



Carbon Stock 2024



March 2025

1. About this Report

For the fourth consecutive year, Lacan Florestal has prepared and presents its Carbon Stock Report for forestry assets. Lacan Florestal comprises the companies invested in by the four Forestry Funds managed by Lacan Investimentos e Participações (asset manager of the Vinci Compass group), which are responsible for planting and managing commercial forests and conserving and restoring native ecosystems.

This report complements the set of disclosures relating to socio-environmental aspects that Vinci Compass Lacan and Lacan Florestal publish annually. Other publications include:

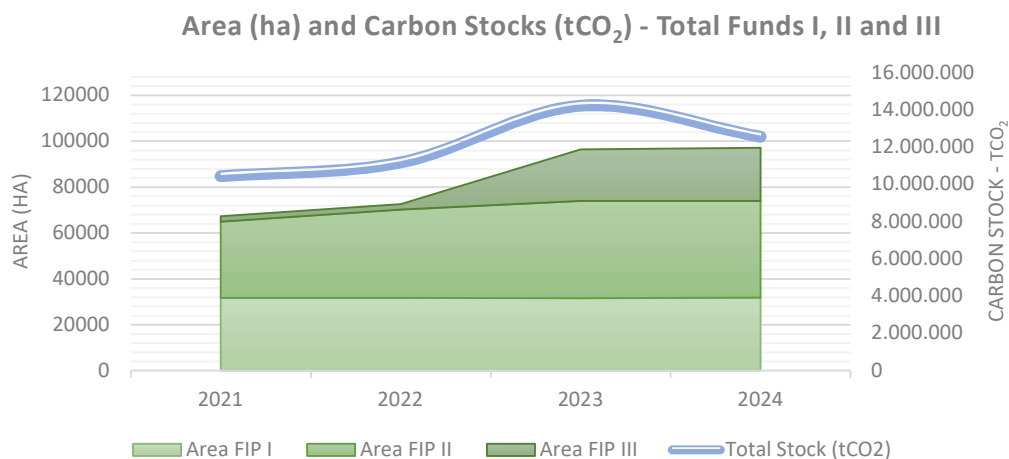
- Integrated Report 2024 (according to GRI and SASB guidelines)
- Greenhouse Gas Inventory 2024 (following GHG Protocol methodology)

2. The Team

The method, calculations and rationale presented in this report were selected and conducted by a team of specialist consultants from Report Group. The forest inventory and data were collected and presented by Lacan's forestry team. Lacan's ESG team worked closely with the team of Report Group and Lacan's Forest Planning and Operations teams to coordinate the 2024 climate analysis and produce this final report.

3. Carbon Stocks – Total and by Fund (FIP I, II e III)

Below we present the total of carbon stored by Lacan's forests, by year and by fund.



Fund	Species	2021		2022		2023		2024	
		Area (ha)	Stock (tCO ₂)	Area (ha)	Stock (tCO ₂)	Area (ha)	Stock (tCO ₂)	Area (ha)	Stock (tCO ₂)
FIP I	TOTAL FIP I	31.757	5.043.691	31.757	3.845.657	31.621	4.303.064	31.768	3.749.805
	<i>Eucalyptus urograndis</i>	31.757	5.043.691	31.757	3.845.657	31.621	4.303.064	31.768	3.749.805
	<i>Pinus elliottii</i>	0	0	0	0	0	0	0	0
	<i>Pinus taeda</i>	0	0	0	0	0	0	0	0
FIP II	TOTAL FIP II	33.218	5.001.440	38.489	6.959.491	42.355	8.136.539	42.355	6.696.983
	<i>Eucalyptus urograndis</i>	33.218	5.001.440	38.489	6.959.491	42.355	8.136.539	42.355	6.696.983
	<i>Pinus elliottii</i>	0	0	0	0	0	0	0	0
	<i>Pinus taeda</i>	0	0	0	0	0	0	0	0
FIP III	TOTAL FIP III	2.316	388.926	2.421	368.236	22.559	1.777.567	23.018	2.108.387
	<i>Eucalyptus urograndis</i>	765	139.749	527	97.016	20.689	1.491.614	21.181	1.834.498
	<i>Pinus elliottii</i>	38	4.622	38	5.272	38	5.912	31	3.971
	<i>Pinus taeda</i>	1.513	244.555	1.856	265.948	1.832	280.041	1.806	269.918
Total Geral		67.292	10.434.057	72.667	11.173.384	96.535	14.217.170	97.141	12.555.175

