



**Gold Standard**<sup>®</sup>  
for the Global Goals

**TEMPLATE**

# MONITORING REPORT

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**VERSION v. 1.1**

**RELATED SUPPORT - TEMPLATE GUIDE Monitoring Report v. 1.1**

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Key Project Information

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SECTION D - Data and parameters

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SECTION F - Safeguards Reporting

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## KEY PROJECT INFORMATION

### Key Project Information

<b>GS ID (s) of Project (s)</b>	GS 2913
<b>Title of the project (s) covered by monitoring report</b>	BaumInvest Reforestation Project
<b>Version number of the PDD/VPA-DD (s) applicable to this monitoring report</b>	Version 1.5; consolidated PDD dated 09/02/2026
<b>Version number of the monitoring report</b>	1.5.1
<b>Completion date of the monitoring report</b>	10/03/2026
<b>Date of project design certification</b>	03/08/2010
<b>Date of Last Annual Report</b>	09/04/2025 for year 2024
<b>Monitoring period number</b>	3 (3 <sup>rd</sup> Performance Certification)
<b>Duration of this monitoring period</b>	25.02.2021 – 15.06.2025 (monitoring period = performance period & design certification renewal period)
<b>Project Representative</b>	Antje Virkus (CEO)
<b>Host Country</b>	Costa Rica
<b>Activity Requirements applied</b>	<input type="checkbox"/> Community Services Activities <input type="checkbox"/> Renewable Energy Activities <input checked="" type="checkbox"/> Land Use and Forestry Activities/Risks & Capacities <input type="checkbox"/> N/A
<b>Methodology (ies) applied and version number</b>	<ul style="list-style-type: none"> <li>• The Gold Standard Afforestation/Reforestation (A/R) Requirements (version 0.9) (applied for this monitoring period)</li> <li>• A/R GHG Emissions Reduction Sequestration Methodology – Version 2.1 (applies for the next monitoring period starting 16.06.2025)</li> <li>• LUF AR Methodology Soil Carbon Tool v1.0</li> <li>• A/R Methodological tool “Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM</li> </ul>

	project activities" (Version 01)
<b>Product Requirements applied</b>	<input checked="" type="checkbox"/> GHG Emissions Reduction & Sequestration <input type="checkbox"/> Renewable Energy Label <input type="checkbox"/> N/A

**Table 1 - Sustainable Development Contributions Achieved**

Sustainable Development Goals Targeted	SDG Impact	Amount Achieved	Units/ Products
SDG 5 Gender Equality	Number of women in managerial/leadership roles (GSDM-I5.5.1)	4 (31%) female employees in managerial/leadership roles (full-time equivalent dedicated to project GS2913).	Number
SDG 8 Decent work and economic growth	Total number of jobs (GSDM-I8.5.1)	13 in average over the monitoring period, including 8 employees of BILA (full-time equivalent dedicated to project GS2913).	Jobs
SDG 13 Climate Action	Amount of GHGs emissions avoided or sequestered (GSDM-I13.2.1)	245,302 (total accumulated VErS (tCO2e) at the end of this monitoring period 15.06.2025)	
SDG 15 Life on Land	<ul style="list-style-type: none"> <li>Total area under sustainable forest management (GSDM-I15.5.2)</li> <li>Number of protected threatened species in the project area &amp; conservation status of species (GSDM-I15.5.1)</li> </ul>	<ul style="list-style-type: none"> <li>Total area under sustainable forest management: 1,355 ha (978.58 ha of planted area and 376 ha of protected areas = 24.43% of total project area)</li> <li>109 reptile and amphibian species identified in the project area</li> </ul>	<ul style="list-style-type: none"> <li>Area (ha)</li> <li>Number</li> </ul>

Please refer to Section D.2 for detailed descriptions of each parameter, including explanations of adjustments made to align with the Gold Standard SDG Impact Tool compared to indicators applied in earlier performance certifications.

**Table 2 – Product Vintages**

Start Dates	End Dates	Amount Achieved		
		VERs	VERs (80%)	20% GS buffer
25/02/2021	31/12/2021	13,366	10,692	2,674
01/01/2022	31/12/2022	13,366	10,692	2,674
01/01/2023	31/12/2023	13,366	10,692	2,674
01/01/2024	31/12/2024	13,366	10,692	2,674
01/01/2025	15/06/2025	13,365	10,692	2,673
<b>25/02/2021</b>	<b>15/06/2025</b>	<b>66,829</b>	<b>53,460</b>	<b>13,369</b>

Table 2 shows the annual VER vintages for the monitoring period, resulting in an overall carbon sequestration of 66,829 VERs. (These estimates are directly traceable in the file “26-02-10\_GS2913\_EX-ANTE&EX-POST\_model\_v2.1.xlsx”). Note: Net GHG emissions sequestered are distributed pro-rata across vintages within the monitoring period.

## SECTION A. DESCRIPTION OF PROJECT

### **A.1. General description of project**

The project involves planting of predominantly native tree species in close-to-nature mixed stands on degraded pasturelands, previously used for extensive cattle ranching, and selective harvesting for timber production. Roughly 30% of the project area consists of old-growth and secondary forests as well as wetlands, which are preserved as important habitats and biological corridors for many rare and endangered animal and plant species of the Atlantic tropical moist forest of Central America.

#### **Baseline scenario and additionality** (summary for Design Certification Renewal)

The **baseline scenario** for the project is the continuation of the pre-project land use, consisting of extensive cattle grazing on pastureland, which represents the most plausible alternative scenario in the absence of the project activity and is applicable across all project areas included under the project. For the Design Certification Renewal, the baseline scenario has been reviewed and confirmed; there have been no material changes in land-use practices, regulatory conditions, or key economic parameters that would alter the originally identified baseline scenario. The baseline scenario was originally established using the A/R CDM “Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities” (Version 01) and remains unchanged.

**Additionality** was originally demonstrated using the same approved A/R additionality tool and remains valid under Design Certification Renewal, as the project continues to represent a change from baseline pasture management to reforestation and sustainable forest management, and no new circumstances have emerged that would invalidate the original additionality determination. The detailed baseline and additionality demonstration is presented in the Design Document (PDD Sections B.4 and B.5).

#### **Double counting / overlap screening**

In line with Gold Standard requirements to avoid double counting of impacts, the PD confirms that the project is not registered under any other voluntary or compliance standards programme of a similar nature and does not overlap with the area of any other Gold Standard project or other similar programme. This is documented under the eligibility criterion on double counting in the Design Certified PDD (Table 2, criterion (d), PDD Section A.1.1). The PD has provided an updated declaration confirming the project has not been previously registered under another programme (“PD declaration GS2913 Project not previously registered\_2025-08-27.pdf”). In addition, the PD has conducted desktop checks of relevant publicly available programme websites/registries

and reviewed applicable host country (Costa Rica) policy updates relevant to potential double counting, to confirm continued exclusivity of the project activity.

## A.2. Location of project

The project area of the BaumInvest Reforestation Project consists of four separated reforestation sites within a radius of approximately 60 km located in the remote central north of Costa Rica (Figure 2.1-01) and situated within two UNESCO-recognized biosphere reserves, 'Agua y Paz' and 'Cordillera Volcánica Central':

Figure 2.1-01: Location of project areas of the BaumInvest Reforestation Project.



- 1) The project area San Rafael consists of two adjacent properties covering a total area of 216.52 ha in the Province of Alajuela (Canton San Carlos, Distrito Pocosal). The planting area comprises 132.86 ha.
- 2) The project area La Virgen consists of 14 properties covering a total area of 755.06 ha in La Virgen de Sarapiquí, Province of Heredia. The total planting area of 517.85 ha is divided into several small and medium-sized modeling units spread across the entire project area. The farm is subdivided into 14 MUs in total; however, only

12 of these are valid and included in CO<sub>2</sub>-fixation calculations. Two MUs were excluded since the last Performance Certification (2021) because it is very small in size and shows a high degree of heterogeneity in growth patterns

- 3) The project area Las Delicias with three contiguous properties covering a total area of 248.58 ha is located in the Province of Alajuela (Canton Upala, Distrito Delicias) and comprises a planting area of 181.51 ha. The farm is subdivided into 10 MUs in total; however, only 7 of these are included in CO<sub>2</sub>-fixation calculations. Three MUs were excluded since the last Performance Certification (2021) because they are very small in size, not eligible as new areas, or still show a high degree of heterogeneity in growth patterns.
- 4) The project area El Porvenir with seven properties, covering a total area of 318.70 ha is located in the Province of Alajuela (Canton Upala, Distrito Aguas Claras) and comprises a planting area of 146.36 ha.

Some MUs, as detailed above, are excluded from CO<sub>2</sub>-fixation calculations. These are not eligible, small in size or still showing a high degree of heterogeneity in growth patterns, have been therefore excluded from the calculations of the CO<sub>2</sub>-fixation. This approach was already applied in the last Performance Certification (2021) and remains unchanged. The table below lists the excluded MUs for clarity:

Management Unit (MU)	Species mix	Planting area (ha)
ElPeje_1.2	Cebo-Guapinol-Sura	0.12
Los Pinos_1	Roble Coral	0.98
Upala_1	Caobilla	0.27
Upala_5	Manú	0.18
Upala_6	Cocobolo	0.24

### Modelling unit applied (MU) – definition and delineation

Modelling Units (MUs) are defined as distinct parts of the planting area where carbon stocks can be quantified by applying a forest growth model. In line with the applicable Methodology, MUs are established in areas with homogeneous characteristics in growth patterns and silvicultural treatment. All forest inventory sampling, MU-level estimation, and CO<sub>2</sub> removal calculations are performed at MU level and aggregated to farm and project totals.

The MU stratification has not changed since the last Performance Certification in 2021. Only eligible and sufficiently homogeneous MUs are included in CO<sub>2</sub>-fixation calculations; excluded MUs and reasons are listed above.

### **A.3. Reference of applied methodology**

- A/R Methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities" (Version 01)
- The Gold Standard Afforestation/Reforestation (A/R) Requirements (version 0.9) (applied for this monitoring period).
- METHODOLOGY FOR AFFORESTATION/REFORESTATION (A/R) GHGs EMISSION REDUCTION & SEQUESTRATION (Version 2.1) (applies for the next monitoring period starting 16.06.2025)
- LUF AR Methodology Soil Carbon Tool v1.0

### **A.4. Crediting period of project**

01/09/2007 – 31/08/2037 (30 years)

## SECTION B. IMPLEMENTATION OF PROJECT

### **B.1. Description of implemented project**

The BaumInvest reforestation project in Costa Rica started operation in San Rafael in 2007 and subsequently expanded to include several new areas: La Virgen (start date: 2010), Las Delicias (start date: 2011), and El Porvenir (start date: 2013).

