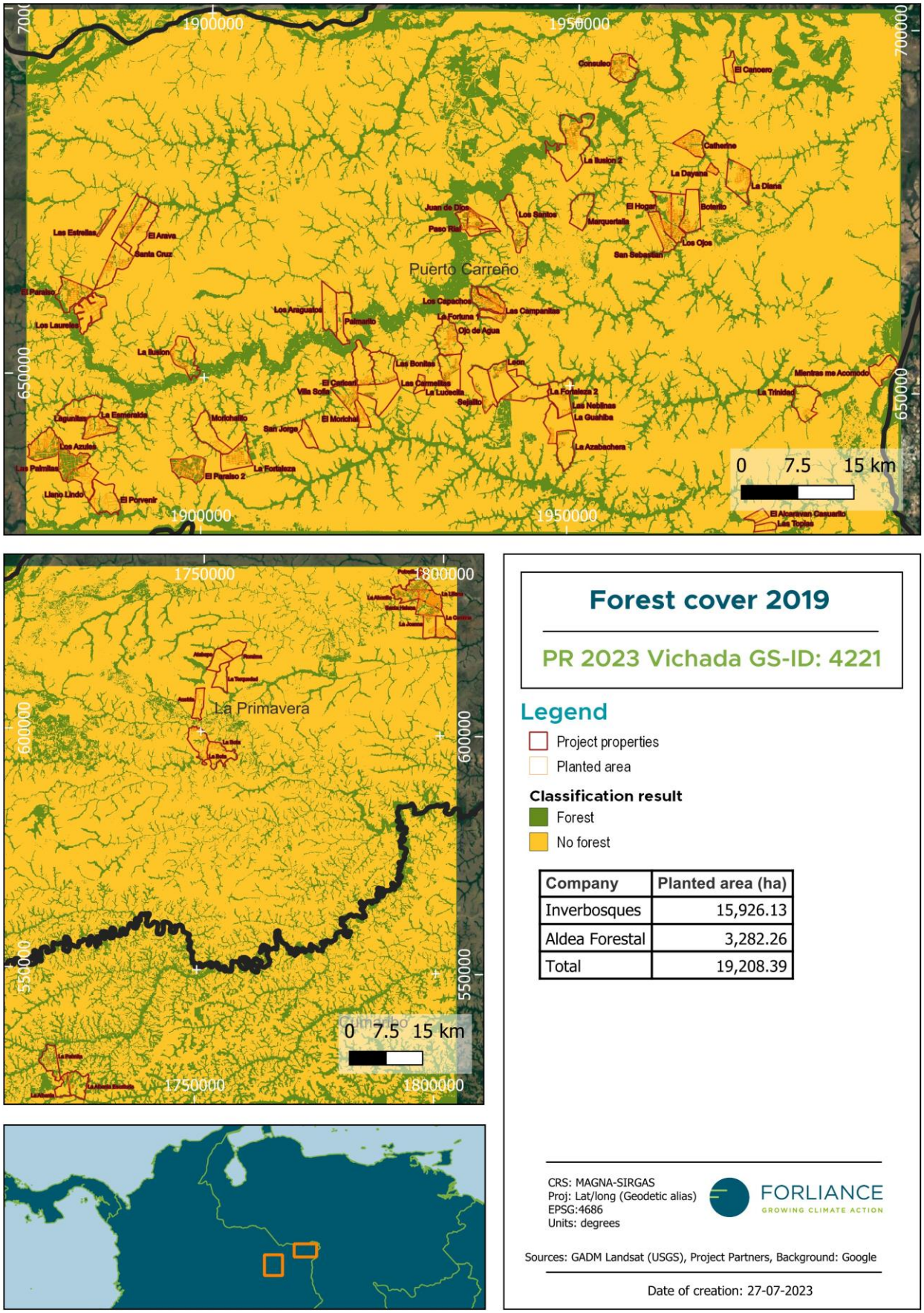


Figure 4. Forest cover analysis

d. Project Areas with organic soils shall not be drained or irrigated (except for irrigation for planting).

The project area does not have organic soil but loamy mineral soils[15]. No drainage or irrigation takes place in the project apart from during the nursery phase. See forest management plans.

e. Soil disturbance (through ploughing, digging of pits, stump removals, infrastructure, etc.) on organic soils shall be in less than 10% of the area that is submitted to certification (not 10% of the entire project area).

See above, the project area does not have organic soil.

Further, soil disturbance is insignificant. Soil is prepared manually and with small machinery as part of land preparation activities and only during planting years.

f. The most likely scenario without the project (baseline scenario) shall be defined for the project area. This scenario shall not show any significant increase of the Baseline biomass ('tree' and 'non-tree').

The baseline scenario is degraded grassland areas, which does not represent an increment in baseline biomass. See section B.4 for more details.

B.3. Project boundary

Source		GHGs	Included?	Justification/Explanation
Baseline scenario	Tree biomass - aboveground	CO_2	Yes	Mandatory (Section 3.1 of GHG methodology)
	Tree biomass – belowground	CO_2	Yes	Mandatory
	Non-tree biomass - Aboveground	CO_2	Yes	Mandatory
	Non-tree biomass - Belowground	CO_2	Yes	Mandatory
	Soil	CO_2	No	Inclusion optional; not considered

[15] See 09_Forest Management

	Harvested wood (timber & energy wood)	CO_2	No	Excluded by default
	Litter & Lying dead wood	CO_2	No	Excluded by default
Project scenario	Tree biomass - aboveground	CO_2	Yes	Mandatory
	Tree biomass – belowground	CO_2	Yes	Mandatory
	Non-tree biomass - Aboveground	CO_2	No	Excluded by default
	Non-tree biomass - Belowground	CO_2	No	Excluded by default
	Soil	CO_2	Yes	Inclusion optional; considered relevant
	Harvested wood (timber & energy wood)	CO_2	No	Excluded by default
	Litter & Lying dead wood	CO_2	No	Excluded by default
Project scenario – Other emissions	Biomass burning (Site preparation)	N_2O and CH_4	No	3.8.2 "Where existing 'tree' and 'non-tree' biomass of the Baseline is burned for the purpose of land preparation, an additional 10% of the Baseline shall be deducted. This is to account for N_2O and CH_4 emissions that are released during the burning process."
	Fertilizer	CO_2	Yes	3.8.3 "0.005 tCO_2 per kg of nitrogen (N) fertiliser shall be deducted"
	Combustion of fossil fuel	CO_2	No	3.8.4 "CO_2 and Non-CO_2 green-house-gas emissions caused by the use of fossil fuel from project activities (flights, management operations, etc.) are insignificant and may therefore be neglected."
	N-fixing trees	CO_2	No	3.8.5 "CO_2 and Non-CO_2 green-house-gas emissions caused by the use of N-fixing species may be conservatively assumed to be zero"

B.4. Establishment and description of baseline scenario

>> The baseline scenario has remained the same since the Project Design Document in 2016. Two maps were produced to outline the land use prior the project start date and at the last performance review. From the maps below, the main land use in the project area are grassland with patches of pastures and previously validated and verified forest plantation. The land use is based on the official land use classification of Colombia.

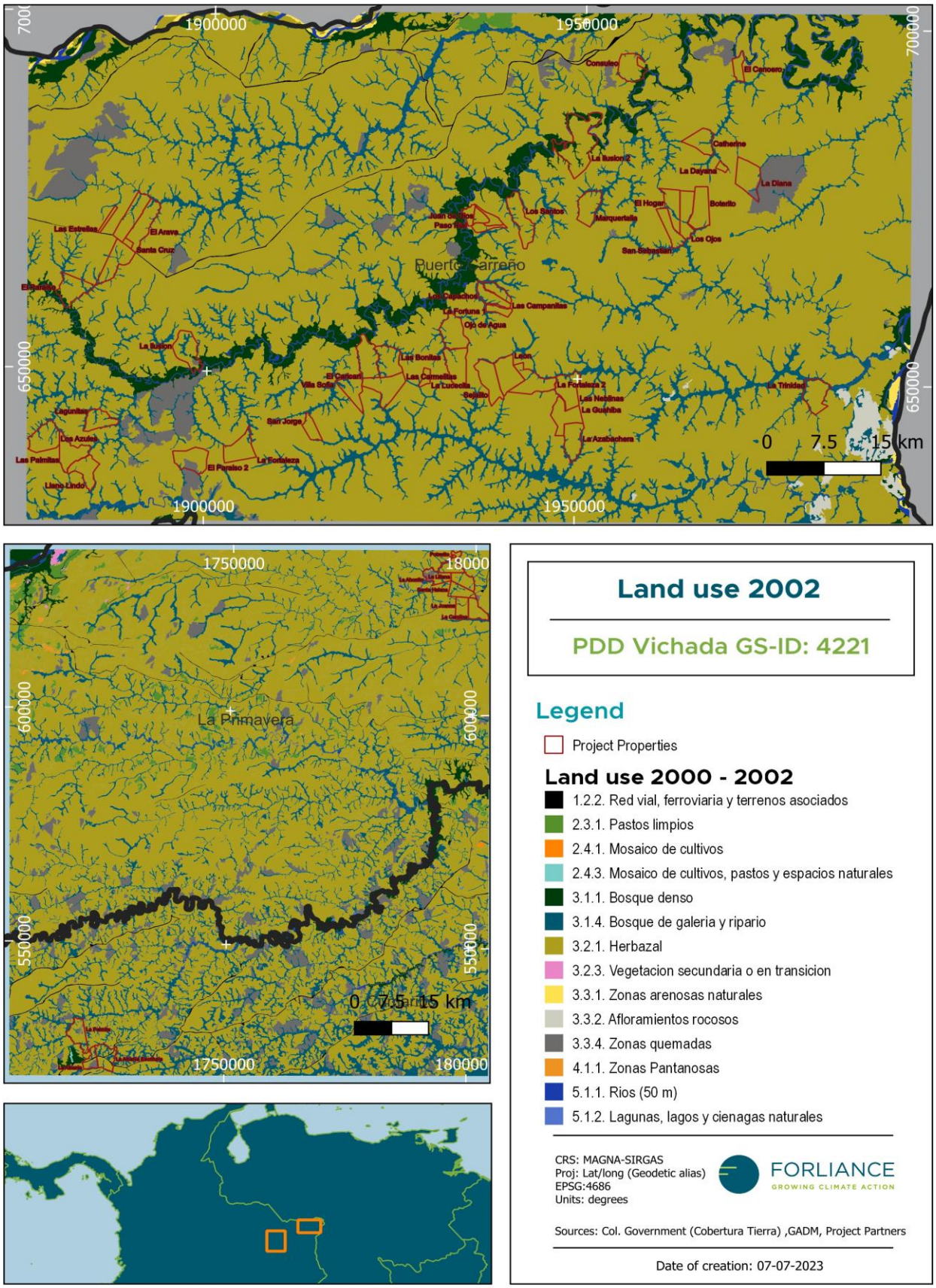


Figure 6a. Land use 2002

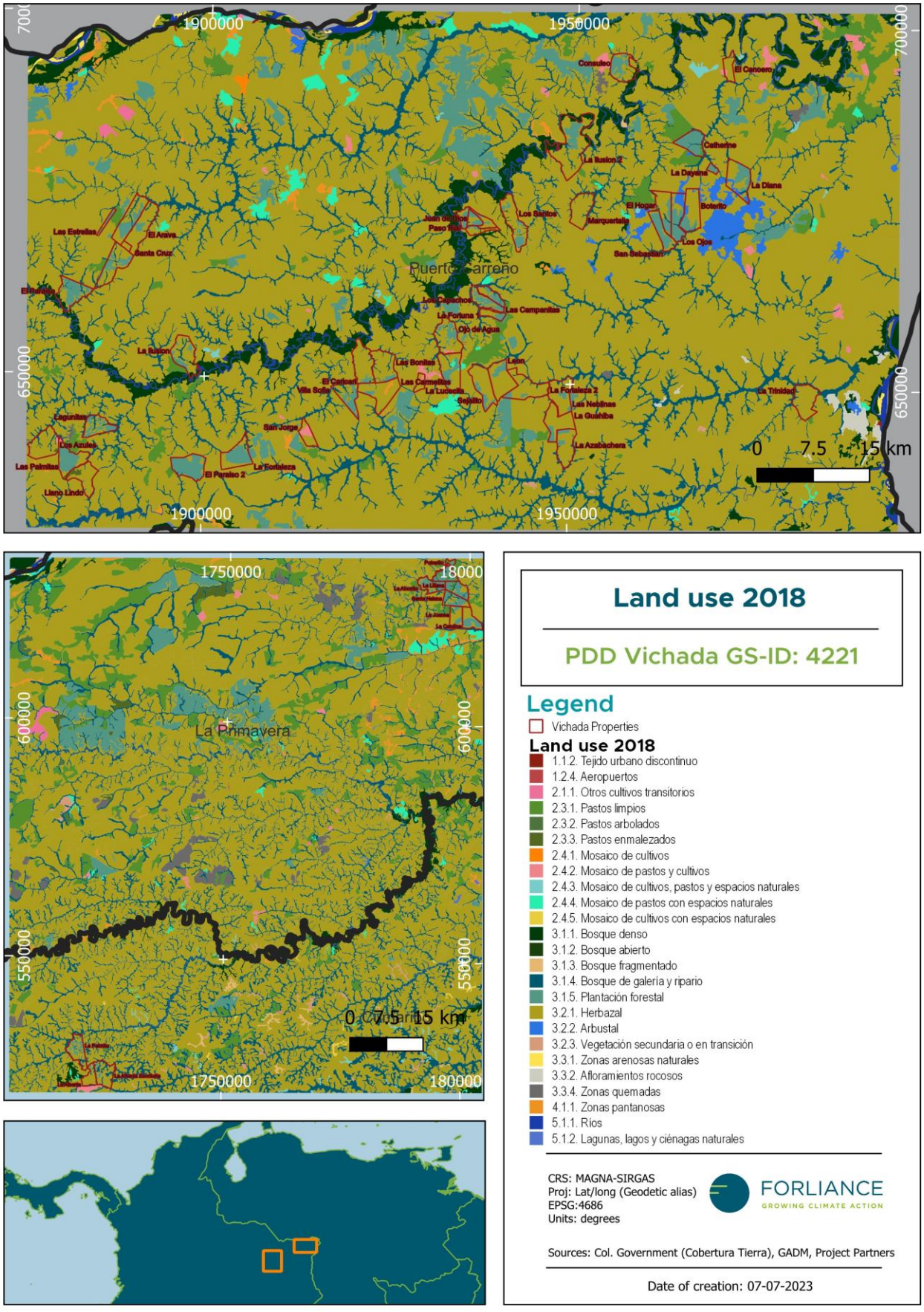


Figure 6b. Land use 2018

Regarding agricultural productivity, livestock farming in Vichada is characterized by traditional extensive livestock farming, with low technological adoption and conventional production models that result in low profitability and productivity (Alcaldia de Puerto Carreño, 2016;2020)[16]. Similar, one of the main gaps to boost this sector is the lack of innovation to improve pastures related to the soil fertility and characteristics (Muñoz et al.,2022)[17]

Both Aldea Forestal and Inverbosques have done several soil analyses prior and during the project implementation, where the main soils types present the following characteristics[18]:

Low natural fertility
Low base saturation
High aluminum saturation
Poor in phosphorus nutrients
Susceptible to water erosion

In relation to the poor soil profile, the fire management in the region is one of the activities that has impacted the land use change from grasslands to agricultural production. Farmers or cattle ranchers renew pastures in the dry season to increase soil productivity and to expand to new areas for agriculture. Nonetheless, the fires becomes uncontrolled fires expanding over grasslands and other land uses[19] (Hernández & Mendoza, 2021)[20].