The carbon stocks found in Lacan's forest plantations amounted to a total of more than 12.5 million tons of carbon dioxide stored in 2024. Almost all (98%) of this carbon stock is found in Eucalyptus plantations.

In the period 2023-2024, despite the increase in the stock in FIP III, there was a reduction in the total carbon stock, due to the harvesting of several areas planted in FIPs I and II.

The annual variations in carbon stock shown in the graph and table above can be attributed mainly to the planting rotations in the forest areas. When a new rotation begins (planting or coppicing), the complete cycle of tree growth begins, from the initial planting to the final harvesting of the wood. During this process, the trees grow and absorb carbon from the atmosphere, contributing to an increase in the carbon stock.

Variations in the carbon stock can be observed as the forest reaches its physiological maturity, so the carbon stock increases during tree growth and decreases temporarily after the harvest period, but is expected to recover as new trees grow.

When the forest plantation reaches maturity, it is harvested, and part of this stored carbon (stock) is removed from the planted forests, i.e. it is removed from Lacan's stock inventory. However, when a new sprouting cycle begins, the trees repeat the natural growth process, resulting in the expected variation in Lacan's carbon stocks. Despite the variation over time, the forests show an average stock over the entire investment cycle of the funds, contributing positively to the removal of greenhouse gases from the atmosphere.

4. Forest Maturity Stage by Fund

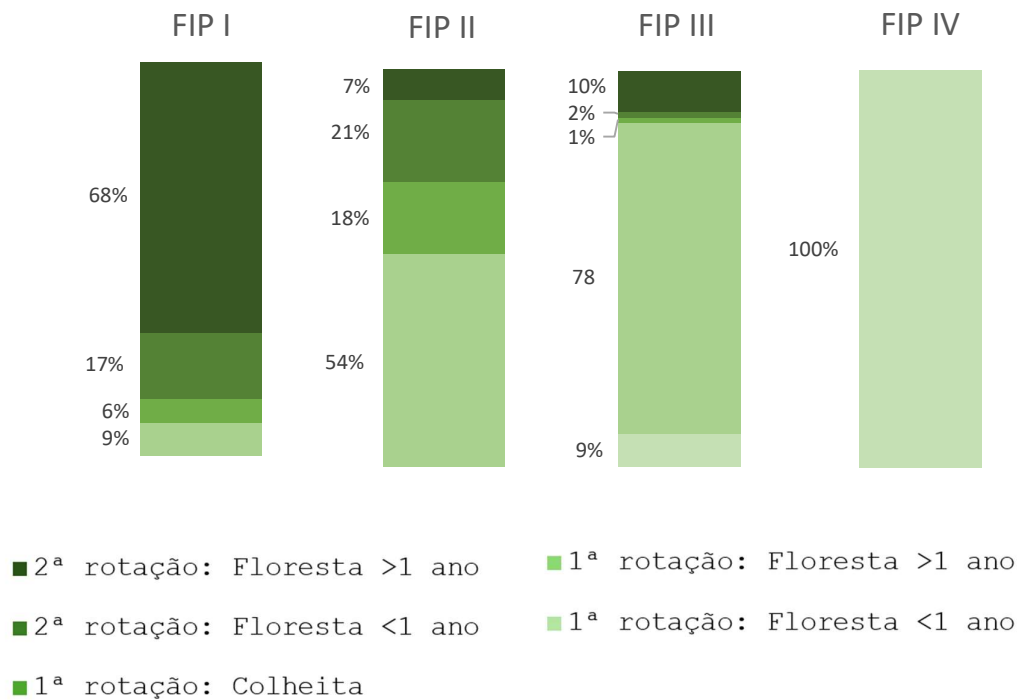
In order to demonstrate more clearly the moment of each FIP in 2024, in other words, the stage of maturity of the forests of each fund, and to explain the areas that were taken into account when calculating the stock, the data below is provided. Overall, the carbon stock for the year calculated shows what the situation of the forests was like, in terms of stock, at the time the forest inventory was carried out, considering the following assumptions:

- 1) **1st rotation: Forest <1 year old**
Areas under implementation in the reference year are not included in the carbon stock calculation (neither in terms of area nor total stock) as they have not yet been measured in the first inventory.
- 2) **1st rotation: Forest >1 year old**
All areas that are growing older than 1 year are accounted for with the values of their latest inventories.
- 3) **1st rotation: Harvesting**
Areas that were harvested in the reference year of the carbon stock inventory are considered with their maximum volume reached (Harvested volume).
- 4) **2nd rotation: Forest <1 year old**
The areas already harvested in the year prior to the carbon stock reference year are included in the calculation, but with a small volume, as this is initial growth, referring to the establishment of the sprout in the first year;
- 5) **2nd rotation: Forest >1 year old**
Areas that have been sprouting for more than a year are back in growth mode, and their area and the carbon stock of the trees is fully included.

Stage of the Forests	FIP I		FIP II	
	Total area (hectares)	Total area (percentage)	Total area (hectares)	Total area (percentage)
1 st rotation: Forest <1 year old	0	0,0%	0	0,0%
1 st rotation: Forest >1 year old	2.860,40	8,8%	22.918,62	54,0%
1 st rotation: Harvesting	1.982,04	6,1%	7.588,91	17,9%
2 nd rotation: Forest <1 year old	5.452,00	16,8%	8.843,00	20,8%
2 nd rotation: Forest >1 year old	22.092,41	68,2%	3.073,94	7,2%

Stage of the Forests	FIP III		FIP IV	
	Total area (hectares)	Total area (percentage)	Total area (hectares)	Total area (percentage)
1 st rotation: Forest <1 year old	2.218,32	8,8%	5.202,95	100,0%
1 st rotation: Forest >1 year old	19.904,47	78,6%	0	0,0%
1 st rotation: Harvesting	266,10	1,1%	0	0,0%
2 nd rotation: Forest <1 year old	448,94	1,8%	0	0,0%
2 nd rotation: Forest >1 year old	2.499,17	9,9%	0	0,0%

Stage of the Forest by FIP



As the graph and table show, FIP I is the most mature fund, with almost 70% of its area in second rotation. The reduction in stock in 2024 is due to the hectares of first rotation trees that were harvested the previous year, reducing the stock in these areas.

FIP II has a large part of its area in advanced years of the first rotation, which justifies it being the fund with the highest carbon stock. The decline in the carbon stock accounted for in 2024 is due to the 8,800 hectares of area that was harvested in 2023, and is in the first year of regrowth in 2024.