The total area of the project covers 1,538.86 hectares (registered cadastral area), of which 978.58 hectares were gradually reforested between 2007 and 2018 with a total of 19 different native tree species in 56 different variations. Currently, there are 16 native tree species and teak. The remaining areas consist mainly of old growth and secondary forest areas, as well as watercourses and wetlands, and are permanently protected.

The initial planting consists of even-aged mixed stands using up to four different tree species for each modelling unit. Predominantly native site-adapted tree species are being planted in planting patterns with usually 625 - 825 trees per hectare.

The forest management practices used include soil preparation, tree nurseries, planting, replanting, continuous weed and pest control when necessary to ensure the survival of the seedlings and the success of the reforestation, as well as pruning, thinning, and selective harvesting. Further project activities aim to prevent illegal logging, poaching, and other disturbances to the newly planted forests and conservation areas within the project area.

Thinning is implemented as a planned reduction of standing stem volume to manage competition and improve stand structure and timber quality. Trees are selected for removal based on silvicultural and phytosanitary criteria (e.g., poor form, suppressed growth, damage, pest/disease). If natural mortality occurs prior to a scheduled thinning intervention, the respective thinning intensity is adjusted accordingly. This ensures that, after each thinning operation, the planned residual stand density and target stocking levels are maintained as originally intended.

The planned thinning regime for the project is summarized below (percentage reduction of standing stem volume in the intervention year):

Year	Planned thinning intensity (%)
2026	15%
2032	10%
2033	10%
2034	10%
2035	10%
2036	10%

Selective harvesting consists of the extraction of individually marked trees based on defined technical criteria (maturity, diameter, form, and health), using directional felling and low-impact extraction methods adapted to site conditions. These management practices are explicitly accounted for in the project’s carbon modelling through the application of thinning deductions in the relevant years and are transparently reflected in the emission reduction calculation workbook submitted for this monitoring period (see “26-02-10\_GS2913\_EX-ANTE&EX-POST\_model\_v2.1.xlsx”, tab “Ex-ante\_ER\_Project\_summary”).

There has been no change to the project design as outlined in the Design Certified PDD. However, the silvicultural method was adjusted from rotation forestry in the very early phase to selective harvesting, which is much more appropriate for this project.

**B.1.1 Forward Action Requests**

*Not applicable, as no Forward Action Requests were raised in previous Performance Certifications.*

**B.2. Post-Design Certification changes**

B.2.1. Temporary deviations from the approved Monitoring & Reporting Plan, methodology or standardized baseline

*Not applicable, as there are no temporary deviations from the approved Monitoring & Reporting Plan, methodology or standardized baseline.*

B.2.2. Corrections

Several minor corrections to the registered (cadastral) farm area resulted in an increase in the total registered farm area from 1,526.80 ha to 1,538.86 ha. The eligible planting

area and set aside conservation area is not affected by this and remains unchanged at 978.58 ha and 376 ha respectively.

Other corrections include data and parameters fixed ex ante or at the latest renewal of the crediting period. See updated values applied in Section D. Updates have been applied to certain species and parameters following an extended review of the available scientific literature. In some cases, the parameters were expanded and refined by incorporating the average values derived from several literature sources, rather than relying on a single reference, in order to ensure robustness and representativeness of the estimates.

In addition, a correction was made to the forest management approach applied for modelling. While earlier documentation (prior 2021) referred to a rotation forestry system, the project's silvicultural approach has since been clarified and corrected to selective harvesting under a close-to-nature continuous forest cover model. This adjustment was reflected in the ex-ante model update carried out during the 2021 performance certification, ensuring consistency with the actual management system applied in the field.

Furthermore, in 2025, the ex-ante model was updated again to align more closely with the most recent forest inventory data (collected 2023–2025). The revised modelling integrates this empirical data, providing more reliable, accurate and conservative estimates of biomass growth and carbon sequestration potential.

#### B.2.3. Changes to start date of crediting period

*Not applicable, as there are no changes to the start date of the crediting period that are relevant for this monitoring period.*

#### B.2.4. Permanent changes from the Design Certified monitoring plan, applied methodology or applied standardized baseline

*Not applicable, as no material and permanent changes to the design of the project i.e. additionality, scale of the project, validity/applicability of the applied methodology, stakeholder consultation, sustainable development criteria and monitoring plan have occurred.*

#### B.2.5. Changes to project design of approved project

No changes to project design.

## SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

The monitoring system applied by the project is implemented in accordance with the description of the monitoring system and monitoring plan provided in the Design Certified PDD (section B.7). The system covers the monitoring of SDG 13, 15, 5 and 8 impacts through defined parameters, data sources, responsibilities, and QA/QC procedures.

- **SDG 13 (Climate Action):** Forest inventory data (DBH, tree height, species identification) are collected from permanent sample plots following the *Forest Inventory Guideline*. Parameters such as BEF, root-to-shoot ratios, wood density, and carbon fraction are taken from GS approved default values or peer-reviewed scientific literature, as detailed in PDD section D.1. QA/QC is ensured through remeasurement of a subset of plots, consistency checks, and validation of input data (detailed in the company’s Forest inventory guideline).
- **SDG 15 (Life on Land):** GIS shapefiles and management records are used to confirm hectares reforested, protected and under sustainable management. Biodiversity indicators are monitored through scientific surveys (e.g. herpetofauna transects) with external partners. QA/QC includes independent review of survey reports and consistency checks with GIS data and/or maps.
- **SDG 5 (Gender Equality):** Employment and gender data are monitored using HR records and organizational charts. The indicator “number of women in managerial/leadership roles” is tracked annually. QA/QC procedures include cross-checks with payroll and employment contracts.
- **SDG 8 (Decent Work and Economic Growth):** Jobs created under the project, including direct field and office staff, are monitored using HR and payroll records. QA/QC procedures include review of contracts, payroll, and tax/social security filings.

All data are compiled digitally in the project’s SharePoint system, verified by the responsible departments, and consolidated for submission during each Performance Certification.

Due to the long history of this project since the transition to the Gold Standard in 2013, the parameters applicable to impact monitoring have been adjusted to align with the

latest requirements of the GS4GG and the SDG Impact tool. As a result, some of the parameters listed below differ from those approved at design certification and subsequent performance certifications (see explanation and further details at the end of section D.2.).

## SECTION D. DATA AND PARAMETERS

### D.1. Data and parameters fixed ex ante or at renewal of crediting period

SDG 13 Climate Action

Data/parameter	<b>Biomass Expansion Factor (BEF)</b>														
Unit	Dimensionless														
Description	<p>BEF is the ratio of the total above-ground tree biomass to the biomass of the merchantable timber. BEF is commonly used in converting standing volumes of timber into total carbon stocks.</p> <p>BEF = Aboveground tree biomass/Stem biomass. (Source: GS A/R GHG Emissions Reduction &amp; Sequestration Methodology, version 2.1).</p>														
Source of data	<p>Values for BEF for different species from:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #D3D3D3;"> <th style="text-align: center;">Ref. code</th> <th style="text-align: center;">BEF value source</th> <th style="text-align: center;">Page</th> <th style="text-align: center;">Note</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">06-02</td> <td>Intergovernmental Panel on Climate Change (IPCC). (2003). <i>Good practice guidance for land use, land-use change and forestry</i>. Institute for Global Environmental Strategies (IGES).</td> <td style="text-align: center;">3178</td> <td style="text-align: center;">PDF page 28</td> </tr> <tr> <td style="text-align: center;">06-03</td> <td>Kraenzel, M., Castillo, A., Moore, T., &amp; Potvin, C. (2003). Carbon storage of harvest-age teak (<i>Tectona grandis</i>) plantations, Panama. <i>Forest Ecology and Management</i>,</td> <td style="text-align: center;">218</td> <td style="text-align: center;">PDF page 6</td> </tr> </tbody> </table>			Ref. code	BEF value source	Page	Note	06-02	Intergovernmental Panel on Climate Change (IPCC). (2003). <i>Good practice guidance for land use, land-use change and forestry</i> . Institute for Global Environmental Strategies (IGES).	3178	PDF page 28	06-03	Kraenzel, M., Castillo, A., Moore, T., & Potvin, C. (2003). Carbon storage of harvest-age teak ( <i>Tectona grandis</i> ) plantations, Panama. <i>Forest Ecology and Management</i> ,	218	PDF page 6
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	173(1-3), 213-225. <a href="https://doi.org/10.1016/S0378-1127(02)00002-6">https://doi.org/10.1016/S0378-1127(02)00002-6</a>		
06-06	Kanninen M., Montero M. M. (2005). Terminalia amazonia; ecología y silvicultura. CATIE Serie Técnica Informe Técnico no. 339	24	PDF page 25
06-16	Fonseca, W., Alice, F. E., & Rey-Benayas, J. M. (2012). Carbon accumulation in aboveground and belowground biomass and soil of different age native forest plantations in the humid tropical lowlands of Costa Rica. <i>Forest Ecology and Management</i> , 265, 62-73. <a href="https://doi.org/10.1016/j.foreco.2011.10.031">https://doi.org/10.1016/j.foreco.2011.10.031</a>	44	PDF page 9
06-20	Segura, M., & Kanninen, M. (2005). Allometric models for estimating volume and total aboveground biomass of seven dominant tree species in a tropical humid forest in Costa Rica. <i>Biotropica</i> , 37(1), 2-8.	5	
06-24	Avendaño Reyes, J. R. (2008). <i>Modelos genéricos de biomasa aérea para especies forestales en función de la arquitectura y la ocupación del rodal</i> (Master's thesis). Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), Turrialba, Costa Rica.	34	PDF page 49
06-36	Segura, M., Kanninen, M., & Suárez, D. (2006). Allometric models for estimating aboveground biomass of shade trees and coffee bushes grown together. <i>Agroforestry Systems</i> , 68(2), 143-150.		PDF page 4

	<a href="https://doi.org/10.1007/s10457-006-9005-x">https://doi.org/10.1007/s10457-006-9005-x</a>		
06-37	Segura, M., Kanninen, M., & Suárez, D. (2006). Allometric models for estimating aboveground biomass of shade trees and coffee bushes grown together. <i>Agroforestry Systems</i> , 68, 143–150.		PDF page 5
06-38	Montero, M., & Kanninen, M. (2006). Biomasa y carbono en plantaciones de <i>Terminalia amazonia</i> en la zona sur de Costa Rica. <i>Revista Forestal Centroamericana</i> , 50, 50–55.		PDF page 1