Therefore, the main land use for all areas within the project boundary is degraded grasslands.

[16] Link: https://www.puertocarreno-vichada.gov.co/Transparencia/plan_de_desarrollo/Plan%20de%20Desarrollo%202016-2019.pdf & http://www.vichada.gov.co/planes/plan-de-desarrollo-2020-2023-trabajo-para-todo-vichada
[17] Link: https://www.ufz.de/export/data/global/266736_DP_2022_4_Munoz_etal.pdf
[18] Soil reports available to the auditor
[19] Official news of fores fires in the región. https://www.parquesnacionales.gov.co/portal/es/alerta-roja-y-naranja-en-la-orinoquia-colombiana-por-probabilidad-de-incendios-forestales/
[20] Link: https://repository.udistrital.edu.co/bitstream/handle/11349/26650/EVALUACIO%CC%81N%20DIAGNO%CC%81STICA%20DE%20LA%20PE%CC%81RDIDA%20DE%20COBERTURA%20VEGETAL%20POR%20INCENDIOS%20FORESTALES.pdf?sequence=1&isAllowed=y
Link: https://colaboracion.dnp.gov.co/CDT/Desarrollo%20Territorial/Portal%20Territorial/KIT-OT/Presentaci%C3%B3n-Vichada.pdf

B.5. Demonstration of additionality

Use this table for Automatic Additionality Only – delete if N/A

Specify the methodology, activity requirement or product requirement that establishes deemed additionality for the proposed project (including the version number and the specific paragraph, if applicable).	The project additionality was assessed in 2015 when the project design was certified. The methodology followed was the Option 1 – AR CDM Tool.
Describe how the proposed project meets the criteria for deemed additionality.	The project additionality assessed in 2015 is provided in the Support Information folder[21]. Futher, the project has gone under performance reiew in 2019, where additionality was assessed too.

B.5.1 Prior Consideration

As a retroactive project, prior consideration requirement was fulfilled as part of the project Design Certification in 2016.

B.5.2 Ongoing Financial Need

Extensive grazing was and is still the main land use activity in this area. This activity is attractive to the landowners as it requires comparatively low investment and has shorter investment return periods. Forest plantations on the other hand need moderately high levels of technical knowledge to be implemented and managed, which the average landowner does not possess in this area. Projects that are developed according to international standards regarding environmental and social norms (SDGs implementation, e.g.) require a level of investment and technical knowledge that is not found in this region. These conditions have not changed since the project implementation and previous monitoring period.

[21] Support Information>11_GS-VVB_docs

Since the project is currently under a conservation approach, no income is obtained from harvesting and selling timber or any non-timber forest product. Therefore, the income from the sale of carbon credits is the main flow to finance the project activities –since forest nursery, maintenance, and establishment-. The revenue generated through the certification allows the project participants to additionally execute fire and pest management activities, increase and finance valuable jobs; and maintain the forestry operation in the region.

For example, in the case of Inverbosques, they hired 110 employees (20% female genre). The average salary is twice the Colombian minimum wage. All workers have been trained in personal financial management and working operational procedures. The project brings additional economic co-benefits to the participants and workers and increase the working opportunities on the region (almost 2/3 of Vichada population are below the poverty line). Furthermore, Inverbosques and Aldea set workshops to teach/train locals activities related with the biodiversity and ecosystems conservation.

Regarding financial needs, the financial model for both organizations is available to the auditor as supporting information. The financial model includes costs such as renting the land, forester rangers, FSC certification, forest insurance, field camps and maintenance, phytosanitary control maintenance, administrative costs, CAPEX (establishment and maintenance of forest plantation). The income from the sales of carbon credits is needed for the continuation and expansion of forestry activities in the region (supporting documentation available).

B.6. Sustainable Development Goals (SDG) outcomes

		SDG IMPACT
SUSTAINABLE DEVELOPMENT GOALS TARGETED	MOST RELEVANT SDG TARGET	**INDICATOR (PROPOSED OR SDG INDICATOR)**
13 Climate Action (mandatory)	13.2 Integrate climate change measures into national policies, strategies and planning	Amount of GHGs emissions avoided or sequestered

8 Decent Work and Economic Growth	8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.	Increased employment opportunities – Total number of jobs
		Enhanced opportunities for income generation – Total number of employees earning above local minimum wage
15 Life on Land	15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.	Increased area under tree canopy cover (which might not be large enough to be considered forest as per DNA or host country definition of forest) – Total area of Trees Planted
	15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.	Enhanced biodiversity – Number of protected threatened species in the project area & conservation status of species
		Enhanced biodiversity – Total protected Land Area

B.6.1 Explanation of methodological choices/approaches for estimating the SDG Impact

SDG 13

The proposed project activity is afforestation. The suggested way of measuring the contribution of the project to this SDG and specific target is estimating the amount of CO_2 sequestered by the project activities. This estimation is based on the Gold Standard Methodology for Afforestation/Reforestation (A/R) GHG Emissions Reduction & Sequestration – Version 2.0 (October 2022). Following the same methodology and based on the baseline scenario identified for the project area, the baseline GHG is calculated based on biomass values given in the literature developed for the region.

SDGs 8 and 15

Existing Projects that transition to GS4GG were allowed to retain their existing sustainable development monitoring plan, including indicators chosen. To do so the Project should provide a brief and simple explanation that links the parameter already monitored to the closest, most relevant SDG Target. Based on the Sustainability Monitoring Plan and supported by the Sustainable Development Assessment, our methodological choice/approach for estimating the SDG outcomes was to establish a linkage with the closest chosen parameters and use supporting documentation as proof of compliance.

This approach resulted in many SDG indicators accounted for under the SDGs 8, 12 and 15. However, not only intended targets were included in this process, but also secondary benefits, which in many cases were already addressed in the safeguarding principles assessment. For that reason, those indicators were deleted from the SDGs indicators list. Rather than providing co-benefits, their compliance demonstrates the project compliance with associated Safeguarding Principles.

With the present Design Certification renewal request, the new SDG Impact Tool was applied. Using the "Start with impact category"- method, the existing indicators were considered as a basis for filling in the tool, but some changes were made considering the observations above. Next to the deletion of some monitoring indicators for the above-mentioned reasons, the main change constitutes the deletion of SDG 12. More explanation can be found in Table .

The parameters presented in the monitoring plan tables, and used for monitoring the actual SDG impacts, were taken from the guidelines suggested in the SDG Impact tool.

Baseline estimates

For SDGs 8, the baseline is assumed to be zero for all indicators, since without the project, there would not be any improvement in working conditions or quality education in the project areas.

In the case of SDG 15, the baseline for the monitoring indicator "Total area of Trees Planted" is also zero since the area would not have been afforested without the project (see section B.5.). The baseline for the indicator "Total protected Land Area" is zero because, in the absence of the project, those areas would be under CORPORINOQUIA

(regional environmental authority) vigilance, which does not ensure that deforestation or forest degradation is prevented. That is because of CORPORINOQUIA´s low capacities for effective monitoring and control in the Colombian Plains.

For the monitoring indicator "Number of protected threatened species in the project area & conservation status of species", the baseline should be the number of individuals observed per species present in the project areas before the establishment of the plantations. However, in 2015, at validation stage, a baseline study was conducted only for bird species and only on La Paz properties. Therefore, the monitoring data of the present monitoring period will serve as a baseline. This approach is likely underestimating the SDG impact but will provide more trustworthy results.

As part of the FSC SLIM Certification, both companies have monitored wildlife[22]. As a result, different species with high conservation values have been observed within the project area and categorized according to the IUCN Red List of Threatened Species. Yet, as abundance has not been measured for any company, the baseline estimates were calculated by assuming one observation per species. Future monitoring activities will consider such variable to obtain more robust results about the project impact on wildlife and to be aligned with the measurement unit of this indicator.

Results showed 21 species[23] in the Aldea Forestal project area, where monitoring was conducted based on direct observations. Among the species found, ten were birds, ten different types of mammals, and one reptile.

In Inverbosques's project areas, two methodologies were implemented. On the one hand, a biologist monitored wildlife in HCV areas and classified observations per species and threatened status. On the other hand, forest keepers recorded direct observations. Yet, the scope of the latter methodology only included identification per common name[24]. Results from both monitoring evidenced the presence of 31 species. Among

[22] Support Information>02_Biodiversity_SDG15>Aldea_Forestal
Support Information>02_Biodiversity_SDG15>Inverbosques
[23] Support Information>02_Biodiversity_SDG15>Aldea_Forestal>VICH22_AF_FSC_HCV_Documents
[24] Support information>02_Biodiversity_SDG15> VICH22_INV_Wildlife monitoring_Forest patrols

them, there are four birds and ten mammals of different types. Note that scientific names of forest keepers´ reports were searched based on common names.

For more information on biodiversity monitoring results is available on the Support Information folder[25]

Table 3: Overview of changes to SDG outcomes with the present PDD-Version

SDG	Target	Former indicator	Reason for change	New indicator
		Total number of direct full-time jobs generated as a result of the project	Combine	8.5 Total number of jobs
		Total number of employees by gender		
	8.5	Average working hours per week of female and male employees, including overtime	Delete; safeguarding principle	
		Payments above minimum wage	Different wording	8.5 Total number of employees earning above local minimum wage
		Average number of hours of training/workshops provided to employees by gender	Delete; co-benefit	
8		Frequency rate of work-related injury by gender	Delete; safeguarding principle	-
		Days lost from work due to work-related injuries and illnesses	Delete; safeguarding principle	-
	8.8	Level of national compliance with labor rights (freedom of association and collective bargaining) based on International Labor Organization (ILO) textual sources and national legislation, by gender and migrant status	Delete; safeguarding principle	-
		Number of employees covered by the health insurance plan.	Delete; safeguarding principle	-
		Number of employees that have received health and safety/training training	Delete; safeguarding principle	-
12	**12.2**	Percentage of employees that have received training related to sustainable management.	Delete; co-benefit	-

[25] Support Information>02_Biodiversity_SDG15

		Annual harvest of main commercial species (estimated) according to FSC principles and criteria and based on Sustainable Forest Management Plans.	Delete (Design change + safeguarding principle)	-
	12.4	Avoidance of air pollution shown as the number of trees planted by the project.	Delete, no intended target	-
		Total weight of non-hazardous and hazardous waste produced by project operations.	Delete; safeguarding principle	-
		Percentage of waste produced by the project that is recycled and composted.	Delete; safeguarding principle	-
		Amount of chemical fertilizers and pesticides used in accordance with FSC principles and criteria.	Delete; safeguarding principle	-
		Percentage of employees who have received training/capacity building related to chemical waste management.	Delete; safeguarding principle	-
15	15.2	Promote sustainable forests and stop deforestation following FSC principles and criteria.	Different indicator/Combine	15.2 Total area of trees planted
		Amount of land forested and rehabilitated by project activities.		
		Existence of a Sustainable Forest Management Plan.	Delete; safeguarding principle	-
	15.5	Number of observations or presence of endemic or threatened species in the project location according to the IUCN Red List	Different wording	15.5 Number of protected threatened species in the project area & conservation status of species
		Percentage and total area of conservation area in the project.	Different wording	15.5 Total protected Land Area

B.6.2 Data and parameters fixed ex ante

SDG13

Data/parameter	Emission removals in tCO2e - Baseline
Unit	Tonnes of CO2e/hectare
Description	The Baseline Scenario is defined as the land use scenario that would exist in the absence of the project.
Source of data	Ruegg, 2017; Etter et al, 2011; San Jose et al, 1988
Value(s) applied	Baseline = AGB Baseline + BGB Baseline Baseline: 8.64 tCO2/ha

Choice of data or Measurement methods and procedures	Biomass stock of baseline scenario was identified from literature. It is defined for the project design certification and revised every project renewal design certification.
Purpose of data	Calculation of GHG baseline scenario
Additional comment	As part of the Renewal Design Certification the baseline GHG was updated based on literature available for Colombia

Data/parameter	AGB Baseline in tCO2e
Unit	Tonnes of CO2e/hectare
Description	The AGB Baseline Scenario is defined as the AGB of the land use scenario that would exist in the absence of the project.
Source of data	Ruegg, 2017; Etter et al, 2011; San Jose et al, 1988
Value(s) applied	AGB Baseline: 5.98 tCO2/ha
Choice of data or Measurement methods and procedures	Biomass stock of baseline scenario was identified from literature. It is defined for the project design certification and revised every project renewal design certification.
Purpose of data	Calculation of GHG baseline scenario
Additional comment	As part of the Renewal Design Certification the baseline GHG was updated based on literature available for Colombia

Data/parameter	BGB Baseline in tCO2e
Unit	Tonnes of CO2e/hectare
Description	The Baseline Scenario is defined as the BGB land use scenario that would exist in the absence of the project.
Source of data	Ruegg, 2017; Etter et al, 2011; San Jose et al, 1988
Value(s) applied	BGB Baseline: 2.66 tCO2/ha
Choice of data or Measurement methods and procedures	Biomass stock of baseline scenario was identified from literature. It is defined for the project design certification and revised every project renewal design certification.
Purpose of data	Calculation of GHG baseline scenario
Additional comment	As part of the Renewal Design Certification the baseline GHG was updated based on literature available for Colombia

Data/parameter	Emission removals in tCO2e – Leakage
Unit	Tonnes of CO2e/ha

Description	Leakage is emissions that occur due to a shift of activities from the inside of a project area to the outside of a project area.
Source of data	Leakage assessment was conducted for the project design certification in 2016. A FORLIANCE´s representative and a third party interview ex-landowners and neighbors to inquire on displacement of previous economic activities implemented over the project area.
Value(s) applied	– Leakage: 0 tCO2/ha
Choice of data or Measurement methods and procedures	Gold Standard Afforestation/Reforestation (A/R) GHG Emissions Reduction & Sequestration Methodology, Version 2[26]
Purpose of data	Calculation of leakage
Additional comment	-

Design change and design certification renewal:
Parameter Emission reductions in tCO2e – Biomass burnt was deleted from the monitoring plan. Aldea Forestal has finalized the establishment of forest plantations and Inverbosques, which expands its planting areas annually, does not burn non-tree biomass as part of the land preparation activities.