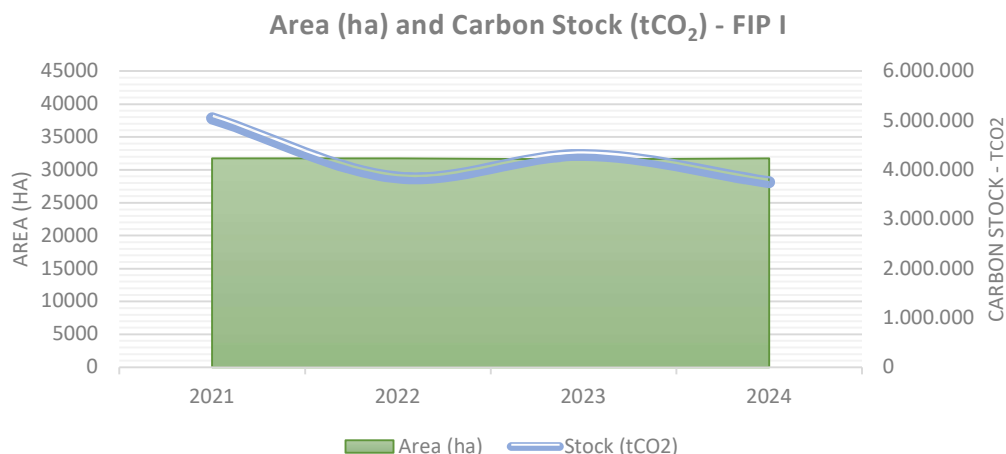
FIP III had a small area harvested in the previous year, only 1.8% of the total. This fact added to the increase in stock due to the growth in the areas of first (19,904.47 hectares) and second (2,499.17 hectares) rotation, led to the total carbon stock increasing in 2024 compared to previous years.

FIP IV, because its entire planted area is less than a year old, does not have a calculated carbon stock, but this situation will change with the stock calculated for 2025, when this FIP will begin to appear in the results.

5. Carbon Stock of FIP I

2021		2022		2023		2024	
Area (ha)	Stock (tCO ₂)	Area (ha)	Stock (tCO ₂)	Area (ha)	Stock (tCO ₂)	Area (ha)	Stock (tCO ₂)
31.757	5.043.691	31.757	3.845.657	31.621	4.303.064	31.768	3.749.805

*Em FIP I, toda a área é plantada com Eucalyptus urograndis



FIP I, Lacan's first Forest Fund, was launched in 2012. By 2024, more than 85% of the Fund's plantations were in second rotation. This year, the reduction in stock resulting from harvesting outpaced the growth of second rotation trees, so the carbon stock of Fund I decreased overall.

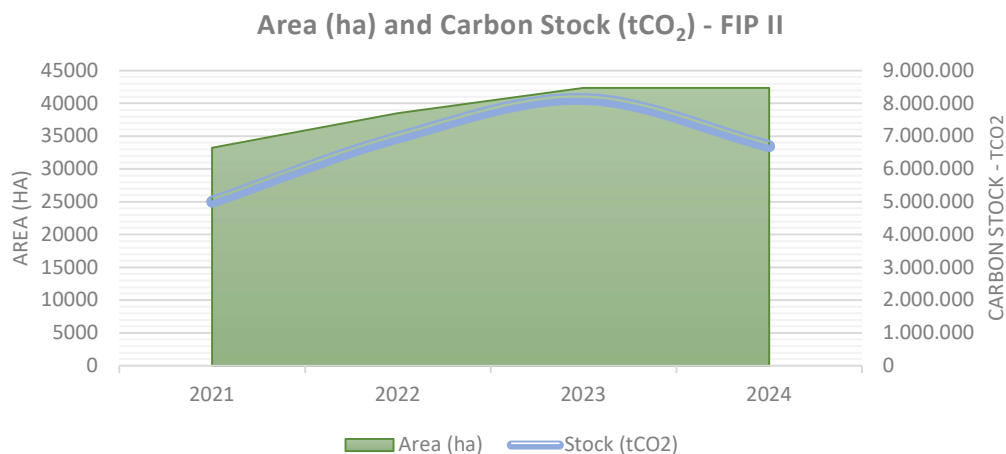
It is expected that there will be no major changes in the stock in 2025 and 2026, considering the harvesting of the last first rotation areas of FIP I, and also the growth of the second rotation areas.

The small increase in the area of FIP I from 2023 to 2024 is due to the reforestation of an area that had been harvested in 2020 before the first stock calculation was made (in 2021).