Value(s) applied

Tree species	Common names	Values	Sources (see "source of data" above) BEF
		BEF	
<i>Calophyllum brasiliense</i>	Cedro maria	1.5	06-02
<i>Carapa guianensis</i>	Caobilla	1.5	06-02
<i>Cedrela odorata</i>	Cedro amargo	1.5	06-02
<i>Cordia alliodora</i>	Laurel	1.4	06-24, 06-36, 06-37
<i>Dalbergia retusa</i>	Cocobolo	1.5	06-02
<i>Dipteryx panamensis</i>	Almendro	1.5	06-02
<i>Hyeronima alchorneoides</i>	Pilón	1.57	06-16
<i>Hymenaea courbaril</i>	Guapinol	1.5	06-02
<i>Minquartia guianensis</i>	Manu	1.5	06-02
<i>Swietenia macrophylla</i>	Caoba	1.5	06-02
<i>Tabebuia ochracea</i>	Corteza Amarilla	1.5	06-02
<i>Tectona grandis</i>	Teca	1.33	06-03

	<i>Terminalia amazonia</i>	Roble Coral	1.23	06-06, 06-38
	<i>Terminalia oblonga</i>	Surá	1.53	06-24
	<i>Virola koschnyi</i>	Fruta Dorada	1.5	06-02
	<i>Vochysia ferruginea</i>	Botarrama	1.5	06-20
	<i>Vochysia guatemalensis</i>	Cebo	1.56	06-16
Choice of data or Measurement methods and procedures	Default data values accepted under GS A/R GHG Emissions Reduction & Sequestration Methodology, version 2.1 (source 06-02). Data values from scientific literature. (See other sources in the summary table in "Value(s) applied").			
Purpose of data	Calculation of project scenario			
Additional comment				

Data/parameter	<b>Root-to-Shoot Ratio (Rts)</b>														
Unit	Dimensionless														
Description	Root-to-Shoot Ratio (Rts) is the ratio of belowground (root) biomass to aboveground biomass (shoot) biomass.														
Source of data	Values for Rts for different species from:														
	<table border="1"> <thead> <tr> <th>Ref. code</th> <th>Rts value source</th> <th>Page</th> <th>Note</th> </tr> </thead> <tbody> <tr> <td>06-02</td> <td>Intergovernmental Panel on Climate Change (IPCC). (2006). <i>2006 IPCC Guidelines for National Greenhouse Gas Inventories. Volume 4: Agriculture, Forestry and Other Land Use</i>. IGES, Japan.</td> <td>3168</td> <td>PDF page 18</td> </tr> <tr> <td>06-03</td> <td>Kraenzel, M., Castillo, A., Moore, T., &amp; Potvin, C. (2003). Carbon storage of harvest-age teak (<i>Tectona grandis</i>) plantations, Panama. <i>Forest Ecology and Management</i>, 173(1-3), 213-225.</td> <td>217</td> <td>PDF page 5</td> </tr> </tbody> </table>	Ref. code	Rts value source	Page	Note	06-02	Intergovernmental Panel on Climate Change (IPCC). (2006). <i>2006 IPCC Guidelines for National Greenhouse Gas Inventories. Volume 4: Agriculture, Forestry and Other Land Use</i> . IGES, Japan.	3168	PDF page 18	06-03	Kraenzel, M., Castillo, A., Moore, T., & Potvin, C. (2003). Carbon storage of harvest-age teak ( <i>Tectona grandis</i> ) plantations, Panama. <i>Forest Ecology and Management</i> , 173(1-3), 213-225.	217	PDF page 5		
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06-25	Oberbauer, S. F., & Donnelly, M. A. (1986). Growth analysis and successional status of Costa Rican rain forest trees. <i>New Phytologist</i> , 104(4), 517–523. <a href="https://doi.org/10.1111/j.1469-8137.1986.tb00654.x">https://doi.org/10.1111/j.1469-8137.1986.tb00654.x</a>	519	PDF page 3

Tree species	Common names	Values	Sources (see "source of data" above)
		R-t-S	R-t-S
<i>Calophyllum brasiliense</i>	Cedro maria	0.42	06-02
<i>Carapa guianensis</i>	Caobilla	0.42	06-02
<i>Cedrela odorata</i>	Cedro amargo	0.42	06-02
<i>Cordia alliodora</i>	Laurel	0.43	06-02, 06-25
<i>Dalbergia retusa</i>	Cocobolo	0.42	06-02
<i>Dipteryx panamensis</i>	Almendro	0.42	06-02
<i>Hyeronima alchorneoides</i>	Pilón	0.30	06-16
<i>Hymenaea courbaril</i>	Guapinol	0.42	06-02
<i>Minquartia guianensis</i>	Manu	0.42	06-02
<i>Swietenia macrophylla</i>	Caoba	0.42	06-02
<i>Tabebuia ochracea</i>	Corteza Amarilla	0.42	06-02
<i>Tectona grandis</i>	Teca	0.16	06-03
<i>Terminalia amazonia</i>	Roble Coral	0.42	06-02
<i>Terminalia oblonga</i>	Surá	0.45	06-25
<i>Virola koschnyi</i>	Fruta Dorada	0.42	06-02
<i>Vochysia ferruginea</i>	Botarrama	0.42	06-02

	<table border="1"> <tr> <td><i>Vochysia guatemalensis</i></td> <td>Cebo</td> <td>0.42</td> <td>06-02</td> </tr> </table>	<i>Vochysia guatemalensis</i>	Cebo	0.42	06-02
<i>Vochysia guatemalensis</i>	Cebo	0.42	06-02		
Choice of data or Measurement methods and procedures	<p>Default data values accepted under GS A/R GHG Emissions Reduction &amp; Sequestration Methodology, version 2.1. IPCC default value (0.42) from Annex 3A.1 Biomass Default Tables for Section 3.2 Forest Land (Source 06-02).</p> <p>Data values from scientific literature (sources: 06-03, 06-16, 06-25).</p>				
Purpose of data	Calculation of project scenario				
Additional comment					

Data/parameter	<b>Wood density</b>																
Unit	g/cm <sup>3</sup>																
Description	Wood density is the ratio between the mass of dry wood divided by its volume.																
Source of data	<p>Values for wood density for different species from:</p> <table border="1"> <thead> <tr> <th>Ref. code</th> <th>wood density value source</th> <th>Page</th> <th>Note</th> </tr> </thead> <tbody> <tr> <td>06-04</td> <td>Oey Djoen Seng. (1951). <i>Specific gravity of Indonesian woods and its significance for practical use.</i> FRPDC, Forestry Dept., Bogor, Indonesia. (cited in Soewarsono, 1990).</td> <td></td> <td>PDF page 1</td> </tr> <tr> <td>06-05</td> <td>Fearnside, P. M. (1997). Wood density for estimating forest biomass in Brazilian forests. <i>Forest Ecology and Management</i>, 90, p:66. <a href="https://doi.org/10.1016/S0378-1127(96)03840-6">https://doi.org/10.1016/S0378-1127(96)03840-6</a></td> <td></td> <td>PDF page 1</td> </tr> <tr> <td>06-07</td> <td>Fearnside, P. M. (1997). Wood density for estimating forest biomass in Brazilian forests. <i>Forest Ecology and Management</i>, 90(1), 59–87.</td> <td></td> <td>PDF page 1</td> </tr> </tbody> </table>	Ref. code	wood density value source	Page	Note	06-04	Oey Djoen Seng. (1951). <i>Specific gravity of Indonesian woods and its significance for practical use.</i> FRPDC, Forestry Dept., Bogor, Indonesia. (cited in Soewarsono, 1990).		PDF page 1	06-05	Fearnside, P. M. (1997). Wood density for estimating forest biomass in Brazilian forests. <i>Forest Ecology and Management</i> , 90, p:66. <a href="https://doi.org/10.1016/S0378-1127(96)03840-6">https://doi.org/10.1016/S0378-1127(96)03840-6</a>		PDF page 1	06-07	Fearnside, P. M. (1997). Wood density for estimating forest biomass in Brazilian forests. <i>Forest Ecology and Management</i> , 90(1), 59–87.		PDF page 1
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06-04	Oey Djoen Seng. (1951). <i>Specific gravity of Indonesian woods and its significance for practical use.</i> FRPDC, Forestry Dept., Bogor, Indonesia. (cited in Soewarsono, 1990).		PDF page 1														
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06-07	Fearnside, P. M. (1997). Wood density for estimating forest biomass in Brazilian forests. <i>Forest Ecology and Management</i> , 90(1), 59–87.		PDF page 1														

	<a href="https://doi.org/10.1016/S0378-1127(96)03840-6">https://doi.org/10.1016/S0378-1127(96)03840-6</a>		
06-08	Fournier, L. A. (2003). <i>Dipteryx panamensis</i> (Pittier) Record & Mell. In <i>Species Descriptions</i> . Escuela de Biología, Universidad de Costa Rica.	446	PDF page 1
06-17	Fearnside, P.M. 1997. Wood density for estimating forest biomass in Brazilian. <i>Forest Ecology and Management</i> 90 p:64		PDF page 1
06-18	CAB International. (2011). <i>Forestry Compendium: Virola koschnyi – Species detail</i> . Wallingford, UK: CABI.		PDF page 1
06-22	Reyes, G., Brown, S., Chapman, J., & Lugo, A. E. (1992). Wood densities of tropical tree species. General Technical Report SO-88. New Orleans, LA: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 15 pp		
06-23	Avendaño Reyes, J. R. (2008). <i>Modelos genéricos de biomasa aérea para especies forestales en función de la arquitectura y la ocupación del rodal</i> . Tesis de <i>Magíster Scientiae</i> en Manejo y Conservación de Bosques Tropicales y Biodiversidad, Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), Turrialba, Costa Rica.	21	PDF page 36
06-27	Rodríguez Sánchez, L., & Müller, E. <i>Vochysia ferruginea</i> Mart. In: Part II – Species Descriptions. Laboratorio de Semillas Forestales, Instituto Tecnológico de Costa Rica, and Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) – Cooperación en los Sectores Forestal y Maderero, Costa Rica.	775	PDF page 1

06-28	Fearnside, P.M. 1997. Wood density for estimating forest biomass in Brazilian. <i>Forest Ecology and Management</i> 90 p:64; <i>Forestry Compendium</i> , CAB International		PDF page 1
06-30	Fearnside, P. M. (1997). Wood density for estimating forest biomass in Brazilian Amazonia. <i>Forest Ecology and Management</i> , 90(1), 59–87.; PROSEA (1993). <i>Plant Resources of South-East Asia. Timber Trees: Minor Commercial Timbers (Vol. 5(2), p. 122).</i>		PDF page 1
06-31	Greaves, A. & McCarter, P. S. (1990). <i>Cordia alliodora: A promising tree for tropical agroforestry</i> . Tropical Forestry Papers No. 22. Oxford Forestry Institute, Department of Plant Sciences, University of Oxford. 43 pp	24	PDF page 34
06-32	Segura, M., & Kanninen, M. (2005). Allometric models for estimating volume and total aboveground biomass of seven dominant tree species in a tropical humid forest in Costa Rica. <i>Biotropica</i> , 37(1), 2–8. <a href="https://doi.org/10.1111/j.1744-7429.2005.03112.x">https://doi.org/10.1111/j.1744-7429.2005.03112.x</a>	4	PDF page 4
06-33	The Wood Exchange. (n.d.). <i>Dalbergia retusa – Wood density</i> . Retrieved from <a href="http://www.thewoodexchange.info">http://www.thewoodexchange.info</a>		PDF page 1
06-35	Carpenter, F. L., Nichols, J. D., & Sandi, E. (2004). Early growth of native and exotic trees planted on degraded tropical pasture. <i>Forest Ecology and Management</i> , 196(2–3), 367–378. <a href="https://doi.org/10.1016/j.foreco.2004.03.030">https://doi.org/10.1016/j.foreco.2004.03.030</a>	369	PDF page 3
08-28	Food and Agriculture Organization of the United Nations (FAO).		