Data/parameter	Emission removals in tCO2e – Soil Carbon
Unit	Tonnes of CO2e/ha
Description	The soil organic carbon is not sampled during inventory activities
Source of data	Soil Carbon is estimated based on the GS Tool for A/R Projects.
Value(s) applied	Default data used was selected from the tool. It includes: Climatic region: Tropical, wet Soil type: High Activity Clay Soils Soil Carbon (tCO2e/ha/yr) = 2,09

[26] GS_Docs>Other_Docs>See section E in 403.01_V1.0_LUF_AR-Methodology_Integrated-TEMPLATE

Choice of data or Measurement methods and procedures	A/R Soil Carbon Tool of the Gold Standard
Purpose of data	Calculation of soil organic carbon project scenario
Additional comment	For more information, please refer to the carbon model. See Support Information>01_Climate_SDG13

Data/parameter	Emission removals in tCO2e – Biomass Expansion Factor (BEF)
Unit	Dimensionless
Description	BEF is calculated from the ratio of aboveground biomass and bole biomass (defined by a merchantable measure or a minimum DBH)[27].
Source of data	IPCC LUCLUF,Good Practice Guidance for Land Use,Land-Use Change and Forestry, Annex 3A.1 Biomass Default Tables for Section 3.2 Forest Land
Value(s) applied	**Specie** / **BEF** Acacia mangium / 1.5 Eucalyptus pellita / 1.5 Eucalyptus tereticornis / 1.5 Eucalyptus urophylla / 1.5 Pinus caribaea / 1.5 Pinus oocarpa / 1.5
Choice of data or Measurement methods and procedures	BEF values were selected based on IPCC data.
Purpose of data	Calculation of project scenario
Additional comment	-

Data/parameter	Emission removals in tCO2e - Wood density
Unit	ton/m^3
Description	Wood density is the ratio of oven-dry weight of wood over its green volume

[27] Source: Sanquetta, C. R., Corte, A. P., & da Silva, F. (2011). Biomass expansion factor and root-to-shoot ratio for Pinus in Brazil. Carbon balance and management, 6(1), 6.

Source of data	MINAM et al., 2021. https://biocarbono.org/wp-content/uploads/2022/12/Publicacion-GEI-31.10.22.pdf
Value(s) applied	
Choice of data or Measurement methods and procedures	Values were selected at species or genus level from literature about species carbon sequestration performance in the project region. Tree biomass is estimated by multiplying volume per wood density per species.
Purpose of data	Calculation of project scenario
Additional comment	Wood density values were taken from research developed in forest plantations of the project region Further details in Support Information>01_Climate_SDG13

Species	Wood density (ton/m^3)
Acacia mangium	0.55
Eucalyptus pellita	0.71
Eucalyptus tereticornis	0.79
Eucalyptus urophylla	0.71
Pinus caribaea	0.42
Pinus oocarpa	0.48

Data/parameter	Root-to-Shoot Ratio (R-t-s)
Unit	Dimensionless
Description	Ratio of the weight of the roots to the weight of the top of the tree. Used for belowground tree biomass estimation.
Source of data	IPCC LUCLUF, Good Practice Guidance for Land Use, Land-Use Change and Forestry, Annex 3A.1 Biomass Default Tables for Section 3.2 Forest Land
Value(s) applied	

Species	R-t-S
Acacia mangium	0.42
Eucalyptus pellita	0.42
Eucalyptus tereticornis	0.42
Eucalyptus urophylla	0.42

	Pinus caribaea 0.42 Pinus oocarpa 0.42
Choice of data or Measurement methods and procedures	R-t-s values were selected based on IPCC data.
Purpose of data	Calculation of project scenario
Additional comment	-

Data/parameter	Carbon fraction tC/t d.m.
Unit	Percentage
Description	Percentage of the biomass of the tree that is carbon.
Source of data	Gold Standard Afforestation / Reforestation (A/R) GHG Emissions Reduction & Sequestration Methodology
Value(s) applied	0.5
Choice of data or Measurement methods and procedures	Default value
Purpose of data	Calculation of project scenario
Additional comment	-

Data/parameter	C to CO2 factor
Unit	tCO2/tC
Description	Factor applied to convert carbon sequestered to CO_2e sequestered
Source of data	Gold Standard afforestation / reforestation (A/R) GHG emissions reduction and sequestration methodology
Value(s) applied	3.6667 (44/12)
Choice of data or Measurement methods and procedures	IPCC default value.
Purpose of data	Calculation of project scenario
Additional comment	

B.6.3 Ex ante estimation of SDG Impact

For SDGs 8 and 15 ex-ante estimations had to be done for the first time with the Design Certification Renewal request in 2023. Therefore, the long-term estimations are based on existing monitoring data. It is assumed that the total SDG impacts over the project lifetime are the current values plus little to no further growth for Aldea Forestal and approximately 25% for Inverbosques, as the latter is still increasing its operations. The resulting ex-ante estimations are described below for each SDG.

See SDG Impact Tool for more information on the status quo and the relevant supporting documentation.

SDG 13 Climate Action

The ex-ante estimations for SDG 13 are calculated using the Gold Standard afforestation / reforestation (A/R) GHG emissions reduction and sequestration methodology Version 2.0. This project estimates generating 138,528 tCO2e/year on average, for MU planted until 2018: and a total of 4,155,846 tCO2e during 30 years. The GHG removal is updated in every performance review.

SDG 8 - Decent Work and Economic Growth

Since growth has slowed down for Aldea Forestal, it is expected that the current number of employees and their payment will remain the same or, if needed, two more employees will be hired. As Inverbosques is still increasing its operations, it is assumed that the total SDG impacts over the project lifetime are the current observed values of 2022 plus a conservative 0% growth for Aldea Forestal and 25% for Inverbosques.
Thus, the equations for the ex-ante estimations for both SDG 8 indicators are the following:

- Expected value by 2036_{AF} (n Jobs) = Status Quo 2022 * 1
- Expected value by 2036_{AF} (n Employees > minimum wage) = Status Quo 2022 * 1
- Expected value by 2036_{INV} (n Jobs) = Status Quo 2022 * 1.25
- Expected value by 2036_{INV} (n Employees > minimum wage) = Status Quo 2022 * 1.25
- Total project value by 2036 = Expected value by 2036_{AF} + Expected value by 2036_{INV}

That means that Inverbosques (and thereby the whole project) is expected to hire 28 additional employees until the project ends in 2036, and 21 more employees will earn above local minimum wage. This means an expected increase of 24% for SDG 8 impacts the whole project.

Table 4: Ex-ante estimations for SDG 8 (*rounded*)

Indicator	Aldea Forestal		Inverbosques		Total Project	
	Baseline	Ex-ante 2036	Baseline	Ex-ante 2036	Baseline	Ex-ante 2036
Total number of jobs	4	4	112	140	116	144
Total number of employees earning above local minimum wage	4	4	82	103	86	107

SDG 15 – Life on Land

Like for SDG 8, it is assumed that the total SDG impacts over the project lifetime are the current observed values of 2022 plus 0% growth for Aldea Forestal and 25% for Inverbosques.
Thus, the equations for the ex-ante estimations for SDG 8 indicators are presented in the following paragraphs, while the summary of ex-ante estimations is given in Table .

Total area of Trees Planted

As Aldea Forestal finished establishment activities in 2018, its goal is to conserve, at least the planted areas under well condition.

Ex-ante$_{AF}$ (area trees planted)= Status Quo 2022 * 1

It corresponds to the current Inverbosques planted area plus an expected 25% growth in planted areas.

Ex-ante$_{INV}$ (area trees planted) = Status Quo * 1.25

Number of protected threatened species in the project area & conservation status of species

As described under B.6.1., baseline values were assumed as the results of this monitoring period results in terms of number of species.

Baseline AF= 21
Baseline Inverbosques= 31

Ex-ante values were estimated by assuming an increment of baseline, which represents future measurements of abundance. For Aldea Forestal, a 25% increase is assumed, considering that the project area will not be extended, but the slow conversion into a more diverse forest will lead to more species and individuals using the project areas as a natural corridor or choosing the project area as their habitat. In contrast, for Inverbosques, a 25% increment is projected based on the company's annual growth, which brings along an increment in the extension of conserved areas.

Ex-ante$_{AF}$ (n Individuals of threatened species) = 21 * 1.25 = 26
Ex-ante$_{INV}$ (n Individuals of threatened species) = 31 * 1.25 = 39

Total protected Land Area

The ex-ante estimation for protected land area assumes that the project continues to put 10% of the total project areas under conservation, as required by the standard. For Aldea Forestal, as it will not plant additional areas, the objective is to conserve under good conditions those areas and when possible, to increase such areas through the implementation of restoration or conservation activities. In the case of Inverbosques conserve more than 10% and it will add conservation areas to every expansion of the project area.

The project baseline is defined as 52 species because some of them were registered in Aldea Forestal and Inverbosques areas. Further, expected value by 2026 is accounted for an increase in 25% of species abundance registered in both project participants areas.

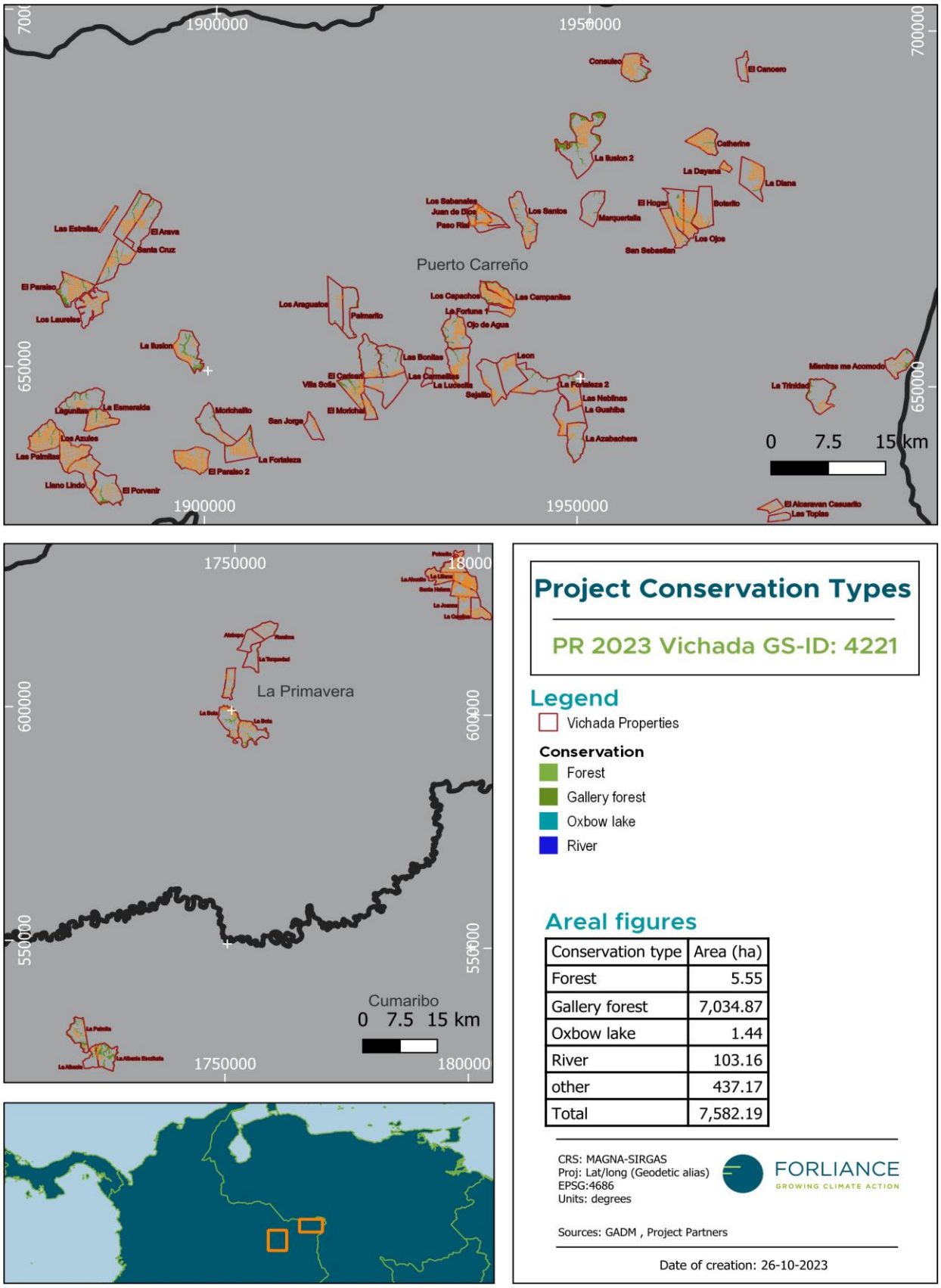


Figure 7. Conservation areas

Table 5 shows a summary of the baseline and ex-ante estimates for the SDG 15 indicators.

Table 5: Ex-ante estimations for SDG 15

	Aldea Forestal		Inverbosques		Total Project	
Indicator	**Baseline**	**Ex-ante 2036**	**Baseline**	**Ex-ante 2036**	**Baseline**	**Ex-ante 2036**
Total area of Trees Planted (ha)	3,282.26		11,182.54		19,208.4	
Number of observations of protected threatened species in the project area	21	26	31	39	52	65
Total protected Land Area					7,487	

B.6.4 Summary of ex ante estimates of each SDG Impact

SDG 13

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
Year 1	5,533	5,533	0
Year 2	5,533	5,533	0
Year 2	5,533	5,533	0
Year 4	5,533	5,914	382
Year 5	5,533	9,375	3,843
Year 6	5,533	26,058	20,525
Year 7	5,533	53,899	48,367
Year 8	5,533	72,295	66,763
Year 9	5,533	94,786	89,253
Year 10	5,533	122,897	117,364
Year 11	5,533	149,710	144,178
Year 12	5,533	184,400	178,868
Year 13	5,533	210,848	205,316

Year 14	5,533	237,459	231,927
Year 15	5,533	273,958	268,425
Year 16	5,533	316,024	310,492
Year 17	5,533	345,421	339,888
Year 18	5,533	353,233	347,700
Year 19	5,533	353,233	347,700
Year 20	5,533	353,233	347,700
Year 21	5,533	353,233	347,700
Year 22	5,533	353,233	347,700
Year 23	5,533	353,233	347,700
Year 24	5,533	353,233	347,700
Year 25	5,533	351,922	346,390
Year 26	5,533	348,168	342,635
Year 27	5,533	342,666	337,133
Year 28	5,533	339,656	334,123
Year 29	5,533	336,519	330,986
Year 30	5,533	332,535	327,002
Total	**165,982**	**6,643,743**	**6,477,761**
Total number of crediting years	30		
Annual average over the crediting period	**5,533**	**221,458**	**215,925**

SDG 8

Indicator	Total Project Value by 2036	Number of crediting years	Annual average over the crediting period (*rounded*)
Total number of jobs	144	30	5
Total number of employees earning above local minimum wage	107	30	4

SDG 15

Indicator	Total Project Value by 2036	Number of crediting years	Annual average over the crediting period
Total area of Trees Planted	19,208.4	30	482
Number of protected threatened species in the project area & conservation status of species	51	30	2
Total protected Land Area	7,487	30	

B.7. Monitoring plan

B.7.1 Data and parameters to be monitored

Parameters monitored for SDGs 8 and 15 were updated at design certification renewal in 2023 as the existing tables did not correspond with the SDGs selected in Section B.6.

SDG 13

Data / Parameter	Productive area
Unit	Hectares (ha)
Description	The productive area is considered as the eligible area where tree planting (or related actions) activities take place and that meets the applicability conditions of the applied Gold Standard Methodology.
Source of data	- Inverbosques and Aldea Forestal information on productive area boundaries.
Value(s) applied	Updated in every performance review event

Measurement methods and procedures	Remote sensing tools to trace project productive area and planted areas.
Monitoring frequency	At each performance certification event
QA/QC procedures	Remote sensing tools are used to trace the project's productive area.
Purpose of data	Report on SDG 13
Additional comment	This parameter is monitored because it represents the eligible area where afforestation can take place.

Data / Parameter	Height
Unit	Meter
Description	The height will be used to calculate tCO_2 sequestration in the planted areas.
Source of data	Field measurements: Forest Inventory
Value(s) applied	Updated in every performance review event
Measurement methods and procedures	A sampling approach is designed and conducted by experts to measure tree´s allometric variables. Sample plots are measurement units were variables, such as height are registered. The amount of sample plots, their shape and location are determined per project participant depending on the characteristics and variability in planted areas.
Monitoring frequency	At each performance certification event
QA/QC procedures	External foresters are hired to conduct forest inventories to monitor forest plantations growth.
Purpose of data	Report in SDG 13
Additional comment	See Section B.6.1. for further details on monitoring approaches.

Data / Parameter	DBH
Unit	cm
Description	The DBH is used to calculate tCO_2 sequestration in planted areas
Source of data	Field measurements: Forest Inventory
Value(s) applied	Updated in every performance review event
Measurement methods and procedures	A sampling approach is designed and conducted by experts to measure tree´s allometric variables. Sample plots are measurement units were variables, such as Diameter at Breast Height (DBH) are measured.

	The amount of sample plots, their shape and location are determined per project participant depending on the characteristics and variability in planted areas.
Monitoring frequency	At each performance certification event
QA/QC procedures	External foresters are hired to conduct forest inventories to monitor forest plantations growth.
Purpose of data	Report on SDG 13
Additional comment	See Section B.6.1. for further details on monitoring approaches.

Data / Parameter	Tree volume mean annual increment (MAI)
Unit	m^3/ha/yr
Description	Mean Annual Volume Increment of project species on site
Source of data	MAI values are estimated based on DBH and H data and allometric volume equations. Allometric tree variables and equations are provided and measured by the project participants based on forest inventories. Aldea Forestal allometric equations were readjusted on the 2022 Forest Inventory, while Inverbosques allometric equations were fitted in 2019.
Value(s) applied	Updated in every performance review event
Measurement methods and procedures	Each project participant has allometric volume equations adjusted to the project planted areas. Age and volume per tree are used to estimate MAI, which is extrapolated, later, to plot and hectare level.
Monitoring frequency	At each performance certification
QA/QC procedures	External foresters are hired to conduct forest inventories to monitor forest plantations' growth.
Purpose of data	Report on SDG 13
Additional comment	See Section B.6.1. for further details on monitoring approaches. For more details on forest monitoring methodology see Support Info>Climate_SDG13

Data / Parameter	Aboveground tree biomass (AGB)
Unit	Tonnes of CO_2-equivalents/hectare (tCO_2e/ha)
Description	Aboveground tree biomass is calculated using the stem volume, the Biomass Expansion Factor (BEF), carbon fraction and C to CO_2 factor.

Source of data	Forest inventories measurements of DBH and height. Allometric equation of height fitted to project plantations based on height measurements at each forest inventory. Allometric equations of volume per species adjusted to project areas and from literature. Wood density values per species were obtained from MINAM et al., 2021. https://biocarbono.org/wp-content/uploads/2022/12/Publicacion-GEI-31.10.22.pdf
Value(s) applied	Updated in every performance review event
Measurement methods and procedures	AGB is measured to estimate the project contribution to SDG 13. It results from multiplying BEF, wood density, volume per tree, carbon fraction, and a default value to convert C to CO_2e. The volume per tree is calculated based on allometric equations that depend on DBH and heights measurements. Values per tree are then extrapolated to plot and finally to hectares.
Monitoring frequency	At performance certification
QA/QC procedures	AGB values are compared to values available in literature and ex-ante estimates.
Purpose of data	Report on SDG 13
Additional comment	

Data / Parameter	Belowground tree biomass
Unit	Tonnes of CO_2-equivalents/hectare
Description	Below ground biomass is estimated based on the root to shoot ratio of trees with respect to aboveground biomass
Source of data	Aboveground biomass estimates Root to shoot ratios were obtained from IPCC
Value(s) applied	0.42

Measurement methods and procedures	- To estimate BGB, root biomass is assumed to correspond to a proportion of AGB. Such proportion is given by the root-to-shoot ratio,
Monitoring frequency	At each performance certification
QA/QC procedures	
Purpose of data	Report on SDG 13
Additional comment	

Data / Parameter	Other emissions
Unit	Tonnes of CO_2-equivalents/hectare(tCO_2/ha)
Description	Other emissions are those that result from the use of Nitrogenous fertilizers during project activities.
Source of data	Project participants provide information on fertilizers applied as part of the forest management plan.
Value(s) applied	Updated in every performance review event
Measurement methods and procedures	Nitrogen content in Kg/ha is calculated based on each fertilizer content given in percentage. Then, such percentage is multiplied by the total kilograms of fertilizers applied per hectare to find Kg of N per hectare. The default value of 0.005 tCO2 per kg of N was applied to the Carbon Model.
Monitoring frequency	At each performance certification
QA/QC procedures	FSC standard certification principles and criteria.
Purpose of data	Report on SDG 13
Additional comment	Other emissions from certain land preparation techniques, from the use energy during project activities, and from nitrogen-fixing trees were not included since they are not related to project activities.

SDG 8

Data / Parameter	Total number of jobs
Unit	Number

Description	Refers to total jobs generated because of the project.
Source of data	Project activity
Value(s) applied	Updated in every performance review event
Measurement methods and procedures	Head count. Use numbers as at the end of the reporting period, unless there has been a material change during the reporting period;"
Monitoring frequency	Annual
QA/QC procedures	-
Purpose of data	Monitor Target 8.5
Additional comment	-

Data / Parameter	Total number of employees earning above local minimum wage
Unit	Number of employees
Description	Refers to the total number of employees earning above the local minimum wage The lowest wage permitted by law or by a special agreement (such as with a labor union).
Source of data	Project activity
Value(s) applied	Updated in every performance review event
Measurement methods and procedures	Head count Use the number as at the reporting period."
Monitoring frequency	Annual
QA/QC procedures	-
Purpose of data	Monitor Target 8.5
Additional comment	-

SDG 15

Data / Parameter	Total area of Trees Planted
Unit	Hectares (ha)
Description	Refers to area of land on which trees were planted during the reporting period.

Source of data	Project activity
Value(s) applied	Updated in every performance review event
Measurement methods and procedures	Measurement
Monitoring frequency	Annual
QA/QC procedures	-
Purpose of data	Monitor Target 15.2
Additional comment	-

Data / Parameter	Number of observations or presence of endemic or threatened species in the project location according to the IUCN Red List
Unit	% increase/decrease in the number of individuals of endangered species "x" spotted in the project area
Description	Refers to number of threatened species present on land and conservation status of the species in reporting period. Threatened species are any species (including animals, plants, fungi, etc.) which are likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The term threatened is an umbrella term for a group of categories that capture various levels of threat to the species, ranging from vulnerable species to endangered species to critically endangered species. Project can refer to the following sources for further guidance and for clarification on the classification definitions cited herein: International Union for the Conservation of Nature Convention on International Trade in Endangered Species of Wild Fauna and Flora
Source of data	Project Activity (Species monitoring)
Value(s) applied	Updated in every performance review event
Measurement methods and procedures	Calculation
Monitoring frequency	Annual.
QA/QC procedures	-
Purpose of data	Monitor Target 15.5

Additional comment	-

Data / Parameter	Total protected Land Area
Unit	ha of functional ecosystem ha of enhanced or regenerated ecosystem
Description	Refers to the total project area of land identified and marked as a protected area to enhance biological diversity. For example, the Gold Standard project is required to mark 10% of the project area as a protected area (LUF Activity Requirements).
Source of data	Project activity
Value(s) applied	Updated in every performance review event
Measurement methods and procedures	Measurement
Monitoring frequency	Annual
QA/QC procedures	-
Purpose of data	Monitor Target 15.5
Additional comment	-

B.7.2 Sampling plan

SDG 13

The sampling plan methodology follows the "Sourcebook for Land Use, Land-Use Change and Forestry Projects" by Pearson et al., 2005. It was implemented autonomously by each project participant[28] as summarized below.

Table 6. Summary of forest monitoring methodology per company

Step	Phase	Project participant
1	**Stratification**	A stratum – or Modelling Unit- is defined as a coherent area of one planted species of the same planting year belonging to one

[28] Support_info>01_Climate_SDG13>2. Aldea Forestal>AF_Monitoring
Support_info>01_Climate_SDG13>1. Inverbosques>Inv_Monitoring

		company. Planted areas were stratified for both companies to cover trees growth variability based on company, establishment year and species. For instance, AF-Am-2009 means an Aldea Forestal stand of Acacia mangium and established in 2009.	
Step	**Phase**	**Aldea Forestal**	**Inverbosques**
2	**Forest inventory design**	Randomly stratified sampling	Randomly stratified sampling
3	**Sampling size**	Confidence level of 95%, statistical error equal or less than 10%, variability level, and effective area per stands are considered to determine sampling size. A total of 224 permanent plots are measured every monitoring.	The sampling intensity is 0.5%, which represents 814 permanent plots plus additional plots established as the planted area increases.
4	**Plot's location**	Plots are permanent, the reason why they were randomly located once. When needed, additional plots are located randomly at each forest inventory.	Plots are permanent, the reason why they were systematically located once. When needed, additional plots are located at each forest inventory.
5	**Plots shape and area**	Circular plots of 500 m^2 with a radius of 12.62 m	Circular plots of 400 m^2 with a radius of 11.28 m.

6	**Tree measurements**	All trees with a height equal or greater than 1.3 m are measured clockwise starting to the north, with the closest tree to the plot center. Qualitative and quantitative variables are measured. DBH is measured in cm for all trees with height equal or above 1.3 m, while heights are measured only for a subset of 16 trees per plot.	All trees with a height equal or greater than 1.3 m are measured clockwise starting to the north, with the closest tree to the plot center. Qualitative and quantitative variables are measured. DBH is measured in cm for all trees with height equal or above 1.3 m, while heights are measured only for a subset of trees equivalent to 20% or 25% of plot density. Regression models are used to estimate missing heights of non-measured trees.

SDG 15

Monitoring Indicator: Enhanced biodiversity – Number of protected threatened species in the project area & conservation status of species.

Approach

- *Inverbosques*

Five camera traps were installed temporarily in 17 different locations within HCV areas of different properties. Bushnell Core Glow cameras were used for the characterization; they were programmed to take a series of five (5) photographs and a fifteen (15) second video per event detection and were active 24 hours a day.
Each photograph and video provided the following capture information: date, time, moon phase and temperature. To avoid overestimation, a group of photographs of the same species every 24 h in the same camera was considered as an individual[29].

[29] See VICH22_INV_HCV-Report_2023

- *Aldea Forestal*

The establishment of camera traps is envisioned but currently not executed. For the time being, animal sightings by field workers are registered to monitor the presence of threatened species. A photo competition among the workers was started to encourage the attention of rare species[30].

Note that all other SDG indicators are measured for the entire project, and not estimated by a sampling approach.

B.7.3 Other elements of monitoring plan

Field Measurements

The following equipment is needed to carry out the forest inventory:

- Compass (this may not be necessary if using GPS)
- Geographic Positioning System (GPS)
- Maps of plots to be measured
- Fiberglass meter tape (100 m and 30 m)
- Tree measuring tape
- PVC tube or pole with 2.5 m painted in 10 cm long bands for height determination
- Metal poles
- Clinometer for tree height and land slope
- Chalk or spray to mark trees after measuring
- Camera
- Data collection forms
- Permanent markers and/or pens

SECTION C. DURATION AND CREDITING PERIOD

C.1. Duration of project

C.1.1 Start date of project

[30] See VICH22_AF_Species-monitoring-method

02/02/2006

The project is retroactive since its first certification. As per the Land-use & Forest Activity Requirements rules, the project start date for the project corresponds to the planting of trees in La Paz areas.

C.1.2 Expected operational lifetime of project

The project is set up as a sustainable conservation forestry project. The operation timeline estimated for both project participants is 50 years. The project participants will continue their forestry activities in the project region beyond the crediting period. After the crediting period, the project participants expects that there is a natural and/or assisted succession to a forest with native species.

C.2. Crediting period of project

C.2.1 Start date of crediting period

02/02/2006

C.2.2 Total length of crediting period

30 years

SECTION D. SUMMARY OF SAFEGUARDING PRINCIPLES AND GENDER SENSITIVE ASSESSMENT

D.1 Safeguarding Principles that will be monitored

A completed Safeguarding Principles Assessment is in Appendix 1, ongoing monitoring is summarized below.

PRINCIPLES	MITIGATION MEASURES ADDED TO THE MONITORING PLAN
2.2 Gender equality	Documentation of contracts and monitoring of salary payments. See SDG 8.
3. Community Health, Safety and Working Conditions	Health and safety policies and trainings on these topics.
6.1.3 Labour rights	Documentation of contracts; see SDG 8
6.1.5 Labour rights	Documentation of workers' safety workshops; see SDG 8

7.2 Energy supply	Ongoing capacity building for sustainable energy use and stakeholder consultations in the frame of FSC certification.
8.1 Impact on Natural Water Patterns/Flows	Monitoring of water consumption and existence of sustainable consumption policies
8.2 Erosion and/or Water Body Instability	Forest Management plans and certified compliance with them (FSC)
9.1 Landscape Modification and soil	Forest Management plans and certified compliance with them (FSC)
9.4 Release of pollutants	Forest Management plans and certified compliance with them (FSC) - Additional information under Principle 9.5 and 9.6
9.5 Hazardous and Non-hazardous Waste	Forest Management plans and certified compliance with them (FSC) Monitoring of waste disposal and capacity building
9.6 Pesticides and Fertilizers	Forest Management plans and certified compliance with them (FSC) Special capacity building related to and monitoring of agro-chemical use
9.11 Endangered Species	Forest Management plans and certified compliance with them (FSC) Additional biodiversity monitoring in the frame of SDG 15 and capacity building for Flora and Fauna Management

D.2. Assessment that project complies with GS4GG Gender Sensitive requirements

Question 1 - Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy?	Women and men have equal access and rights in the project. Marital status is not relevant for employment and the salary is only depending on the respective role and experience. Women take over leading roles in the project. The number of field workers that are male is clearly higher than female due to the physical work, but on the other hand, more women are employed in the administrational entities.