	(1997). <i>FAO Forestry Paper 134: Estimating biomass and biomass change of tropical forests: A primer</i> . Retrieved from <a href="https://www.fao.org/3/w4095e/w4095e0c.htm">https://www.fao.org/3/w4095e/w4095e0c.htm</a>		
08-29	Zanne, A. E., Lopez-Gonzalez, G., Coomes, D. A., Ilic, J., Jansen, S., Lewis, S. L., ... & Chave, J. (2009). <i>Global Wood Density Database</i> . Dryad. <a href="https://doi.org/10.5061/dryad.234">https://doi.org/10.5061/dryad.234</a>		
09-00	Reyes, G., Brown, S., Chapman, J., & Lugo, A. E. (1992). <i>Wood densities of tropical tree species</i> . General Technical Report SO-88. USDA Forest Service, Southern Forest Experiment Station, New Orleans, LA. 15 p.	9	PDF page 12
09-05	ACAHN (2000). <i>Propiedades de maderas de Costa Rica</i> . Asociación Costarricense de la Industria de la Madera, Heredia, Costa Rica.		
06-99	Gold Standard Foundation. (2024). <i>Afforestation/reforestation (A/R) GHG emissions reduction &amp; sequestration methodology (Version 2.1)</i> . Gold Standard Foundation, Geneva, Switzerland.	14	PDF page 15

Value(s) applied

Tree species	Common names	Values	Sources (see "source of data" above) Wood density
		Wood density	
<i>Calophyllum brasiliense</i>	Cedro maria	0.55	06-07, 08-28, 08-29, 09-00
<i>Carapa guianensis</i>	Caobilla	0.64	06-32
<i>Cedrela odorata</i>	Cedro amargo	0.42	08-28, 08-29, 06-30
<i>Cordia alliodora</i>	Laurel	0.51	06-31, 08-28, 09-00, 09-05

	<i>Dalbergia retusa</i>	Cocobolo	1.02	06-33
	<i>Dipteryx panamensis</i>	Almendra	0.92	06-08, 08-28, 09-05
	<i>Hyeronima alchorneoides</i>	Pilón	0.72	06-28
	<i>Hymenaea courbaril</i>	Guapinol	0.74	06-17, 08-28, 08-29
	<i>Miconia guianensis</i>	Manu	0.79	06-22, 08-28, 08-29, 09-05
	<i>Swietenia macrophylla</i>	Caoba	0.51	08-29
	<i>Tabebuia ochracea</i>	Corteza Amarilla	0.85	06-35, 09-05
	<i>Tectona grandis</i>	Teca	0.63	06-04
	<i>Terminalia amazonia</i>	Roble Coral	0.70	06-05
	<i>Terminalia oblonga</i>	Surá	0.75	06-23, 08-29
	<i>Virola koschnyi</i>	Fruta Dorada	0.53	06-18
	<i>Vochysia ferruginea</i>	Botarrama	0.40	06-27, 08-28, 08-29, 09-05
	<i>Vochysia guatemalensis</i>	Cebo	0.36	08-29, 09-05
	<i>Other species</i>		0.30	06-99
Choice of data or Measurement methods and procedures	Default data value in GS A/R GHG Emissions Reduction & Sequestration Methodology, version 2.1. (source 06-99).  Data values from scientific literature. (See other sources in the summary table in "Value(s) applied").			
Purpose of data	Calculation of project scenario.			
Additional comment				

Data/parameter	<b>Carbon fraction for tree biomass</b>
Unit	tC/tdm
Description	The carbon fraction for tree biomass refers to the total carbon content that it is contained in the tree biomass.
Source of data	Gold Standard Afforestation/Reforestation (A/R) Requirements (version 0.9) applies for this monitoring period.

	Default value as per GS A/R GHG Emissions Reduction & Sequestration Methodology, version 2.1 applies for the next monitoring period starting 16.06.2025).
Value(s) applied	0.50 (applies for the past monitoring period 25.02.2021 – 15.06.2025) 0.47 (applies for the next monitoring period starting 16.06.2025)
Choice of data or Measurement methods and procedures	The Gold Standard Afforestation/Reforestation (A/R) Requirements (version 0.9) (applies for the last monitoring period).  The updated default value of 0.47 from version 2.1 will be applied for for the next monitoring period starting 16.06.2025.
Purpose of data	Calculation of project scenario.
Additional comment	The value of 0.50 was consistently applied for this monitoring period in line with the applicable methodology  The updated value (0.47) as per GS A/R GHG Emissions Reduction & Sequestration Methodology version 2.1 is applied for the next monitoring period starting 16.06.2025.

Data/parameter	<b>Conversion factor 'C' to 'CO2'</b>
Unit	tCO2/tC
Description	The conversion factor 'C' to 'CO2' is used to convert the content of carbon to an equivalent content of CO2.
Source of data	Default value as per GS A/R GHG Emissions Reduction & Sequestration Methodology, version 2.1.
Value(s) applied	44/12
Choice of data or Measurement methods and procedures	Default value as per GS A/R GHG Emissions Reduction & Sequestration Methodology, version 2.1
Purpose of data	Calculation of project scenario
Additional comment	

Data/parameter	<b>Baseline non-tree biomass: grassland</b>
Unit	tCO2/ha
Description	Baseline non-tree biomass is the existing biomass in grass, herbs, roots of grass, etc. (any non-tree species) in the most likely scenario without the project (baseline scenario).
Source of data	<ul style="list-style-type: none"> <li>GS A/R GHG Emissions Reduction &amp; Sequestration Methodology, version 2.1, default factors of 0.4 (tC/tdm) and 44/12 (tCO2/tC).</li> </ul> <p>Methodology; IPCC Guidelines for National GHG Inventories: <a href="https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_06_Ch6_Grassland.pdf">https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_06_Ch6_Grassland.pdf</a></p>
Value(s) applied	23.6 tCO2/ha
Choice of data or Measurement methods and procedures	GS A/R GHG Emissions Reduction & Sequestration Methodology, version 2.1, section 3.5. Baseline emissions and section 3.10 Default values
Purpose of data	Calculation of baseline scenario for grassland
Additional comment	

## D.2 Data and parameters monitored

This section provides the monitored parameters for SDG 5 (Gender Equality), SDG 8 (Decent Work and Economic Growth), SDG 13 (Climate Action), and SDG 15 (Life on Land). Monitoring is reported in line with the *Gold Standard Sustainable Development Methodology (GSDM)* indicators, which are now required for all projects.

Compared to the previous performance certification (2021), the monitoring framework has been adjusted to reflect the updated GSDM tool:

- **SDG 5:** Gender equality was previously measured as the number of women employed in project activities; this is now reported as **GSDM-I5.5.1 (number of women in management roles)**.

Results from 2021–2025 (GSDM-I5.5.1) are not directly comparable to results from previous monitoring periods (women employed/participating in project activities).

Monitoring period	SDG 5 indicator used	Unit	Comparable across periods?
2015–2021	Women employed/participating in project activities	# persons	No
2021–2025	GSDM-I5.5.1 Women in managerial/leadership roles	# persons	No

- **SDG 8:** Decent work was previously quantified as “working agreements with fair wages, appropriate equipment, and training”; this is now reported as **GSDM-I8.5.1 (total number of jobs)**.
- **SDG 13:** The quantification of CO<sub>2</sub> sequestration remains conceptually unchanged but is now reported under **GSDM-I13.2.1 (Amount of GHGs emissions avoided or sequestered)**, updated with the most recent inventory data (2023–2025).
- **SDG 15:** Life on Land was previously reported as hectares re/afforested, protected, and under sustainable management, plus biodiversity indices. This is now represented through **GSDM-I15.5.2 (total area under sustainable forest management)** and **GSDM-I15.5.1 (Number of protected threatened species in the project area & conservation status of species (GSDM-I15.5.1))**.

These adjustments ensure consistency with the current GS requirements while preserving the continuity of project monitoring. Detailed parameter values, sources, and methods are presented in the following tables.

### SDG 5 Gender Equality

Data/parameter	GSDM-I5.5.1 Number of women serving in managerial/leadership/ownership role
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Unit	Number of female managers, leader or in an ownership role.
Description	Number of women in managerial or leadership positions within the Project Developer’s organization as of the end of the reporting period. Indicator replaces the previously applied “number of women employed or participating” metric used in earlier monitoring cycles.
Source of data	Human resources records of BaumInvest AG, BaumInvest Latinoamerica and BaumInvest Colombia, as well as service providers, where applicable.
Value(s) applied	Baseline: 0 (no women in management roles prior to project activity). Monitoring value: 4 average of female employees (31%) over the monitoring period.
Choice of data or Measurement methods and procedures	Official HR contracts and organizational charts with female employees in management/leadership positions
Monitoring frequency	Annually (consolidated at the end of each monitoring period).
QA/QC procedures	Data cross-checked against payroll records, HR contracts, and/or internal audits. Reviewed annually by the HR department.
Purpose of data	To quantify the project’s contribution to SDG 5 (Gender Equality), in line with Gold Standard GSDM methodology.
Additional comment	<p>The 2021 monitoring period reported SDG 5 using “number of women employed in project activities.” In accordance with updated GS requirements, the indicator has been replaced by GSDM-I5.5.1.</p> <ul style="list-style-type: none"> <li>• <b>Indicator update:</b> For 2021–2025, SDG 5 is monitored using GSDM-I5.5.1 (women in managerial/leadership/ownership roles), replacing the indicator used in previous monitoring periods (e.g. in 2015–2021).</li> <li>• <b>Comparability:</b> Results from 2021–2025 (GSDM-I5.5.1) are not directly comparable to results from previous monitoring periods (women employed/participating in project activities).</li> </ul>

Broader gender participation continues to be monitored internally under the project’s Sustainability Monitoring Plan.

**SDG 8 Decent work and economic growth**

Data/parameter	GSDM-I8.5.1 Total number of jobs
Unit	Number of jobs created.
Description	Total number of jobs created under the project, including direct field and office staff. This replaces the indicator (“number of working agreements with fair wages, appropriate working equipment and training of workers”) applied in earlier monitoring cycles.
Source of data	Human resources records of BaumInvest AG, BaumInvest Latinoamerica and BaumInvest Colombia, as well as service providers, where applicable.
Value(s) applied	Baseline: 0 (no jobs prior to project implementation). Monitoring value: 13 on average over the monitoring period including 8 employees of BILA (full-time equivalent dedicated to project GS2913).
Choice of data or Measurement methods and procedures	Official HR contracts and organizational charts.
Monitoring frequency	Annually, consolidated at the end of each monitoring period.
QA/QC procedures	Data cross-checked against payroll records, HR contracts, and/or internal audits; verification against social security and tax registration records.
Purpose of data	To quantify the project’s contribution to SDG 8 (Decent Work and Economic Growth), in accordance with Gold Standard GSDM methodology.
Additional comment	While the 2021 indicator explicitly included fair wages, appropriate equipment, and training, these continue to be standard employment conditions provided by the project to all staff. Under the new GS tool, only the number of jobs (GSDM-I8.5.1) is reported as the certified SDG 8 contribution.

**SDG 13 Climate Action**

Data/parameter	GSDM-I13.2.1 Amount of GHGs emissions avoided or sequestered.
Unit	tCO <sub>2</sub> e
Description	Total amount of greenhouse gases sequestered by the project through tree growth in the eligible planting areas. Soil Organic Carbon (SOC) increment as a result of the plantation. Quantification is conducted using Afforestation/Reforestation (A/R) Requirements (version 0.9) for the past monitoring period (25.02.2021 – 15.06.2025) and the GS A/R “GHG Emissions Reduction & Sequestration Methodology” (version 2.1) for the next monitoring period starting 16.06.2025. The indicator represents the Certified SDG 13 Impact Statement and underpins the issuance of VERs.
Source of data	Field inventory data (tree diameter at breast height - DBH-, tree height, species identification) collected from permanent sample plots, as detailed in the company’s <i>Forest Inventory Guideline</i> .
Value(s) applied	Baseline: 0 (no sequestration prior to project activity). Monitoring values: 245,302 (tCO <sub>2</sub> e) in total based on inventory data from 2025 (achieved at the end of this monitoring period).
Choice of data or Measurement methods and procedures	<ul style="list-style-type: none"> <li>- Data collected following the Forest Inventory Guideline and standard forestry survey protocols.</li> <li>- Estimation of biomass and CO<sub>2</sub> removals conducted in line with the Gold Standard LUF formula for CO<sub>2</sub> fixation.</li> <li>- BEF, Root-to-Shoot ratios, and wood density values are taken from GS approved default values or peer-reviewed scientific literature, as detailed in Section D.1.</li> </ul>
Monitoring frequency	At least once every five years, in line with Gold Standard requirements for A/R projects (Performance Certification cycles).
QA/QC procedures	Detailed in the company’s Forest inventory guideline.
Purpose of data	To quantify the project’s contribution to SDG 13 (Climate Action), in line with Gold Standard GSDM methodology.

	This data is used to calculate net CO <sub>2</sub> removals and issue Verified Emission Reductions (VERs).
Additional comment	

### SDG 15 Life on Land

Data/parameter	GSDM-I15.5.2 Total Area under sustainable forest management
Unit	ha
Description	Area of land within the project boundary that is under sustainable forest management, including re/afforested land and protected natural areas. This replaces the earlier indicator (“hectares re/afforested, protected, and under sustainable management”) reported in the 2021 performance certification.
Source of data	GIS shapefiles, management plans.
Value(s) applied	<p>Baseline: 0 ha under sustainable forest management prior to project activity.</p> <p>Monitoring values:</p> <ul style="list-style-type: none"> <li>• 1,355 ha total area under sustainable forest management, based on updated maps and management records, including:</li> <li>• 978.58 ha of planted area</li> <li>• 376 ha of protected areas within the project.</li> </ul>
Choice of data or Measurement methods and procedures	Areas mapped using GIS. Boundaries are updated when farm area or management zones are adjusted.
Monitoring frequency	Every five years (performance certification cycle) or when major land use changes occur.
QA/QC procedures	Cross-checks with GIS shapefiles, maps and management records. Review by project management prior to submission.
Purpose of data	To quantify the project’s contribution to SDG 15 (Life on Land) through sustainable forest management.

Additional comment	
Data/parameter	GSDM-I15.5.1 Number of protected threatened species in the project area & conservation status of species
Unit	Number
Description	Positive trend in the number of protected threatened species in the project area & conservation status of species over time, measured as number of amphibian and reptile species. At least one biodiversity monitoring report per performance certification (monitoring period) is prepared, covering at least two project areas (San Rafael, La Virgen, Las Delicias, El Porvenir).
Source of data	Biodiversity monitoring studies and reports prepared by research partners (e.g., Senckenberg Institute).
Value(s) applied	Baseline: Initial/Baseline biodiversity assessments <ul style="list-style-type: none"> <li>• 18 reptile and 15 amphibian species (total = 33) identified during the first survey in San Rafael farm in 2009.</li> </ul>
Choice of data or Measurement methods and procedures	Field surveys performed using predefined transects. Each transect is being sampled a total of ten times, the width was approximately eight meters, being four meters at each side of the observer. Mentioned transects were georeferencing using a GPS. Diurnal and nocturnal transects were performed, amphibians and reptiles were recorded by active search, visual encounter and audio strip transects, inspecting all available shelters.
Monitoring frequency	At least once every performance certification (monitoring period).
QA/QC procedures	Scientific review of biodiversity reports; independent verification of sampling methodology.
Purpose of data	To quantify the project's contribution to SDG 15 (Life on Land) through biodiversity conservation and enhancement.
Additional comment	This indicator is adjusted to the new Gold Standard Digital SDG Impact Tool.

### D.3. Comparison of monitored parameters with last monitoring period

Data/Parameter	Value obtained in this monitoring period	Value obtained last monitoring period
SDG #5 Gender Equality	In this monitoring period, BaumInvest Latinoamerica S.A. and BaumInvest AG employed an average of 13 people, out of which an average of 4 (31%) were women in managerial/leadership roles (full-time equivalent dedicated to project GS2913).	In the previous monitoring period, BaumInvest S.A. and BaumInvest AG employed a total of 18 people, out of which 6 (33%) were women and 12 (66%) were men.
SDG #8 Decent work and economic growth	In this monitoring period, BaumInvest Latinoamerica S.A. and BaumInvest AG employed an average of 13 people. (full-time equivalent dedicated to project GS2913).	In the previous monitoring period, BaumInvest S.A. and BaumInvest AG employed a total of 18 people.
SDG #13 Climate Action	The quantity of carbon removals (accumulated) obtained at the end of this monitoring period is 245,302 tCO <sub>2</sub> e (including risk buffer of 20% and SOC estimates)	The quantity of carbon removals obtained at the end of the previous monitoring period was 175,859 tCO <sub>2</sub> e (including risk buffer of 20%)
SDG #15 Life on Land	I15.5.2: total area under sustainable forest management: 1,355 ha, including 978.58 ha of former pastureland continue being reforested, and 376 ha managed as protected areas.  I15.5.1: 109 reptile and amphibian species identified in the project area	I15.5.2: total area under sustainable forest management: 1,355 ha, including 978.58 ha of former pastureland have been reforested and are managed under sustainable forest management. 376 ha are classified and managed as protected areas.  I15.5.1: 95 reptile and amphibian species identified in the project area

DNH 01 – Complaints received	1 formal complaint and 2 informal complaints received and resolved	1 (neighbor complaint in El Porvenir, raised 2018, formally resolved before 2021 certification)
DNH 02 – Ranger sensitization on native species	100% sensitized; inventories confirm increase of native spp.	100% sensitized.

#### D.4. Implementation of sampling plan

During this monitoring period, the project has strengthened the integration of empirical monitoring data into impact assessment:

- **SDG 13 – Climate Action:** Forest inventory data (2023–2025) now serve as primary references for refining the ex-ante growth model, reducing reliance on external literature and improving accuracy and conservativeness of CO<sub>2</sub> sequestration estimates. Default values (BEF, root-to-shoot ratios, wood density, carbon fraction) remain applied where project-specific data are not yet available (see Section D.1). Inventory results in 2025 confirmed higher-than-expected growth due to lower thinning and strong targeted natural regeneration following thinning.

The detailed sampling approach for forest growth parameters based on measurement of tree height and diameter in permanent sample plots is described in the forest inventory guideline (Ref. "Forest invent guideline\_EN\_v1.4.pdf").

- **SDG 5 – Gender Equality:** Employment monitoring shows that on average 31% of staff employed between 2022–2025 were women, a stable share that underpins reporting against GSDM-I5.5.1. This proportion is consistent with long-term project practice, with detailed figures provided in Section D.2.
- **SDG 8 – Decent Work and Economic Growth:** Consolidated HR records confirm the number of formal jobs created under the project, reported against GSDM-I8.5.1 (total number of jobs)

- **SDG 15 – Life on Land:** GIS and management records confirm 978.58 ha reforested and 376 ha maintained as protected areas (in total 1,355 ha) under sustainable forest management.

For biodiversity, a sampling-based monitoring approach has been implemented since project inception. Surveys are carried out in selected farms (at least two of five: San Rafael, La Virgen, Las Delicias, El Porvenir) to ensure coverage of different forest ages and site conditions. Sampling plots and transects are chosen randomly within these farms, and species occurrence is recorded through standardized protocols. The detailed sampling approach for monitoring the biodiversity of herpetofauna is described in the respective monitoring reports. Previous surveys (2009, 2011, 2016, 2022) documented increases in herpetofauna species richness. Results from sampled plots and transects are representative of wider plantation conditions and biodiversity outcomes. The 2023–2025 regeneration monitoring recorded +14 naturally regenerating native tree species (with DBH >5 cm.) inside plantations, confirming a positive biodiversity trend.