Question 2 - Explain how the project aligns with existing country policies, strategies and best practices	As described in the Transition Annex, the project was aligned with the 2018-2022 National Development Plan (NDP). The new NDP for 2022-2026 is still in the adoption process but a draft is available[17]. Similarly, to the former plan, it includes a commitment to strengthening government institutions that have specific mandates to address gender equality. This includes supporting the gender-sensitive design of public policies and budgets at the national and subnational levels. The main pillars of the agenda include: increasing the educational and economic empowerment of women to eliminate gaps in labour markets; the political empowerment of women; the promotion of women's welfare and health (especially with regards to their sexual and reproductive rights); the promotion of the right to a life free of violence; the recognition of rural women as pillars of development; and, gender equity for peace building.
Question 3 - Is an Expert required for the Gender Safeguarding Principles & Requirements?	No. Gender equality is not an issue in the project. Additionally, FSC certification also requires compliance with these principles.
Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation?	No, there is and were never issues with women's participation in stakeholder consultations. Additionally, FSC certification also requires compliance with these principles.

SECTION E. SUMMARY OF LOCAL STAKEHOLDER CONSULTATION

A Stakeholder consultation based on the A/R Requirements V 0.9 was conducted for the project Design Certification in 2015[31]. Furthermore, the project undergoes annual audits

[31] See folder VICH22_Previous_Stakeholder_Consultations

by FSC, which ensures continuous consultation and active participation of local stakeholders[32].

E.1 Summary of stakeholder mitigation measures

The main outcomes of the initial stakeholder consultation in 2015 are summarized in the Table below.

Stakeholder comment	Was comment taken into account (Yes/ No)?	Explanation (Why? How?)
Local Participation: local population would like to be part of the monitoring (SMP).	Yes	Some employees from the project region work directly in project implementation and solutions regarding SMP. Some of the activities they worked on are related to forest monitoring.
Consider laws and regulations.	Yes	The project has all the necessary documentation according to the regulations for forestry operation. When there is a change in policy and regulations, the project participants will take action to keep the documentation up-to-date and start the corresponding procedures. Supporting documentation per project participants is presented to the VVB. Further, project participants' documentation will be reviewed every year in the annual monitoring report.
Cooperation with specialists: stakeholders believe that the project should make alliances with specialists for monitoring biodiversity.	Yes	The project is already part of an important national initiative and is cooperating with an important biodiversity initiative.

[32] See https://connect.fsc.org/document-centre/documents/resource/277 and https://connect.fsc.org/document-centre/documents/resource/392

E.2 Final continuous input / grievance mechanism

METHOD	INCLUDE ALL DETAILS OF CHOSEN METHOD (S) SO THAT THEY MAY BE UNDERSTOOD AND, WHERE RELEVANT, USED BY READERS.
Aldea Forestal: Grievance box ("Buzón PQR")	A physical mailbox installed on the plantation. It is accessible for both workers and community members and provides an option for anonymous feedback and questions. It is checked monthly and the process for following up on the input is described in the communication guidelines.[33]
Inverbosques: Suggestion box ("Buzón de sugerencias")	A physical mailbox was installed on the plantation for anonymous feedback and questions. It is checked every two months[34].
Inverbosques: Offer for direct communication	In addition to the box, a landline and an email address are dedicated for feedback and questions via direct communication. The number is +57 (4) 322 1348 and the email info@inverbosques.com[35].
GS Contact (mandatory)	help@goldstandard.org
Other	-

[33] See Supporting doc >05_Social
[34] See 20230210 INFORME DE GESTIÓN SOCIAL 2022 INVERBOSQUES
[35] https://www.inverbosques.com/contacto/

APPENDIX 1 - SAFEGUARDING PRINCIPLES ASSESSMENT

Complete the Assessment below and copy all Mitigation Measures for each Principle into SECTION D above. Please refer to the instructions in the Guide to Completing this Form.

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
Principle 1. Human Rights			
1. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the	1.During the construction and operation of the project, the project proponent respected and respected all human rights. The project is not in any kind of conflict with the livelihood of local people[36].	1.Project proponent had conducted stakeholder's consultation and sought their opinion. The project adheres to the host country´s commitment and ratification to The Universal Declaration of Human Rights (UDHR), the International Covenant on Economic, Social and Cultural Rights, International	Not required

[36] See Support information folder> 04_Social

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
Universal Declaration of Human Rights 1. The Project shall not discriminate with regards to participation and inclusion	2. The project will not employ any personnel based on gender, race, religion, sexual orientation, or any other basis. Article 13 of the Colombian Constitution provides that nobody shall suffer discrimination because of their sex, race, national or family origin, language, religion, political opinions, or beliefs[37].	Covenant on Civil and Political Rights (ratified, acceded or succeeded 29.10.69)[38]. It was incorporated in Colombia's domestic law by Act 74 of 1968, approving the "International Covenants on Economic, Social and Cultural Rights and on Civil and Political Rights and the Optional Protocol to the latter instrument, adopted unanimously by the General Assembly of the United Nations in New York on 16 December 1966". The host country has also ratified the eight fundamental Conventions of the International Labour Organization and has set up an ILO	

[37] Source: https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:11200:0::NO::P11200_COUNTRY_ID:102595
[38] Source: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=IV-4&chapter=4&clang=_en

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		declaration[39]. Additionally, stakeholder consultations are held on a regular basis in the frame of the FSC certification[40] 2. The project is following the non-discrimination principles by FSC[41]. The companies are hiring women, people from local communities, and even indigenous community members. See also SDG 8.	
Principle 2. Gender Equality			
1. The Project shall not directly or indirectly lead	1. All project participants have within their	1. See left.	1.None required.

[39] Source: https://www.ilo.org/wcmsp5/groups/public/@ed_norm/@relconf/documents/meetingdocument/wcms_646373.pdf
[40] VICH22_AF_FSC_Principles
[41] VICH22_AF_FSC_Principles

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
to/contribute to adverse impacts on gender equality and/or the situation of women 2. Projects shall apply the principles of non-discrimination, equal treatment, and equal pay for equal work 3. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks 4. (where required) Summary of opinions and recommendations of an Expert Stakeholder(s)	Management Plans a Gender Equality policy as a mechanism to promote equal opportunities for men and women in access to employment, working conditions, professional development, training, and participation in decision-making processes within their organizations[42]. 2. There is no place for discrimination against women in this Project. The project does not potentially reproduce or further deepen discrimination against women based on gender.	2. Wages and payments are uniform among all workers regardless of gender and above the minimum wage. 3. Not applicable.	2. See SDG 8, company records and payrolls. 3.None required.

[42] See VICH22_INV_Gender-policy and VICH22_AF_FSC_Principles

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
	3. As described in the Transition Annex, the project was aligned with the 2018-2022 National Development Plan (NDP). The new NDP for 2022-2026 is still in the adoption process but a draft is available[43]. Similarly, to the former plan, it includes a commitment to strengthening government institutions that have specific mandates to address gender equality. This includes supporting the gender-sensitive design of public policies and budgets at the national and		

[43] https://colaboracion.dnp.gov.co/CDT/portalDNP/PND%202022/Bases-PND2022-2026_compilado-CEVC15-10-2022.pdf

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
	subnational levels. The main pillars of the agenda include: increasing the educational and economic empowerment of women to eliminate gaps in labour markets; the political empowerment of women; the promotion of women's welfare and health (especially with regards to their sexual and reproductive rights); the promotion of the right to a life free of violence; the recognition of rural women as pillars of development; and, gender equity for peace building.		
Principle 3. Community Health, Safety and Working Conditions			

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
1. The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community	The project complies with all relevant local and national laws. The Project does not threaten human health or the environment and does not adversely affect the health of the workers and the community.	Occupational Health and Safety Management System are followed and applied, and internal policies have been established as reflected in their Sustainable Management Plans[44].	Health and safety policies and trainings on these topics.
Principle 4.1 Sites of Cultural and Historical Heritage			
Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture?	No: The project does not change, damage, or remove any cultural heritage. Colombia complies with the International Covenant on Economic, Social and Cultural Rights (ratified,	Not applicable	Not required

[44] See VICH22_AF_Health_and_safety_at_work and VICH22_INV_Health-Safety

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
	acceded or succeeded 29.10.69)[45] ensuring no damage to critical cultural heritage. As per the list of cultural heritage sites in Colombia[46] by UNESCO, it is clear that the project is not located at a cultural heritage site.		
>> Not applicable			
Principle 4.2 Forced Eviction and Displacement			
Does the Project require or cause the physical or economic relocation of peoples (temporary or	No: The project is not involved and is not complicit in involuntary resettlement or relocation of peoples in	Not applicable	Not required

[45] Source: https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=IV-3&chapter=4
[46] Source: http://whc.unesco.org/en/statesparties/co

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
permanent, full or partial)?	any way. The Project Developers have also obtained all necessary land titles and legal documentation approval[47]. The project is in private land and all necessary documentation about land tenure is available upon request.		
>> Not applicable			
Principle 4.3 Land Tenure and Other Rights			
a. Does the Project require any change, or have any uncertainties related to land tenure	a. No: The project does not require any change to land tenure arrangements on any rights. Project participants	Not applicable	Not required

[47] See Folder "08_Land tenure"

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
arrangements and/or access rights, usage rights or land ownership? b. For Projects involving land use tenure, are there any uncertainties with regards to land tenure, access rights, usage rights or land ownership?	sign usufruct contracts with landowners to get rights over land and forest plantations[48]. In the case of Aldea Forestal, the owners of the properties are shareholders of the company who signed usufruct contracts with Aldea Forestal S.A., for the period that goes from 2008 to 2058. These contracts are legally registered in the Office of Registry and Public Instruments. Up to date, those properties are not under any legal contest as evidenced in land tenure certificates, named		

[48] Support Information>08_Land Tenure

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
	”Certificados de Tradición y Libertad” in Colombia. In the case of Inverbosques, they have the rights. b.No: There are no uncertainties related to land tenure or other usage or access rights as the right of use is contracted and legally registered under the relevant authorities in the country.		
>> Not applicable			
Principle 4.4 - Indigenous people			
Are indigenous peoples present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous peoples?	No: The project is not located on land/territory claimed by any indigenous peoples. Indigenous groups are located and continuously contacted to communicate	Not applicable	Not required

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
	projects activities and initiatives[49]. Good relationships are evidenced by the fact that complaints or conflicts have not arisen between project participants and surrounding indigenous communities, who are engaged annually in stakeholder consultations conducted on a mandatory basis as part of the FSC certification.		
>> Not applicable			
Principle 5. Corruption			
1. The Project shall not involve, be complicit in or	The proponent confirms that there is no corruption involved in the project	Achieved by following and demonstrating compliance with FSC principles and establishing	Not required.

[49] Support Information>05_Social

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
inadvertently contribute to or reinforce corruption or corrupt Projects	activity. To ensure that, project participants implement anti-corruption policies[50] which are also required for the FSC certification. The project abides by the United Nations Convention against Corruption. Colombia ratification was made the 27.10.06[37].	anti-corruption agreements and policies.	
Principle 6.1 Labour Rights			
1. The Project Developer shall ensure that all employment is in compliance with national labour occupational	1.The proponent assures that there will be no bonded or forced labour. A uniform policy will be and is implemented for all	1. ILO principles are included in the management policies of the companies. The workers are aware of the principles. All workers have legal contracts, are	1. See SDG 8. 2. None required. 3. Sample contracts and payrolls[54] 4. Same as point above.

[50] Support Information>06_SOP
[54] See VICH22_AF_Labor and VICH22_INV_Employee_numbers

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
health and safety laws and with the principles and standards embodied in the ILO fundamental conventions 2. Workers shall be able to establish and join labour organisations 3. Working agreements with all individual workers shall be documented and implemented and include: A) Working hours (must not exceed 48 hours per week on a regular basis), AND	employees. The host country has robust laws in place prohibiting forced and compulsory labour. The project is aligned with ILO. Colombia ratified the ILO Fundamental Convention - Forced Labour Convention, 1930 (No.29)[51]. 2. The proponent confirms that all the fundamental rights of the employees will be respected. Colombia has no Forestry Labour organization. The Colombian Constitution and national legislation referred to the principle of dialogue and	affiliated to social security, no child work in any kind, safe processes and working hours are established. The Ministry of Work (Mintrabajo)[42] is responsible for the compliance of these aspects. 2. The project approves a Labour organization; however, the workers don't see it necessary due to good and open communication. 3. Working agreements with all individual workers are documented and implemented. 4. The proponent assures that no child labour is or will be employed. The project proponents have set mechanisms	5. Documentation of annual capacity building[55] See folder 06_SOP in general.

[51] Source: Information System of International Labour Standards, Country Profile, Colombia. Available at: https://www.ilo.org/dyn/normlex/en/f?p=1000:11110:0::NO:11110:P11110_COUNTRY_ID:102595 ; see also VICH22_Terms_Conditions_2015
[55] See VICH22_AF_Health_and_safety_at_work and VICH22_INV_Health-Safety, and VICH22_AF_Trainings

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
B) Duties and tasks, AND C) Remuneration (must include provision for payment of overtime), AND D) Modalities on health insurance, AND E) Modalities on termination of the contract with provision for voluntary resignation by employee, AND F) Provision for annual leave of not less than 10 days per year, not including sick and casual leave.	consultation to promote good relations between employers and workers, to resolve collective labour disputes, and to reach agreement on policies on wages and conditions of work[52]. 3. All workers have legal contracts and their respective social security identification. The Ministry of Work (Mintrabajo) is responsible for the compliance of these aspects. 4. Child labour is strictly prohibited in the country as stated in the constitution and as ratified in the	to ensure the age of all the temporary/ permanent employees during the lifetime of the project. 5.See left.	