These results demonstrate how monitored field, HR, and biodiversity data are applied in practice, ensuring robust and transparent reporting against the Gold Standard SDG Impact Tool indicators.

## SECTION E. CALCULATION OF SDG IMPACTS

### E.1. Calculation of baseline value or estimation of baseline situation of each SDG Impact

For each SDG indicator monitored in Section D.2, the baseline represents the situation prior to project implementation. Where no activity or structure existed before, the baseline value is set to zero. In such cases, baseline values for social and organizational indicators (e.g. female managers, jobs created) are therefore set to zero.

#### SDG 5 Gender Equality

GSDM-I5.5.1 Number of women serving in managerial/leadership/ownership role.

- **Baseline situation:** Prior to the establishment of the project entity, no formal management structure existed; hence no women (or men) held managerial roles associated with the project.
- **Baseline value:** 0 female employees in managerial/leadership roles.

#### SDG 8 Decent work and economic growth

GSDM-I8.5.1 Total number of jobs.

- **Baseline situation:** Before project implementation, no formal jobs were created or contracted for the project activity.
- **Baseline value:** 0 jobs.

#### SDG 13 Climate Action

GSDM-I13.2.1 Amount of GHGs emissions avoided or sequestered.

- **Baseline situation:** The project area was grassland prior to implementation. In accordance with the Gold Standard A/R methodology, the baseline biomass stock is estimated from non-tree biomass present on grasslands.
- **Baseline calculation:** For the grassland the value of 23.6 tCO<sub>2</sub>/ha (IPCC default value of 16.1 (tdm/ha)<sup>1</sup>; and default factors of 0.4 (tC/tdm) and 44/12 (tCO<sub>2</sub>/tC) as per the GS A/R guidelines (page 14) is applied. The value is calculated as: 16.1 tdm/ha \* 0.4 tC/tdm \* 44/12 tCO<sub>2</sub>/tC = 23.6 tCO<sub>2</sub>/ha. Since appropriate

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<sup>1</sup> 2006 IPCC GfNGGI\_Grassland.pdf (page 27, table 6.4)

country-specific estimates for non-tree biomass in grassland were not available, we use international default values for biomass stocks present on aboveground and belowground biomass for grassland provided from IPCC.

- **Baseline value:** 23.6 tCO<sub>2</sub>/ha × 978.58 ha = 23,093 tCO<sub>2</sub>e (included in ER spreadsheets).
- **Evidence:** Land-use history (pastureland), IPCC defaults for grassland, GS A/R methodology v2.1 , p. 29.

## SDG 15 Life on Land

GSDM-I15.5.2 Total Area under sustainable forest management.

- **Baseline situation:** At project start, no hectares within the project boundary were managed under sustainable forest management.
- **Baseline value:** 0 ha.
- **Evidence:** Land-use history (pasture), cadastral records, GIS shapefiles from project start.
- GSDM- I15.5.1 Number of protected threatened species in the project area & conservation status of species **Baseline situation:** Biodiversity conditions are referenced to the first Biodiversity baseline assessments conducted on herpetofauna in San Rafael (2009).
- **Baseline value:** a total of 33 different species identified (18 reptile and 15 amphibian species identified during the first survey in San Rafael farm in 2009).
- **Evidence:** Baseline biodiversity monitoring report (Ref.: 2009-09-22 Bericht Herpetofauna Monitoring Sept 09.pdf).

## E.2. Calculation of project value or estimation of project situation of each SDG Impact

### SDG 5 Gender Equality

GSDM-I5.5.1 Number of women serving in managerial/leadership/ownership role

- **Formula / Calculation:**

$$\text{Number of women managers/leaders} = \sum_t \text{Female employees in management/leadership}$$

- **Data source:** Annual HR statements (lists of employees disaggregated by gender and position) issued by BIAG and BILA at the end of each calendar year. For 2025, the HR statement was prepared in June in the context of this Performance Certification.
- **Project value (monitoring period 2022–2025):**
  - Average for monitoring period: 4 (31%) (full-time equivalent dedicated to project GS2913).

*(Note: all these women held managerial or leadership positions, reported in the HR records — see spreadsheet sheet "25-08-27\_GS2913\_SDG5&SDG8\_data.xlsx".)*

- **Spreadsheet reference:** "25-08-27\_GS2913\_SDG5&SDG8\_data.xlsx"

## SDG 8 Decent work and economic growth

GSDM-I8.5.1 Total number of jobs.

- **Formula / Calculation:**

$$Jobs = \sum_t Employees\ at\ year\ end$$

- **Data source:** Annual HR statements from BIAG and BILA, disaggregated by gender and position. Statements are issued at the end of each calendar year; for 2025, the HR statement was prepared in June for this Performance Certification.
- **Project value (monitoring period 2022–2025):** Average for the monitoring period is 13 jobs.  
**Spreadsheet reference:** "25-10-02\_GS2913\_SDG5&SDG8\_data\_v2.0.xlsx"

## SDG 13 Climate Action

The outcome for SDG 13 will be quantified as CO<sub>2</sub> sequestration by applying the methodology “GS A/R GHG Emissions Reduction & Sequestration Methodology, version 2.1”. The net benefit is the difference between the quantified CO<sub>2</sub> sequestration in the project scenario minus the quantified CO<sub>2</sub> sequestration in the baseline situation. In the following, a detail description of the equations and procedures followed as per section 3.3 to 3.8 of the GS A/R Methodology is presented.

### 3.3 Calculation of CO<sub>2</sub> removal

The CO<sub>2</sub> removal unit is determined for every year (t) of the crediting period using the following formula:

$$\begin{aligned}
 & \text{CO}_2 \text{ removal units MU,t} \\
 & = (\text{CO}_2\text{-removal MU,t} - \text{Baseline MU,t} - \text{Leakage MU,t} - \text{Other} \\
 & \text{Emissions MU,t}) \times \text{Eligible planting area MU}
 \end{aligned}$$

$$\text{CO}_{2\text{removal}}\text{Project area,t} = \sum_{\text{MU}=1}^{\text{MUs}} \sum_{\text{t}=1}^{\text{CP}} \text{CO}_2\text{removal MU,t}$$

Where:

$\text{CO}_{2\text{removal}}\text{Project area,t}$	=	CO <sub>2</sub> -removal units of a project area in year t (tCO <sub>2</sub> )
CO <sub>2</sub> removal MU,t	=	CO <sub>2</sub> -removal of a MU in year t (tCO <sub>2</sub> )
MUs	=	MUs of a project area (1, 2, 3, ...)
t	=	Years of the crediting period (1, 2, 3, ...)
CP	=	Year the crediting period ends (1, 2, 3, ...)

The modelling unit applied is the Modelling Unit (MU). The following overview summarizes the MU-based calculation chain used for CO<sub>2</sub> removal quantification and aggregation:

- Permanent plot measurements (DBH and height) are used to calculate stem volume and derive the MU mean volume (m<sup>3</sup>/ha).
- MU precision is assessed (±20% at 90% confidence); where the criterion is not met, the prescribed conservative uncertainty deduction is applied at MU level prior to ER aggregation (as per GS A/R methodology v2.1 and LUF AR Annex A).
- MU mean volume is converted to biomass and then to tCO<sub>2</sub>e using the applied conversion factors (BEF, root-to-shoot ratio, wood density and carbon fraction; see Section B.6.2).

- Where selective harvesting occurs, long-term CO<sub>2</sub> removal is adjusted by deducting thinning where applicable, as implemented in the ER calculation workbooks.
- MU results are multiplied by MU area and aggregated (area-weighted) to farm totals; farm totals are summed to the project total.
- Baseline is deducted in accordance with the methodology applicability conditions (baseline deducted in year 1 only, t=1).

The CO<sub>2</sub>-removal units are determined in a cumulative way, alongside the growth of a forest. This implies that at the beginning of a project, emissions from the baseline can outweigh the parameter CO<sub>2</sub>-removal units and the net amount of CO<sub>2</sub> sequestered is negative.

The different parameters of the previous formula, as well as the calculation approach for the CO<sub>2</sub> removal, are provided below:

1. Calculation of average volume (m<sup>3</sup>/ha) at the MU level, as a result of permanent plots' data (DBH and height from all the trees inside the plot) collected in the latest forest inventory.
2. A statistical analysis is conducted to ensure that the mean value (m<sup>3</sup>/ha) at the MU is statistically robust. In case that the 20% precision level within the 90% confidence level is not complied with, an uncertainty discount as per Gold Standard A/R GHG emissions reduction & sequestration methodology v.2.1 is calculated and subtracted from the mean value. This uncertainty treatment is applied at MU level prior to aggregation to farm/project totals.
3. Calculation of the CO<sub>2</sub> removal at the MU level by using the following formula. The conversion factors (BEF, root-to-shoot ratios, wood density, carbon fraction) allow the conversion of the "Stem volume", which is measured in cubic meters (m<sup>3</sup>) to "tree biomass" with the unit tCO<sub>2</sub> (see Section B.6.2).

$$\text{CO}_2\text{e (t)} = \text{Volume (m}^3\text{)} \times \text{BEF} \times (1 + \text{Root:Shoot}) \times \text{Wood Density} \times \text{Carbon Fraction} \times \frac{44}{12}$$

4. The number of CO<sub>2</sub> removal units is determined for each Modelling Unit (MU), and its portion of the total baseline is deducted.

5. The sum of all MUs CO<sub>2</sub>-removal units make up the CO<sub>2</sub>-removal units of the entire project. Farm-level totals are obtained as the sum of MU results per farm; project-level totals are obtained as the sum across all farms.
6. With the applicability conditions the A/R methodology assumes no significant increase in the Baseline. Being "significant" defined to be more than 5% of the "long-term CO<sub>2</sub>-Fixation". Therefore, the Baseline is only deducted in year 1 (t=1).

Detailed MU-level calculations (MU areas, plot inputs, MU mean volume, precision/CI check and any uncertainty deduction, thinning adjustment, and resulting tCO<sub>2</sub>e) are provided in the submitted farm-level calculation workbooks listed below, enabling independent replication of the reported monitoring results. Overall details of baseline and CO<sub>2</sub> removal at the MU and farm level can be found in:

- "25-11-11\_GS2913\_ElPorvernir\_RE.xlsx"
- "25-11-11\_GS2913\_LasDelicias\_RE.xlsx"
- "25-11-11\_GS2913\_LaVirgen1\_RE.xlsx"
- "25-11-11\_GS2913\_LaVirgen2\_RE.xlsx"
- "25-11-11\_GS2913\_SanRafael\_RE.xlsx"

### **3.4 Selection and justification of the baseline scenario**

The project area was grassland prior to implementation. In accordance with the Gold Standard A/R methodology, the baseline biomass stock is estimated from non-tree biomass present on grasslands.

### 3.5 Baseline

Baseline calculation for the grassland existing prior to implementation applies the value of 23.6 tCO<sub>2</sub>/ha (IPCC default value of 16.1 (tdm/ha)<sup>2</sup>; and default factors of 0.4 (tC/tdm) and 44/12 (tCO<sub>2</sub>/tC) as per the GS A/R guidelines (page 14). The value is calculated as: 16.1 tdm/ha \* 0.4 tC/tdm \* 44/12 tCO<sub>2</sub>/tC = 23.6 tCO<sub>2</sub>/ha. Since appropriate country-specific estimates for non-tree biomass in grassland were not available, we use international default values for biomass stocks present on aboveground and belowground biomass for grassland provided from IPCC.

The Baseline is determined at the Modelling Unit (MU) level using the following formula:

$$\begin{aligned} \text{Baseline MU,t [tCO}_2\text{/ha]} \\ = \text{Baseline Eligible planting area [tCO}_2\text{]} \div \text{Eligible planting area [ha]} \end{aligned}$$

Baseline value for the project is: 23.6 tCO<sub>2</sub>/ha × 978.58 ha = 23,093 tCO<sub>2</sub>e (included in ER spreadsheets).

### 3.6 CO<sub>2</sub> removal

The yearly CO<sub>2</sub>-removal is determined at the level of Modelling Unit (MU) during the crediting period.

For every MU a growth-model and conversion factors is determined. The conversion factors (BEF, root-to-shoot ratios, wood density, carbon fraction) allow the conversion of the "Stem volume", which is measured in cubic meters (m<sup>3</sup>) during the forest inventories, to "tree biomass" with the unit tCO<sub>2</sub> (see Section B.6.2).

A realistic survival rate is reflected in the growth model. The long-term CO<sub>2</sub> removal is determined under the "selective harvesting" silvicultural method applied. The ex-ante model is built as follows:

1. Estimation of aboveground biomass by using ex-ante removals from the 2022–2025 monitoring period. Forest inventory data (2023–2025) from the plantations now serve as primary references for refining the ex-ante growth model till the end of the

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<sup>2</sup> 2006 IPCC GfNGGI\_Grassland.pdf (page 27, table 6.4)

crediting period, reducing reliance on external literature and improving accuracy and conservativeness of CO<sub>2</sub> sequestration estimates.

2. Ex-ante projections beyond 2025 are derived from a yearly growth rate calculated as the average of observed growth rates (2023-2025), and reduced conservatively to account for thinning and mortality, based on actual management practice and observed field data.
3. Ex-ante projections are estimated at the MU and farm level, and finally at the project level as the sum of all the farms.
4. Calculation of soil organic carbon (SOC) per MU using the GS4GG Tool “for estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities”. The following sequestration rates apply: 0.2585 (tCO<sub>2</sub>/ha.year) for LAC, 0.3575 (tCO<sub>2</sub>/ha.year) for HAC and 0.385(tCO<sub>2</sub>/ha.year) for VOL soils. For more details, see the carbon sequestration excel spreadsheet: “403\_V1.0\_0.7\_LUF\_AR Methodology\_Soil Carbon Tool\_GS2913”, and further explanations in “SOC\_supporting\_assumptions\_GS2913\_v2.0.pdf”.

### 3.7 Leakage emissions

No changes applied.

*Ref: San Rafael: 01\_PDD\_BRP\_CFS\_San Rafael (2010).pdf; Page 6-11*

*Ref: La Virgen 1: 02\_PDD\_BRP\_CFS\_La Virgen (2013).pdf; Page 31-33*

*Ref: La Virgen 2 & Las Delicias: 03\_PDD\_BRP\_GS-LUF\_NewArea\_2014; Page 52-55*

*Ref: El Porvenir: 04\_PDD\_BRP\_GS-LUF\_NewArea\_2021\_5.6 Leakage*

### 3.8 Other emissions

There are no other emissions from the project.

There are no emissions as a result from certain land preparation techniques, neither from the use of fertilisers, nor did the project use burning of biomass as a site preparation technique.

Combustion of fossil fuel - CO<sub>2</sub> and Non-CO<sub>2</sub> 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, as per the applicable Methodology.

### SDG 15 Life on Land

GSDM-I15.5.2 Total Area under sustainable forest management.

- **Formula / Calculation:**

$$\text{Area under SFM (ha)} = \text{Reforested area} + \text{Protected area}$$

- **Data source:** GIS shapefiles and project management records.
- **Project value:**
  - 978.58 ha reforested with mixed, predominantly native species.
  - 376 ha designated as protected natural areas.
  - Total = 1,355 ha under sustainable management.
- **Reference:** see ER spreadsheets (.xlsx) per farm and land use shapefiles per farm.
- GSDM- I15.5.1 Number of protected threatened species in the project area & conservation status of species **Formula / Calculation:** Number of protected threatened amphibian and reptile species identified in biodiversity surveys at sample sites.
- **Data source:** Baseline biodiversity survey (2009) and follow-up reports (2011, 2016, 2022).
- **Project value:**
  - Positive trend in herpetofauna diversity confirmed in 2016, 2022 surveys.
  - Field surveys during 2023–2025 confirm strong natural regeneration.
- **Reference:** *Biodiversity Monitoring reports (2009, 2011, 2016, 2022).*

### E.3. Calculation of leakage

Potential sources of leakage emissions were systematically assessed in accordance with the applicable A/R methodologies. Based on field surveys and stakeholder consultations all relevant leakage categories related to the pre-project land use (extensive cattle grazing) were evaluated and excluded. Written statements from the former landowners confirm that livestock farming was permanently abandoned after the purchase of the property, all cattle were sold (and slaughtered), and there was no displacement of activities to other areas. In addition, national legislation in Costa Rica prohibits the conversion of forest areas into pasture or cropland, which further ensures that no leakage occurs. Consequently, the project activity did not result in any leakage emissions.

No changes applied.

*Ref: San Rafael: 01\_PDD\_BRP\_CFS\_San Rafael (2010).pdf; Page 6-11*

*Ref: La Virgen 1: 02\_PDD\_BRP\_CFS\_La Virgen (2013).pdf; Page 31-33*

*Ref: La Virgen 2 & Las Delicias: 03\_PDD\_BRP\_GS-LUF\_NewArea\_2014; Page 52-55*

*Ref: El Porvenir: 04\_PDD\_BRP\_GS-LUF\_NewArea\_2021\_5.6 Leakage*

**E.4. Calculation of net benefits or direct calculation for each SDG Impact**

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
			Total 245,302	
SDG 13 – Climate Action	GSDM-I13.2.1 Amount of GHG emissions avoided or sequestered (tCO <sub>2</sub> )	23,093 tCO <sub>2</sub>	tCO <sub>2</sub> e (including risk buffer of 20%, and SOC)	66,829 tCO <sub>2</sub> e*
SDG 5 – Gender Equality	GSDM-I5.5.1 Number of women in managerial/leadership roles	0	Average +4 (31%) women	+4 women
SDG 8 – Decent Work & Economic Growth	GSDM-I8.5.1 Total number of jobs	0	Average: 13 jobs	+13 jobs
SDG 15 – Life on Land	GSDM-I15.5.2 Area under sustainable forest management (ha)	0	978.58 ha reforested + 376 ha protected = 1,355 ha	1,355 ha
SDG 15 – Life on Land	GSDM- I15.5.1 Number of protected threatened species in the project area & conservation status of species	33	109 amphibian and reptile species identified	+76 species

\* The Net ER benefit reported for SDG 13 – Climate Action (66,829 tCO<sub>2</sub>e) is based on calculations from the project’s ex-post data. These estimates are directly traceable in the file “26-02-10\_GS2913\_EX-ANTE&EX-POST\_model\_v2.1.xlsx”, tab *Ex-post\_ &\_ex-ante\_ER\_farms*.

**E.5. Comparison of actual SDG Impacts with estimates in approved PDD**

<b>SDG</b>	<b>Values estimated in ex ante calculation of approved PDD for this monitoring period</b>	<b>Actual values<sup>3</sup> achieved during this monitoring period</b>
<b>SDG 13 Climate Action</b> (GSDM-I13.2.1)	-13,155 tCO <sub>2</sub> ex-ante net removals for MP 2022–2025 from approved PDD/transition model (after baseline).	+66,829 tCO <sub>2</sub> net benefit; inventory result for MP 2022–2025
<b>SDG 15 – Life on Land</b> (GSDM-I15.5.2)	1,355 ha Ex-ante SFM area planned/validated for MP 2022–2025 in the PDD (reforested + designated protected areas	1,355 ha 978.58 ha reforested + 376 ha protected (GIS/management records 2022–2025).
<b>SDG 15 – Life on Land</b> (GSDM-I15.5.1)	Estimated ex-ante value for the number of reptile and amphibian species for this monitoring period: 105 species.	Positive trend (qualitative): 109 reptile and amphibian species identified in the project area (survey 2022)
<b>SDG 5 – Gender Equality</b> (GSDM-I5.5.1)	Target was to reach ideally 40% of women working for the project (not limited to managerial/leadership roles).	4 (31%) female employees in managerial/leadership roles (full-time equivalent dedicated to project GS2913).
<b>SDG 8 – Decent Work &amp; Economic Growth</b> (GSDM-I8.5.1)	Commitment: jobs under fair wages, appropriate equipment, training, and safety	13 in average over the monitoring period (8 employees of BILA full-time equivalent dedicated to project GS2913)

<sup>3</sup> Whenever emission reductions are capped, both the original and capped values used for calculations must be transparently reported. Use brackets to denote original values.

E.5.1. Explanation of calculation of value estimated ex ante calculation of approved PDD for this monitoring period.

For SDG 13 the ex-ante values validated in the PDD for this monitoring period were calculated using the Gold Standard A/R methodology, applying literature values and international defaults where country-specific data were not available. Parameters such as biomass expansion factors, root-to-shoot ratios, wood density and carbon fraction were taken from peer-reviewed sources and IPCC defaults. Baseline carbon stocks were set using the IPCC default for grassland biomass (23.6 tCO<sub>2</sub>/ha).