[52] Source: https://www.ilo.org/dyn/normlex/en/f?p=1000:13101:0::NO:13101:P13101_COMMENT_ID:3077520

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
4. No child labour is allowed (Exceptions for children working on their families' property requires an Expert Stakeholder opinion) 5. The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures	Convention on the Rights of the Child (28.01.91)[53]. 5. Workers receive annual training to guarantee quality and security during operations.		
Principle 6.2 Negative Economic Consequences			

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Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
1. Does the project cause negative economic consequences during and after project implementation?	No: The financial sustainability of the project has been discussed in the registered PDD. The calculations are for the entire lifetime of the project. There are no negative economic impacts or potential risks to the local economy due to the project activities. Furthermore, the project integrates local workers and provides quality job opportunities.	Not applicable. Also, the project is annually monitored and certified under FSC.	
Not applicable			
Principle 7.1 Emissions			
Will the Project increase greenhouse gas emissions over the Baseline Scenario?	Yes: The project leads to additional greenhouse gas emissions from land preparation, from fertilizer use and fossil fuel use for management practices.	All emission sources at baseline are accounted for under section 3.8 Other Emissions of the Afforestation/reforestation (A/R) GHG emissions reduction & sequestration methodology V 2.0.	None required

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
>> Projects shall not increase greenhouse gas emissions over the Baseline Scenario unless this is specifically allowed within Activity Requirements or Gold Standard Approved Impact Methodologies.			
Principle 7.2 Energy Supply			
Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel	Yes: The project uses energy from a local grid and power supply[56].	The project uses a very limited amount of energy and installed solar panels for activities such as electricity/internet. Electricity is controlled, reported and	Ongoing capacity building[58] for sustainable energy use and stakeholder consultations[59] in the frame of FSC certification.

[56] Support Info>07_Environment>1.Aldea Forestal>VICH22_AF_Environmental_Impact>VICH22_AF_EIA_2021
Support Info>07_Environment>2. Inverbosques>VICH22_Inv_Energy_Consumption
[58] See VICH22_AF_Activity-Logbook_2022 and 411-SIG-MZ-V6 Cronograma Capacitaciones.pdf
[59] VICH22_AF_Social_Impact_Evaluation, VICH22_AF_Env-Impact_Assessment_Results_22

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
resource (such as wood, biomass) that provides for other local users?		monitored. Measures are taken to improve energy efficiency for communal and living areas but all areas within the project have guaranteed access to energy[57]. The project contributes to capacity building related to high power lines and use of electricity at work.	
>> The Project shall not affect the availability and reliability of energy supply to other users.			
Principle 8.1 Impact on Natural Water Patterns/Flows			
Will the Project affect the natural or pre-existing	Potentially: The project is located in a region with	All water resources are conserved, protected and	Monitoring of water consumption and existence of

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Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	pronounced dry and wet seasons. Therefore, it might affect water availability in the dry season.	mapped. The project uses ground-water in a natural way (root system of the mixed plantations) but does not affect negative natural or preexisting pattern of watercourses, ground-water and/or watersheds. The Corporación Autónoma Regional de la Orinoquía, Corporinoquia, adopted the Environmental Management Plan of one of the project participants with the resolution 800.41.11.019 of October 14, 2011, and it is in force. The Environmental Management System, SG-A comprises different modules	sustainable consumption policies[62]

[62] See folder 07_Environment; especially VICH22_INV_Environmental-management-indicators_Summaries and VICH22_AF_Env-Impact_Assessment_Results_22

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		including water management[60]. Other programs such as water-saving and efficient usage of water with system monitoring and wastewater treatment programs are currently implemented. Capacity building about rational and efficient usage of water and wastewater as part of the Environmental Management is also executed. Project locations areas were assessed using the Aqueduct 3.0 Country Rankings[61] datasets to examine the water stress or scarcity as suggested by the standard. At the country level,	

[60] VICH22_INV_Water and VICH22_AF_Environmental_Management_Policy

[61] Aqueduct 3.0 Country Rankings. Available at: https://www.wri.org/resources/data-sets/aqueduct-30-country-rankings. For further details please refer to: https://github.com/rutgerhofste/aqueduct30_country_rankings_data_download/blob/master/metadata.md

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		Colombia is ranked in position 118. Here, water stress scores ranked from 1 (highest water stress score) to 165 (lowest water stress score). The analysis also shows the baseline water stress that measures the ratio of total water withdrawals to available renewable surface and groundwater supplies. Vichada department is categorized as Low (<10%).	
>> Not applicable			
Principle 8.2 Erosion and/or Water Body Instability			

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
a. Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion? b. Is the Project's area of influence susceptible to excessive erosion and/or water body instability?	a. No: The project activity directly protects soil and reduces erosion by maintaining an effective soil cover that reduces erosion and supplies the soil with plenty of organic material. b. No: The project area is not susceptible to excessive erosion or water body instability. The project is located in the Bita river basin under the Ramsar Convention. In this basin, there are several systems temporarily floodable forests called gallery forests or riparian forests, which	a. As stated in the management plans, the project participants are commited to the Sustainable Development Goals: "Vida de ecosistemas terrestres, la empresa contribuye en la protección de bosques, toma acciones para evitar la erosión, invierte para generar suelo nuevo y prohíbe las actividades de caza y pesca". Other actions are implemented within the Soil Management Technical plan as mentioned: "Realización de zanjas para el transporte de escorrentía dentro de los predios que servirán como control de erosión, drenaje y control de taludes"; and "De ser necesario	Forest Management plans and certified compliance with them (FSC)[64]

[64] See folders 14_Forest Management, VICH22_AF_Environmental_Impact and VICH22_INV_General_Environmental-and-Forest_Management

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
	alternate with mosaics of savannas[63].	la remoción de material durante el desarrollo del proyecto se cubrirá el material removido si no se reutiliza o se dispondrá de forma inmediata, para evitar fenómenos de erosión y arrastre de material por viento o por escorrentía hacia los cuerpos de agua cercanos". Erosion and critical erosion points are mapped and monitored. c.All group members have actively engaged in the Bita River Basin Management Plan (POMCA) construction and design among other institutions such as the Omacha Foundation, WWF,	

[63] Source: Lasso, C. A., D. Morales-B. y F. de P Gutierrez. 2014. Criterios bioecológicos para la identificación, caracterización y establecimiento de límites en humedales interiores de Colombia. Serie Editorial Recursos Hidrobiológicos y Pesqueros Continentales de Colombia. Instituto de Investigación de Recursos Biológicos Alexander von Humboldt (IAvH). Bogotá D. C., Colombia. 248 pp.

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		Conservation International, The Nature Conservancy and local/national governmental entities.	
Not applicable			
Principle 9.1 Landscape Modification and Soil			
Does the Project involve the use of land and soil for production of crops or other products?	Yes: The project enhances the role of forest plantations as components of multi-functional landscapes that contribute to native biodiversity conservation and restoration at different scales.	The project through afforestation with FSC certification schemes promotes biodiversity. The long-term goal is to prepare the soil for the growth of forest plantation that support landscape connectivity and forest cover. Soil analysis has been implemented to have a better understanding of the relationship between climatic seasonality, landscape characteristics and intrinsic physicochemical soil properties/features. Monitoring plans are also present to manage	Forest Management plans and certified compliance with them (FSC)

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		soil quality changes and identify erosive and instability processes. Capacity building programs exist to address soil compaction and erosion prevention. Further, FSC certificate guarantees that good and better silvicultural practices are implemented in the forest plantations following the Conservation agreements with Foresters and local partners signed for the designation of the Ramsar site. As mentioned by Suarez et al. (2021), these agreements ensure that the forest partners apply and implement good practices for forestry production through actions such as the control and management of herbicides and agro-inputs, the control of exotic species in native forests, the implementation of environmental	

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		management plans, the prevention of and fire management and training in conservation and management issues. It is worth noting that these conservation areas have the role of Habitat Corridors. These corridors ensure the species' habitat connectivity within the MU and the wider landscape. The survival of many species will depend on the availability of suitable habitats both in the MU and the wider landscape, especially for wide-ranging and large-bodied species (HCV guidance).	
>> .9.1 The Project shall identify the functions and services provided by the landscape and demonstrate no net degradation in existing			

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
landscape function and services. 3.9.2 To ensure healthy soils the following aspects shall be identified, and appropriate measures shall be put in place to protect them: (a) Soil types, AND (b) Biota, AND (c) Erosion 3.9.3 Measures shall be incorporated to minimise soil degradation (e.g., through crop rotation, composting, no use of heavy machinery, use of N-fixing plants, reduced tillage, no use of ecologically harmful substances).			

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
3.9.4 Projects that involve the production, harvesting, and/or management of living natural resources by small-scale landholders and/or local communities shall adopt the appropriate and culturally sensitive sustainable resource management practices.			
Principle 9.2 Vulnerability to Natural Disaster			
Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought	No: The Project will not be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or	All native forests and flood zones are protected. Forest fire management is composed of 2 modules: 1) Creation of fire brigades (or emergency brigades) and	

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
or other extreme climatic conditions?	other extreme climatic conditions.	2) Firebreak barriers around the plantations. People selected for these tasks have been already trained and count with the respective capacity building training courses. FSC certification, as well as all management plans, have a component about how to address and respond to natural disasters or the most common ones in the local area. Mitigation actions, monitoring plans and capacity building compose the whole Action Plan of each company[65].	
>> Not applicable.			
Principle 9.3 Genetic Resources			

[65] See 06_SOP> VICH22_AF_Emergencies-management and VICH22_INV_Emergency_Processes

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
Could the Project be negatively impacted by or involve genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development, or take place in facilities or farms that include GMOs in their processes and production)?	No: The project does not have any impact by the use of genetically modified organisms or GMOs.	No GMOs are used, as it is also prohibited by FSC[66]. The nurseries selling seeds to the project are certified.	None required
>> Not applicable.			
Principle 9.4 Release of pollutants			
Could the Project potentially result in the	No: The project does not lead to the release of any	FSC certification within its principles and criteria describes environmental measures taken	- Forest Management plans and certified compliance with them (FSC)

[66] See 09_Forest Management folder for all FSC annual auditing reports 2019-2022

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
release of pollutants to the environment?	pollutants to the environment.	and implemented by project participants. A weather station was installed by AF. It has already generated the first weather data, in the upper part of the Bita River Basin[67]. This information is being processed and it is a contribution to the region, in agreement with the foundation La Palmita of the Casanare Department. A hydrological station has also been installed inside the Bita River, which will be monitored in the summer, to extract the information, process it, and put it at the service of the region. Management plans within their	- Additional information under Principle 9.5 and 9.6

[67] See VICH22_AF_Weather_Stations_Installation_Report

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		mitigation actions and monitoring structure have as objectives: - Prevent surface and groundwater pollution by implementing a wastewater management and treatment system. - Minimize the risks of contamination, caused by the use of chemical inputs and fuels.	
>> Not applicable.			
Principle 9.5 Hazardous and Non-hazardous Waste			
Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?	Yes: The project involves the generation of a limited amount of hazardous and nonhazardous chemicals and/or materials.	Standard procedure is followed at the site during operation and maintenance reflected in their management plants, as well as FSC guidelines and regulations. Capacity building for all companies addresses hazardous and non-hazardous chemicals	Forest Management plans and certified compliance with them (FSC)

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		and/or materials within their project activities.	
>> The Gold Standard Certification requires that 3.9.11 Projects shall avoid or, when avoidance is not feasible, minimise and control release of hazardous materials resulting from their production, transportation, handling, storage and use in the Project. Where avoidance is not possible, the health risks, including potential differentiated effects on men, women and children, of the potential	Not applicable		Monitoring of waste disposal and capacity building[68][1]

[68] See folders VICH22_AF_Waste_Disposal, VICH22_INV_Waste and VICH22_INV_Environmental-management-indicators_Summaries

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
use of hazardous materials shall be addressed appropriately. 3.9.12 Projects shall consider the use of less hazardous substitutes for such chemicals and materials and will avoid the manufacture, trade, and use of chemicals and hazardous materials subject to international bans or phase-outs due to their high toxicity to living organisms, environmental persistence, potential for bioaccumulation, or potential for depletion of the ozone layer15. 3.9.13 All sources of waste and waste products shall be identified and classified. Waste products include			

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
amongst others: (a) Chemical wastes, AND (b) Containers, AND (c) Fuels and oils, AND (d) Human waste, AND (e) Rubbish (including metals, plastics, organic and paper products), AND (f) Abandoned buildings, machinery or equipment. 3.9.14 Where waste generation may not be avoided, the Project shall reduce the generation of waste, and recover and reuse waste in a manner that is safe for human health and the environment. 3.9.15 Where waste may not be recovered or reused, it shall be treated, destroyed, or disposed of in an			

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
environmentally sound manner that includes the appropriate control of emissions and residues resulting from the handling and processing of the waste material. 3.9.16 If the generated waste is considered hazardous16, reasonable alternatives for its environmentally sound disposal will be adopted while adhering to the limitations applicable to its transboundary movement17. 3.9.17 The Project shall not make use of chemicals or materials subject to international bans or phase-outs. For example, DDT, PCBs and other chemicals listed in			

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol.			
Principle 9.6 Pesticides & Fertilisers			
Will the Project involve the application of pesticides and/or fertilisers?	Yes: Pesticides are minimized and used only selectively in areas with specific problems. Fertilizers are used in early stages of tree growth.	The project follows the national legislation on pesticides and FSC principle and criteria as well as the FSC pesticide policy FSC-POL30-001 V3-0[69].	Forest Management plans and certified compliance with them (FSC)

[69] Source: https://ic.fsc.org/file-download.fsc-pol-30-001-v3-0-en-d1-0-fsc-pesticides-policy-en.7453.htm

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
>> 3.9.18 Projects involving pest management, the integrated pest management (IPM) and /or integrated vector management (IVM) approaches shall be adopted and aim to reduce reliance on chemical pesticides. 3.9.19 The health and environmental risks associated with pest management should be minimised with support, as needed, to institutional capacity development, to			Special capacity building related to and monitoring of agro-chemical use[70][1]

[70] See folders VICH22_INV_Agrochemicals, VICH22_INV_Environmental-management-indicators_summaries and VICH22_AF_MM_Pesticides

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
help regulate and monitor the distribution and use of pesticides and enhance the application of integrated pest management. 3.9.20 When Projects include pest management or the use of pesticides, pesticides that are low in human toxicity, known to be effective against the target species and have minimal effects on non-target species and the environment shall be selected. 3.9.21 There shall be a 'Chemical Pesticides Policy' that is documented, implemented and regularly updated. This policy shall include at a			

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
minimum: (a) Provisions for safe transport, storage, handling and application, AND b) Provisions for emergency situations. 3.9.22 The Project Developer shall not purchase, store, manufacture, trade or use products that fall in Classes IA (extremely hazardous) and IB (highly hazardous) of the World Health Organization Recommended Classification of Pesticides by Hazard. 3.9.23 Fertilisers shall be avoided, or their use shall be minimised and justified. If the aerial application of fertiliser is used, then measures			

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
shall be put in place to prevent drift.			
Principle 9.7 Harvesting of Forests			
Will the Project involve the harvesting of forests?	No: The project follows a conservation model.	The forests are sustainably managed according to the FSC SLIM principles and criteria.	None required
>> Not applicable.			
Principle 9.8 Food			
Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	No: The Project does not have any impact on the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives.	Not applicable	None required
>> Not applicable.			
Principle 9.9 Animal husbandry			
Will the Project involve animal husbandry?	No: The project does not involve animal husbandry.	Not applicable	None required

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
>> Not applicable.			
Principle 9.10 High Conservation Value Areas and Critical Habitats			
Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified?	No: The Project does not affect or alter largely intact or HCV ecosystems, critical habitats, landscapes, key biodiversity areas, or sites identified, as all already existing forests remain, and all protection areas are identified and mapped.	The project activities are implemented in productive and agroforestry areas within the Ramsar area, not in protective areas. The Omacha Foundation, in charge of the formulation of the management plan for the Ramsar site account - Rio Bita, has recently published a book shared as supporting documentation. In Chapter 9 - Transformed Landscapes it can be seen, on page 197 and onwards, a detailed description of the soils of Vichada and the intervention of the Ramsar site in its	

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		agroforestry development potential. They highlight the initiative the project participants are part of and contribute to the protection not only of the Armadillo but also of the Fauna and Biodiversity existing in the basin. The Ministry of Environment and Sustainable Development selected as one of the wetland complexes suitable for inclusion in the List of Wetlands of International Importance, the Wetland Complex of the Bita River Basin, located in the municipalities of La Primavera and Puerto Carreño in the	

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		Department of Vichada[71]. The project actively participates in the construction of the management plan of the Bita River Basin (POMCA). Working Plans focused on different aspects as a central axis for the conservation and sustainable use of the basin are considered and reflected in the Management Plan as follows: **Institutional agreements:** Through the project "Management and Conservation of the Bita River as a Ramsar site", participatory agreements are reached for the construction of the Bita River Plan. management and implementation	

[71] https://www.funcionpublica.gov.co/eva//gestornormativo/norma_pdf.php?i=87540

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		of sustainable production proposals in aquatic and terrestrial ecosystems". The general objective is to support the designation of the RAMSAR Bita River Site and to design the management plan for it. Also, implement management actions in terrestrial and aquatic ecosystems in coordination with the authorities and local actors, with the following specific objectives: a. Establish conservation agreements with basin owners and other stakeholders to focus efforts protection of key species such as dolphins, otters, turtles, peacocks, rays, tapirs and felines. b. Mitigate the conflict between big cats and livestock production in the Bita River basin.	