The projections were designed to be conservative and indicative, recognizing that at the time of validation there were no regional long-term precedents for either rotation forestry (silvicultural system at that time) plantations, or close-to-nature selective harvesting plantations with predominantly native species. Variability across soils, rainfall and micro-climates was accounted for through conservative average growth assumptions.

The ex-ante model of the approved PDD for this monitoring period assumed a series of thinning in the years 2022–2025, resulting in a net negative ex-ante estimate (indicated in Table E.5 above) for this monitoring period. This projection reflected the expected short-term reduction in standing volume due to management interventions, while long-term sequestration benefits were expected in later periods.

Since then, continuous monitoring and operational experience have led to lower thinning intensity/timing than originally planned, alongside notable natural regeneration within plantations. The ex-ante values have been updated with the 2023–2025 forest inventory results, ensuring that projections now reflect the project's own robust data and provide a more accurate picture of context-specific growth dynamics. Actual sequestration measured during the monitoring period amounted to +66,829 tCO<sub>2</sub>. The difference between the PDD ex-ante value and the monitored result therefore arises primarily from adapted management (thinning regime) and observed natural regeneration. Going forward, the updated ex-ante projections are aligned with the implemented regime to ensure like-for-like comparisons. (See ex-ante model in "26-02-10\_GS2913\_EX-ANTE&EX-POST\_model\_v2.1.xlsx").

For SDG 15 (land under sustainable forest management), the ex-ante estimate is based on the validated planting schedule and set-aside areas, which have remained stable since the last Performance Certification. Biodiversity was treated qualitatively at validation, with the expectation of improvements as forest structure develops over pastureland.

For SDG 5 (gender equality), the PDD fixed a numerical ex-ante target for the proportion of women employed in the workforce (not limited to managerial roles). This provided a clear benchmark against which actual performance can be compared.

For SDG 8 (decent work), the PDD defined impacts not only as the creation of jobs, but also as ensuring fair wages, adequate working equipment, and access to training and manuals. No fixed numerical projection was validated, but the commitment to these quality criteria formed part of the design certification. Actual values are now reported under the updated GS indicator (I8.5.1 = total jobs), while continuing to ensure that these conditions are met.

Overall, while ex-ante values were conservative and based on the best available data at the time of validation, GS2913 now benefits from its long track record, robust monitoring systems, and accumulated experience — which is rare for tropical A/R projects of this age and scale. This combination strengthens the credibility of both comparisons with ex-ante values and future refinements of project projections.

#### **E.6. Remarks on increase in achieved SDG Impacts from estimated value in approved PDD**

*Not applicable for afforestation and reforestation (A/R) project activities.*

## SECTION F. SAFEGUARDS REPORTING

No additional safeguarding principles have been added to the Sustainability Monitoring Plan. The project continues to implement the Do-No-Harm (DNH) assessment commitments on complaints handling (DNH 01) and protection of native species (DNH 02). For DNH 01, one formal complaint and two informal complaints were received and resolved during this monitoring period and being managed in line with the established protocol. For DNH 02, monitoring confirms the opposite of risk: inventories show an increase of native species within plantations, and long-standing staff are fully aware of their protection. The parameter remains active but is effectively implemented and considered outdated as a risk trigger.

**DHN 01**

Data/parameter	Complaints received via the project’s grievance mechanism (DHN safeguard)
Unit	Number
Description	Count of formal complaints submitted by stakeholders (e.g., community members, neighbors, workers) through the grievance channels and logged in the project’s register during the monitoring period. Tracks the effectiveness of the mitigation measure: <i>hold dialogue to resolve significant disputes; if unresolved, proceed legally.</i>
Source of data	Project Grievance Register and supporting records (complaint forms, emails/letters, meeting minutes)
Value(s) applied	<ul style="list-style-type: none"> <li>• <b>Baseline:</b> Not applicable (pre-project).</li> <li>• <b>Monitoring period (2022–2025):</b> 1 formal complaint and 2 informal complaints received and resolved; case under resolution in line with protocol.</li> </ul>
Choice of data or Measurement methods and procedures	Grievances may be submitted via phone, email, written note, complaint box or in person. Upon receipt, the Forestry Department Manager (or delegate) logs the complaint (date, source, summary, location, responsible staff, actions taken, status, closure date), acknowledges receipt to the complainant, follows up until resolution, and records the outcome. If dialogue fails, the case is escalated as per the manual.
Monitoring frequency	Continuous logging; consolidated reporting at each Performance Certification
QA/QC procedures	Register entries are reviewed for completeness and consistency by the Forestry Department Manager; supporting evidence (emails/letters/minutes) is crosschecked; status updates are verified prior to certification.
Purpose of data	To monitor the Do-No-Harm safeguard on stakeholder disputes, demonstrate accessibility and effectiveness of the grievance mechanism, and document implementation of mitigation measures.
Additional comment	

**DNH 02**

Data/parameter	Sensitization of forest rangers regarding identification and protection of native tree species
Unit	Qualitative (Yes/No; supported by training records)
Description	Ensuring that existing patches of native trees or solitary stems, as well as naturally regenerating species, are protected during plantation management. Workers are trained and sensitized to identify and preserve these species in the course of their maintenance work.
Source of data	<ul style="list-style-type: none"> <li>• Training/onboarding records</li> <li>• Hand-out of forestry manual (Management of Forestry Plantation)</li> <li>• Interviews with forest rangers (where relevant).</li> </ul>
Value(s) applied	<ul style="list-style-type: none"> <li>• <b>Baseline:</b> No sensitization of forest rangers prior to project implementation</li> <li>• <b>Current situation (2022–2025):</b> All forest rangers have been sensitized at the time of onboarding; follow-up training provided as needed.</li> </ul>
Choice of data or Measurement methods and procedures	<ul style="list-style-type: none"> <li>• Onboarding training session conducted by Forestry Department Manager.</li> <li>• Distribution of forestry manual</li> <li>• Follow-up training when new needs are identified</li> <li>• Cross-check through interviews with forest rangers during supervision.</li> </ul>
Monitoring frequency	At the time of onboarding for each new forest ranger; follow-up training as required
QA/QC procedures	<ul style="list-style-type: none"> <li>• Training attendance sheets reviewed and archived</li> <li>• Forestry Department Manager verifies that manuals are distributed, and instructions understood</li> <li>• Interviews cross-checked with field supervisors.</li> </ul>
Purpose of data	To demonstrate that mitigation measures to protect native tree species is implemented and effective, ensuring biodiversity conservation in managed plantations.
Additional comment	Contrary to risk has been observed: forest inventory records from the last two years confirm an increase of native tree species within plantations, showing strong natural regeneration. The on-site team and forestry workers — most of whom have been with the company since the beginning — are fully aware of the importance

of retaining and protecting native species. As such, the original situation that triggered this monitoring parameter no longer applies, and the safeguard is considered effectively implemented and maintained.

## SECTION G. STAKEHOLDER INPUTS AND LEGAL DISPUTES

### **G.1. List all Inputs and Grievances which have been received via the Continuous Input and Grievance Mechanism together with their respective responses/mitigations.**

Formal grievances received during the current Monitoring Period

Complaint received from the Municipality of Upala by email on May 28, 2025, regarding damage to a public road (congestion of the road drainage channel) caused by logging operations and the haulage of thinned timber at the project site El Porvenir.

In response to the complaint, the responsible managing director of BILA S.A. immediately contacted the timber buyer responsible for the damage. After the logging operations were completed, the buyer repaired the damage within a few days of the complaint being received, to the full satisfaction of the Municipality of Upala.

*Ref.: 2025-05-28\_MUNIUPALA\_camino código 04.pdf*

Informal grievances received during the current Monitoring Period:

At the La Virgen project site, two complaints were informally brought to the attention of the responsible managing director of BILA in August 2024 via the local forest ranger. Both complaints came from the local "Comité de Caminos San Ramon de la Virgen" and the local SINAC-MINAE office in Sarapiquí, also regarding damage to a public road caused by logging operations and the haulage of timber.

In the first case, the damage to the roadside was also repaired a few days after the logging operations were completed.

In the second case, no damage was caused, but we were temporarily prohibited from using the public road for the transport of timber. The road was maintained during this time and the ban on use was intended to prevent possible damage. Of course, we complied with these instructions so that no damage was caused.

All inputs and grievances received via the Continuous Input & Grievance Mechanism have been listed separately in the "GS2913\_Input & Grievance Record\_MP\_2021-

2025.pdf”, in accordance with the internal “SOP\_Continuous Input & Grievance Mechanism v1.3.pdf”.

## **G.2. Report on any stakeholder mitigations that were agreed to be monitored.**

*Concerns raised during the stakeholder consultation in El Porvenir:*

*A stakeholder expressed concern about tree felling activities and their potential negative impact on secondary roads and bridges used by the local community.*

### *Proposed Mitigation Measures*

- *Infrastructure Protection to minimize damage to secondary roads and bridges.*
- *Maintenance Commitment: Repair or restore any affected infrastructure caused directly by project activities.*
- *Establish a direct communication channel (Input and grievance mechanism) to promptly receive and address concerns related to road/bridge usage.*
- *Monitoring of the Mitigation Measure*
- *Conduct inspections of roads and bridges during and after felling activities.*
- *Collect ongoing feedback from local stakeholders on the condition of infrastructure and accessibility.*
- *Reporting and documentation of complaints and corrective actions in the project’s monitoring reports.*

*The formal grievance received from the Municipality of Upala by email on May 28, 2025 (see G.1.), and the corresponding response and resolution, demonstrate that the proposed mitigation measures have been implemented and are functioning effectively. In particular, the prompt repair of the affected public road reflects the project’s commitment to infrastructure protection and maintenance. Furthermore, the direct communication channel established through the grievance mechanism ensured that the concern was received and addressed without delay. This case confirms that the mitigation measures outlined are effectively applied in practice and provide a reliable framework for preventing and addressing similar issues in the future.*

**G.3. Provide details of any legal contest that has arisen with the project during the monitoring period**

*Not applicable, as no legal contest relating to the project has arisen during the monitoring period.*

## Revision History

Version	Date	Remarks
1.1	14 October 2020	<p>Hyperlinked section summary to enable quick access to key sections</p> <p>Improved clarity on Key Project Information</p> <p>Section for POA monitoring</p> <p>Forward action request section</p> <p>Improved Clarity on SDG contribution/SDG Impact term used throughout</p> <p>Clarity on safeguard reporting</p> <p>Clarity on design changes</p> <p>Leakage section added for VER/CER projects</p> <p>Addition of Comparison of monitored parameters with last monitoring period</p> <p>Provision of an <a href="#">accompanying Guide</a> to help the user understand detailed rules and requirements</p>
1.0	10 July 2017	Initial adoption