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		Signposting: Signposting of areas and staff awareness through messages of prevention and control of the different activities. **Capacity building:** In support of the different agreements, training is held on the importance of the protection of the Bita River Basin, through the agreement of wills it is possible to generate the first training with the project participants staff and the community on the importance of protecting the Bita River. This process is part of the continuous improvement of the company to raise awareness among staff, employees and interest groups on the importance of good use of natural resources. Based on the FSC report, in the Bita River Basin, according to studies carried out by the Alexander Von	

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		Humboldt Institute, there are endemic species and species in a state of vulnerability according to IUCN (e.g. Oso palmero, tapir, perro de agua, among others). There is a population located within the basin, which is supplied by the services provided by the basin in areas such as the collection of water for consumption and food. However, the formulation and approval of the Bita River Management Plan, entrusted to the Omacha Foundation, is still pending. Without this plan, it is not possible to determine the scope, area affected and influenced, and protection measures necessary for the maintenance of this HCV, so it is not possible at the moment to carry out the relevant consultations with third parties involved. To date, companies	

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		recognize at the time of the audit the possible existence of HCVs in categories HCV1, HCV2 and HCV5, which must be defined once the management plan is approved. As a mapping tool IBAT[63] was used (Country Profile Colombia) to deliver nationally relevant data that are disaggregated from global datasets, to support conservation planning and reporting. It presents information on species from The IUCN Red List of Threatened Species™, Protected Areas from the World Database of Protected Areas (WDPA) and on Key Biodiversity Areas (KBAs) from the World Database on Key Biodiversity Areas.	
>> Not applicable			
Principle 9.11 Endangered Species			

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
a. Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)? a. Does the Project potentially impact other areas where endangered species may be present through transboundary affects?	a. Yes: There are endangered mmamals registered thorugh biodiversity monitoring within the Project boundary. b. No: The Project does not impact other areas where endangered species may be present through transboundary effects.	Areas for conservation purposes are managed under a forest enrichment approach and mapped. The HCV approach is taken into account to restore and protect degraded areas of ecological, religious or historical relevance. FSC principles and criteria are followed based on the certification. Joint efforts and cooperation signed between the Alexander von Humboldt Research Institute for Biological Resources, the Omacha Foundation and the Vichada Government within the framework of the Project	Forest Management plans and certified compliance with them (FSC) Additional biodiversity monitoring in the frame of SDG 15[72] and capacity building for Flora and Fauna Management[73]

[72] Support Info>02_Biodiversity
[73] VICH22_INV_Other_Env_Impacts

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		"Development of a conceptual, methodological and operational framework for the establishment of an innovative Protected River figure in the Bita River, department of Vichada"[65]. The project included and articulated the research findings from different entities into their management plans, capacity buildings and monitoring modules: "Follow up on the management measures proposed in the Management Plan for the protection and conservation of the region's wildlife. Monitor the impact of the project on this fauna component". The entity responsible for the control of this biotic component is Corporinoquia[66]. The project keeps a record of casual sightings of native fauna. Every person on the premises reports	

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management, or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
		the fauna and the approximate sighting site. This feeds a database, with which it will be possible to see some relative frequency of the different species. There is an absolute prohibition of hunting native fauna.	
>> Not applicable.			

APPENDIX 2 - CONTACT INFORMATION OF PROJECT DEVELOPER(S)

Organization name	FORLIANCE GmbH
Registration number with relevant authority	DE293284454
Street/P.O. Box	Eifelstr. 20
Building	/
City	Bonn
State/Region	North Rhine-Westphalia
Postcode	53225
Country	Germany
Telephone	
E-mail	Info@forliance.com
Website	www.forliance.com
Contact person	Julian Ekelhof
Title	Senior Director Climate Solutions
Salutation	Mr.
Last name	Ekelhof
Middle name	-
First name	Julian
Department	Climate Solutions
Mobile	-
Direct tel.	+49 (0) 228-969 119 – 0
Personal e-mail	info@forliance.com

APPENDIX 3 - LUF ADDITIONAL INFORMATION

Risk of change to the Project Area during Project Certification Period:	Low risk due to a previous analysis before acquiring and including the area to the project. Efficient sustainable management combined with the active participation of important national and international stakeholders demonstrate transparency and permanence of the project activities during 30 years crediting period. Also, contracts signed by project participants commits to participate during the complete crediting period.
Risk of change to the Project activities during Project Certification Period:	Low risk due to a previous analysis before acquiring and including the area to the project. Aldea Forestal and Inverbosques are committed to continue the forestry practices in the region under a conservation approach.
Land-use history and current status of Project Area:	Current situation: Before the project activity started, the baseline of the project area was grassland. All these areas were evaluated and classified as applicable planting areas for A/R activities. Other small patches of native vegetation left were classified and nowadays managed as conservation areas. Other areas (previously planted or due to the project activity) located in the border of a river or other watershed are also classified as conservation areas.

	Further cattle ranging was an activity identified during the additionality assessment. By mid-80s Colombia completed the process of territorial occupation of the Caribbean and Andean regions and to a lesser extent the Orinoco. Regions in the Orinoco were occupied to implement cattle farming systems.
Socio-Economic history:	Current situation: due to a marginal and difficult access location, no previous activities were reported. There was a lack of investment and know-how to create a business model. The previous owner decides to sell the land and migrate to the city, to invest in other activities. Forestry activities in different rural areas can be an effective support to alleviate regional poverty, promote regional know-how, increment capacity building and be a key element for socio-economic development, by providing directly and indirectly jobs. Further, cattle ranging was an activity identified during the additionality assessment (see above).
Forest management applied (past and future)	There was no forest management in the area before the project start and the corresponding afforestation activities. The project proponents were originally considering a rotational management system but have decided to adhere to a conservation system. In

	this system, well adapted species were planted and are now managed and supported to grow into a mature forest. Detailed management practices are described in folder 14_Forest Management.
Forest characteristics (including main tree species planted)	The main species planted are: - Acacia Mangium - Pinus sp. - Eucalyptus sp All three species are fast growing species used already in other parts of the country for land rehabilitation and reforestation. The project area is divided into multiple parcels, alternating species and planting years.
Main social impacts (risks and benefits)	The main social benefits of the project are: - Poverty alleviation: many persons in rural areas are forced to migrate to the cities due to the lack of regional job opportunities. - Equal rights: the company has a multicultural team and a mix of people with equal rights without gender discrimination. - Capacity building: the employees and also neighbours are continuously learning about the

	importance of sustainable management and good practices. Equal rights: a multicultural team requires also the need of having a comprehensive and tolerant perception.
Main environmental impacts (risks and benefits)	The main environmental benefits of the project are: Building new forests: a mix A/R is a key element to obtain an important synergy between the different natural resources existing in the area, and increase the protection of those basic elements: retaining water in the trees and soil to prevent flooding, prevent soil erosion protecting the nutrients and soil microelements, provide shelter to migratory and native animals and insects. Forest Conservation: through this activity, the project ensures native ecosystems connectivity; creating small corridors that impact positively the interconnectivity of different regional natural ecosystems. Climate change: it is a climate project with focus on mitigation strategies to fight global warming. Some low risks of the project are: Climate impact: due to climate change strong winds, fires, and/ or floodings might occur.
Financial structure	The project as it is under a conservation scheme, depends of the

	revenue of the carbon finance. Legal contracts of investor to kick-off the project activities are available to the auditor. This includes a transparent process to provide land tenure titles, specify the owners of the resources inside the project (wood, CO2 and other resources).
Infrastructure (roads/houses etc):	-
Water bodies:	-
Sites with special significance for indigenous people and local communities - resulting from the Stakeholder Consultation:	Not detected
Where indigenous people and local communities are situated:	-
Where indigenous people and local communities have legal rights, customary rights or sites with special cultural, ecological, economic, religious or spiritual significance:	-

APPENDIX 4 - DESIGN CHANGES

A4.1. Details of proposed or actual design change

The project has switched from afforestation with a rotation model to a conservation model. While the ex-ante estimation of the carbon model was always based on a conservation approach, the project had originally planned to build up a rotation forestry system, which was reflected in all project documentation. One previous FAR was to update the carbon model to account for rotational harvesting. However, before reaching the end of the first rotation, some project participants decided not to harvest the established forest stands and thus wished to change to a conservation model instead.

Another Design Change, only two of the original project participants will continue under the Gold Standard ID 4221: Inverbosques and Aldea Forestal. Reforestadora La Paz will transition to a stand-alone project, as the company intends to continue operating under the previously certified rotation management.

A4.2. Describe the impacts of design change on the following

As the participating companies had always operated independently from each other, the removal of La Paz from the project does not have any impact on the following parameters. Therefore, only the change from rotation to conservation is assessed.

a. ***Additionality***

Additionality was originally assessed in 2016 using the A/R CDM 'Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities'. Here, only a barrier analysis was conducted instead of an additional investment analysis, as the baseline was deemed to be the only plausible alternative land use scenario. This is mainly due to the persisting difficult transport conditions in the project region, which make any investment into other commercial projects unviable. Even though the need for operational infrastructure like a sawmill is a barrier reduced by converting the project from rotation into a conservation system, the main barrier for reforestation activities is even stronger now: Financial return from a SLIMF project is equal to zero and as a consequence, access to bank loans or investors is even more limited.

In the Alternative Scenario Analysis, CIF "Certificado de Incentivo Forestal" was further mentioned as a governmental indicative that is trying since years to incentive forestry activities. While there were in the past many barriers regarding the access to this funding opportunity, it is only available to newly established plantations[74]. Therefore, it is no longer relevant for the assessment of additionality.

In conclusion, additionality is even stronger after the design change, as only very limited income will be obtained from timber sales, and carbon finance is the main income source for the project participants to continue the forestry and monitoring practices.

To further support an understanding of the project's additionality, a detailed financial overview is available to the auditor.

b. ***Applicability of methodology and other methodological regulatory documents with which the project activity has been certified***

The originally applied methodology was the Gold Standard A/R methodology 0.9 with the following applicability requirements:

1. Areas shall not be on wetlands.

2. Areas with organic soils shall not be drained or irrigated (except for irrigation for planting).

3. Soil disturbance (through ploughing, digging of pits, stump removals, infrastructure, etc.) on organic soils shall be in less than 10% of the area that is submitted to certification (not 10% of the entire project area).

4. The most likely scenario without the project (baseline scenario) shall be defined for the project area. This scenario shall not show any significant increase of the Baseline biomass ('tree' and 'non-tree').

All four criteria are not impacted by the design change, since the planted area was not changed, and organic soils are only present in the conservation areas.

With the ongoing Design Certification Renewal, the project is applying the updated Methodology for Afforestation/Reforestation (A/R) GHG emission reduction & sequestration V 2.0, which adds the two following applicability criteria:

1. Projects can apply all silvicultural systems:

i. Conservation forests (no use of timber)

ii. Forests with selective harvesting

iii. Rotation forestry

Instead of falling under category 1.a.iii, the project applies the equally eligible silvicultural system listed under 1.a.i.

2. All projects can include agriculture (agroforestry) or pasture (silvopasture) activities.

The project does not include agroforestry nor silvopastoral activities, neither before nor after the design change.

As the project was not implemented as described in the registered project documentation, the applicability and application of the baseline methodology with which the Project has been registered shall be reassessed. However, since the Design

Certification Renewal requests an update of the Baseline assessment anyways, this step is skipped.

c. ***Compliance with the monitoring plan of the applied methodology***

The applied methodology only prescribes the monitoring of tree biomass by calculating the stem volume in a selection of sampling plots. Optionally, soil organic material can be monitored. Both pools are monitored irrespectively of the applied silvicultural system. Thus, monitoring for the methodology is not impacted by the Design Change.

d. ***Level of accuracy and completeness in the monitoring of the project activity compared with the requirements contained in the registered monitoring plan***

Since the previous monitoring plan for the project activity was already calibrated to fill a conservation-based carbon model, there is no impact on the accuracy and completeness of monitoring. Monitoring of tree growth will be continued as before.

e. ***Scale of the project activity***

Project scale is not affected. Even though one project participant is removed, with 71,367.11 ha and an annual emission reduction of over 130,000 tCO_2 (See section B.6.4.) the project is still considered large scale as per GHG Emissions Reduction & Sequestration Product Requirements v.2.2 Section 9.1.2.

f. ***Stakeholder consultation***

According to the GS4GG Design Change Requirements 1.1, an additional stakeholder consultation has to be undertaken if the change constitutes an increase or shift of areas. Since this is not the case, and the change in the forest management system has no different implications for local stakeholders than before, it was deemed unnecessary to conduct a consultation specifically for the change.

Other than that, stakeholder consultations continue to be held annually in the framework of the FSC certification audits.

g. ***Sustainable development criteria***

With the ongoing Design Certification Renewal, sustainable development is newly monitored via the SDG tool. Several indicators were removed from the SDG monitoring plan since they did not fit this framework, or were actually describing safeguarding principles instead of additional benefits. However, the only change in the monitoring plan attributable to the Design Change is the removal of SDG 12: due to the design change from rotation to conservation, harvested volumes are no longer accounted for. Consequently, sustainable timber production is no longer a significant SDG impact and SDG 12 was taken out of the list of monitored SDG impacts.

h. ***Safeguarding assessment***

There is no impact on the compliance with safeguarding principles due to the change in the management system. The companies' principles and management policies, including their approach to treating workers and the surrounding communities, are not touched by the change (Principles 1 to 6).

Further, as FSC certification applying the SLIMF (small or low-intensity managed forest) management system even reduces impacts on the environment further, as no harvesting activities are taking place that might cause additional emissions or disturb the ecosystem. This means that principle 9.7 Harvesting of Forests is no longer applicable to the project, and any risks related to principles 7 to 9.1 as well as 9.10 and 9.11 are further reduced.

The assessment of 9.3 to 9.6 is not impacted by the Design Change, and principles 9.8 and 9.9 remain irrelevant for the project.

There were no new comments by stakeholders or a revised EIA.

i. ***Compliance with applicable legislation***

The number of applicable laws and regulations has been reduced due to the reclassification to the FSC SLIMF standard, which accompanied the Design Change. Several national resolutions and decrees no longer apply to the project participants due to the character of a low impact project (see list below). A comprehensive overview and up to date permits are within the folder: 07_Environment, the auditor can find all permits and laws applicable per organization. No new approvals/licenses from the environmental and/or regulatory agencies are needed, but some existing ones became redundant.

j. <u>Only for LUF Projects</u>: Transparent summary of all approved changes in Project Area, Eligible Area and accompanying changes in ex-ante emissions removals.

DATE OF APPROVED	PROJECT AREA (HA)	ELIGIBLE AREA (HA)	EX-ANTE ESTIMATE (TCO2E)

DESIGN CHANGE (MM/DD/YYYY)	INCREASE OR DECREASE ?	VALUE (HA)	INCREASE OR DECREASE ?	VALUE (HA)	INCREASE OR DECREASE ?	PERCENTAGE (%)
Performance review (2019) Renewal validation (2023)	Decrease	84,310.3 56,259	Decrease	14,624 14,464.8	Decrease (for 30 years)	5,904,863 4,155,846 (29.6%)
Performance review (2023)	Increase	73,835.87	Increase	19,208.4	Increase	6,085,167 (46%)

ADDITIONAL INFORMATION

An overview of the project areas and different carbon potential estimates are presented in the table below. Such changes have occurred due to project owners´ decisions and VVB and Gold Standard assessments.

Validation - verification 2016					
Event	**Company**	**Year**	**Carbon model 2015**	**VVB Report**	**Comment**
			Planted area	**Planted area**	
Validation - verification 2016	Inverbosques	2009-2014	7,103.50	Not reported	Old MU: 14-22
Validation - verification 2016	La Paz	2006-2014	3,276.30	Not reported	Old MU: 1-13
Validation - verification 2016	Aldea Forestal	2009-2014	2,824.70	Not reported	Old MU: 23-28
Total planted area			13,205	13,205	
Total conservation area			Not reported	8,089	Reported in the PDD: 8,089 ha
Total project area			Not reported	76,356	Reported in the PDD: 76,356 ha
Total carbon projected over 30 yr			**1,532,898.00**	**1,207,411 (ex- ante)**	**Total verified until 2015: 325,487 tCO2**

Verification 2019					
Event	**Company**	**Year**	**Carbon model 2019**	**VVB Report**	**Comment**
			Planted area	**Planted area**	

Verification 2019	Inverbosques	2014-2019	11,346.7	Not reported	New area added: 4,242 ha
Verification 2019	Aldea Forestal	2014-2019	3,277.4	Not reported	New area added: 452 ha
Verification 2019	La Paz	2014-2019	Not reported	4,812	Not taken into account for VER calculation; New area added: 1,536 ha ;
Total planted area added			-	6,231	
Total planted area			14,624.2	14,624	Total planted area was 19,436 ha (difference due to La Paz = 4,812 ha).
Total conservation area			Not reported	11,227	Inverbosques: 11,000 ha, Ref. La Paz: 163 ha, AF: 64 ha
Total project area			Not reported	76,356	
Total carbon projected over 30 yr			**4,801,736.9**	**4,040,545**	Calculated for Aldea Forestal and Inverbosques only

Design change and revalidation 2023

Event	**Company**	**Year**	**Carbon model 2023**	**VVB Report**	**Comment**
			Planted area	**Planted area**	
PDD 2023	Inverbosques	2023	11,182.54 ha	-	
PDD 2023	Aldea Forestal	2023	3,282.26 ha	**-**	-
Total planted area			14,464.8 ha	-	
Total conservation area			7,487.75 ha		
Total project area			56,259 ha		

Performance review 2023

Event	**Company**	**Year**	**Carbon model 2023**	**VVB Report**	**Comment**

			Planted area	Planted area	
Updated PDD for PR	Inverbosques	2023	15,926.13		Added area of 4,743.59 ha
Updated PDD for PR	Aldea Forestal	2023	3,282.26		
Total planted area			19,208.4		
Total conservation area			7,582.19		
Total project area			73,835.87		

Aside from the total project areas and their carbon sequestration potential, Modelling Units have been redefined for a better understanding. The table below shows a comparison between the three MU structures implemented as part of the three PDD).

MUs Comparative table											
2016			2019				2023				
MU Code	Year	Area (ha)	MU	Plant year	Sp	Area (ha)	ID	MU1 Code	MU2 Code	ID	Area (ha)
1	2006	4.3	1	2009	Am	270.3	1	AF-2009	1.1	AF-Am-2009	270.075
2	2006	13.1	1	2009	Pc	238.3	2	AF-2010	1.2	AF-Pc-2009	238.071
3	2007	94.5	2	2010	Pc	533.2	3	AF-2011	2.1	AF-Pc-2010	532.748
4	2007	110.1	3	2011	Pc	352.2	4	AF-2012	3.1	AF-Pc-2011	351.884
5	2008	16.6	4	2012	Pc	444.2	5	AF-2013	4.1	AF-Pc-2012	443.812
6	2008	307.7	5	2013	Pc	564.8	6	AF-2014	5.1	AF-Pc-2013	564.256
8	2009	126.9	6	2014	Ep	121.6	7	AF-2015	6.1	AF-Ep-2014	129.278
7	2009	280.6	6	2014	Pc	505.0	8	IB-2009	6.2	AF-Pc-2014	504.536
10	2011	239.0	7	2015	Ep	15.3	9	IB-2010	7.1	AF-Pc-2015	232.329
9	2011	380.5	7	2015	Pc	232.5	10	IB-2011	7.2	AF-Ep-2015	15.266
11	2012	464.4	8	2009	Am	88.1	11	IB-2012	8.1	IB-Am-2009	88.052
13	2014	207.6	8	2009	Ep	30.3	12	IB-2013	8.2	IB-Ep-2009	30.342
12	2013	1,031.1	8	2009	Pc	0.6	13	IB-2014	8.3	IB-Pc-2009	0.622
14	2009	547.5	9	2010	Am	693.4	14	IB-2015	9.1	IB-Am-2010	691.585
15	2010	1,637.0	9	2010	Ep	429.1	15	IB-2016	9.2	IB-Ep-2010	428.057
16	2011	1,605.4	9	2010	Et	143.9	16	IB-2017	9.3	IB-Et-2010	143.911
17	2012	727.6	10	2011	Am	1,496.8	17	IB-2018	10.1	IB-Am-2011	1471.133

18	2013	939.2	10	2011	Ep	763.8	18	IB-2019	10.2	IB-Ep-2011	763.063
19	2014	1,207.2	10	2011	Et	43.1			10.3	IB-Et-2011	42.782
20	2012	141.9	10	2011	Eu	3.9			10.4	IB-Eu-2011	3.861
21	2013	148.1	11	2012	Am	945.2			11.1	IB-Am-2012	882.096
22	2014	149.6	11	2012	Ep	104.3			11.2	IB-Ep-2012	104.203
23	2009	518.4	11	2012	Et	10.2			11.3	IB-Et-2012	10.154
24	2010	545.6	12	2013	Am	877.0			12.1	IB-Am-2013	741.133
25	2011	523.4	12	2013	Ep	226.5			12.2	IB-Ep-2013	181.472
26	2012	456.9	12	2013	Et	10.0			12.3	IB-Et-2013	10.039
27	2013	532.5	12	2013	Eu	3.8			12.4	IB-Eu-2013	3.838
28	2014	247.9	13	2014	Am	1,005.5			13.1	IB-Am-2014	971.194
Total		**12,531.4**	13	2014	Ep	301.5			13.2	IB-Ep-2014	301.430
			14	2015	Am	572.4			14.1	IB-Am-2015	570.497
			14	2015	Ep	313.4			14.2	IB-Ep-2015	313.051
			14	2015	Eu	19.0			14.3	IB-Eu-2015	18.992
			15	2016	Am	800.4			15.1	IB-Am-2016	800.357
			15	2016	Ep	695.3			15.2	IB-Ep-2016	695.255
			16	2017	Am	250.5			16.1	IB-Am-2017	250.436
			16	2017	Ep	749.4			16.2	IB-Ep-2017	749.370
			17	2018	Am	124.6			17.1	IB-Am-2018	124.555
			17	2018	Ep	641.1			17.2	IB-Ep-2018	662.936
			17	2018	Eu	3.7			17.3	IB-Eu-2018	3.658
			Total			**14,624.2**			18.1	IB-Am-2019rep	100.625
									18.2	IB-Ep-2019rep	19.147
									18.3	IB-Pc-2019rep	4.699
							Total				**14464.801**

The table below shows the MU updated with the last areas added under the third Performance review.

MU Comparison								
2019				PR 2023				
MU	Plant year	Sp	Area (ha)	ID	MU1 Code	MU2 Code	ID	Area (ha)
1	2009	Am	270.3	1	AF-2009	1.1	AF-Am-2009	270.07
1	2009	Pc	238.3	2	AF-2010	1.2	AF-Pc-2009	238.07

MU Comparison								
2019				PR 2023				
MU	Plant year	Sp	Area (ha)	ID	MU1 Code	MU2 Code	ID	Area (ha)
2	2010	Pc	533.2	3	AF-2011	2.1	AF-Pc-2010	532.75
3	2011	Pc	352.2	4	AF-2012	3.1	AF-Pc-2011	351.88
4	2012	Pc	444.2	5	AF-2013	4.1	AF-Pc-2012	443.81
5	2013	Pc	564.8	6	AF-2014	5.1	AF-Pc-2013	564.26
6	2014	Ep	121.6	7	AF-2015	6.1	AF-Ep-2014	129.28
6	2014	Pc	505.0	8	IB-2009	6.2	AF-Pc-2014	504.54
7	2015	Ep	15.3	9	IB-2010	7.1	AF-Pc-2015	232.33
7	2015	Pc	232.5	10	IB-2011	7.2	AF-Ep-2015	15.27
8	2009	Am	88.1	11	IB-2012	8.1	IB-Am-2009	88.05
8	2009	Ep	30.3	12	IB-2013	8.2	IB-Ep-2009	30.34
8	2009	Pc	0.6	13	IB-2014	8.3	IB-Pc-2009	0.62
9	2010	Am	693.4	14	IB-2015	9.1	IB-Am-2010	691.58
9	2010	Ep	429.1	15	IB-2016	9.2	IB-Ep-2010	428.06
9	2010	Et	143.9	16	IB-2017	9.3	IB-Et-2010	143.91
10	2011	Am	1,496.8	17	IB-2018	10.1	IB-Am-2011	1471.13
10	2011	Ep	763.8	18	IB-2019	10.2	IB-Ep-2011	763.06
10	2011	Et	43.1	19	IB-2020	10.3	IB-Et-2011	42.78
10	2011	Eu	3.9	20	IB-2021	10.4	IB-Eu-2011	3.86
11	2012	Am	945.2	21	IB-2022	11.1	IB-Am-2012	882.1
11	2012	Ep	104.3			11.2	IB-Ep-2012	104.2
11	2012	Et	10.2			11.3	IB-Et-2012	10.15
12	2013	Am	877.0			12.1	IB-Am-2013	741.13
12	2013	Ep	226.5			12.2	IB-Ep-2013	181.47
12	2013	Et	10.0			12.3	IB-Et-2013	10.04
12	2013	Eu	3.8			12.4	IB-Eu-2013	3.84
13	2014	Am	1,005.5			13.1	IB-Am-2014	971.19
13	2014	Ep	301.5			13.2	IB-Ep-2014	301.43
14	2015	Am	572.4			14.1	IB-Am-2015	570.5
14	2015	Ep	313.4			14.2	IB-Ep-2015	313.05
14	2015	Eu	19.0			14.3	IB-Eu-2015	18.99
15	2016	Am	800.4			15.1	IB-Am-2016	800.36
15	2016	Ep	695.3			15.2	IB-Ep-2016	695.25
16	2017	Am	250.5			16.1	IB-Am-2017	250.44

MU Comparison							
2019				PR 2023			
MU	Plant year	Sp	Area (ha)	ID	MU1 Code	MU2 Code	ID	Area (ha)
16	2017	Ep	749.4			16.2	IB-Ep-2017	749.37
17	2018	Am	124.6			17.1	IB-Am-2018	124.56
17	2018	Ep	641.1			17.2	IB-Ep-2018	662.94
17	2018	Eu	3.7			17.3	IB-Eu-2018	3.66
Total			**14,624.2**			18.1	IB-Am-2019rep	100.62
						18.2	IB-Ep-2019rep	19.15
						18.3	IB-Pc-2019rep	4.7
						18.4	IB-Am-2019	98.69
						18.5	IB-Ep-2019	665.72
						18.6	IB-PE-2019	845.42
						18.7	IB-Pc-2019	5.85
						18.8	IB-Pt-2019	0.26
						19.1	IB-Ep-2020	605.92
						19.2	IB-Pc-2020	1071.12
						19.3	IB-Ep-2020rep	7.18
						20.1	IB-Ep-2021	756.71
						21.1	IB-Ep-2022	686.72
				Total				**19,208.4**

Revision History

Version	Date	Remarks
1.3	14 April 2023	Integrated the design change memo as annex of the document.

		Editorial changes
1.2	14 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Inclusion criteria table added Gender sensitive requirements added Prior consideration (1 yr rule) and Ongoing Financial Need added Safeguard Principles Assessment as annex and a new section to include applicable safeguards for clarity Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on Stakeholder Consultation information required Provision of an accompanying Guide to help the user understand detailed rules and requirements
1.1	24 August 2017	Updated to include section A.8 on 'gender sensitive' requirements
1.0	10 July 2017	Initial adoption