6. Carbon Stock of FIP II

2021		2022		2023		2024	
Area (ha)	Stock (tCO ₂)	Area (ha)	Stock (tCO ₂)	Area (ha)	Stock (tCO ₂)	Area (ha)	Stock (tCO ₂)
33.218	5.001.440	38.488	6.959.491	42.355	8.136.539	42.355	6.696.983

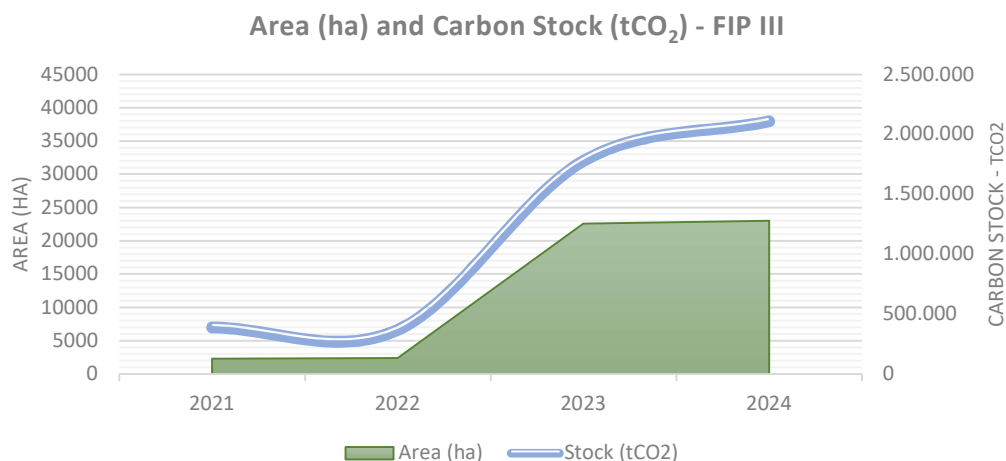
* In FIP II, the entire area is planted with Eucalyptus urograndis



FIP II, Lacan's second Forest Fund, began operations in 2016. More than 54% of the plantations in Fund II are still in their first rotation and are expected to be harvested in the following years. Because of the harvest in this FIP, there has been a reduction in the carbon stock. When the forests enter their second rotation, and regrowth overtakes harvesting, the Fund will start sequestering carbon on a large scale again.

7. Carbon Stock of FIP III

Species	2021		2022		2023		2024	
	Area (ha)	Stock (tCO ₂)	Area (ha)	Stock (tCO ₂)	Area (ha)	Stock (tCO ₂)	Area (ha)	Stock (tCO ₂)
TOTAL FIP III	2.316	388.926	2.421	368.236	22.559	1.777.567	23.018	2.108.387
<i>Eucalyptus urograndis</i>	765	139.749	527	97.016	20.689	1.491.614	21.181	1.834.498
<i>Pinus elliottii</i>	38	4.622	38	5.272	38	5.912	31	3.971
<i>Pinus taeda</i>	1.513	244.555	1.856	265.948	1.832	280.041	1.806	269.918



FIP III is Lacan's third Forest Fund, and began in 2020. Although there has not been a considerable increase in the total area of the FIP, the carbon stock continues to increase due to the growth of forests planted in previous years.

As this Fund continues to expand its plantations in the coming years, it is expected to continue removing CO₂ from the atmosphere and increasing its carbon stock.

The losses in area and carbon stock in relation to areas planted with Pinus are mainly due to disinvestment in farms with this type of crop and replacement with Eucalyptus.

8. Carbon Stock of FIP IV

In 2024, Lacan started operating FIP IV, which already has planted areas. However, as these areas have not yet reached one year of maturity, following the assumptions defined in the carbon stock calculations of previous years, they have not yet been included in the accounting, but will be included in subsequent years.

9. Calculation References

Method used for the calculation (IPCC, 2003):

<https://www.ipccnggip.iges.or.jp/public/gpglulucf/gpglulucf.html>

Difference in carbon stock (ΔC)

$$\Delta C = \sum_{ijk} [A_{ijk} * (C_{t2} - C_{t1}) / (t_2 - t_1)]_{ijk}$$

Where:

A = Area (hectares)

ijk = species i, age j, management k

C_{t1} = carbon stored at age 1 (t)

C_{t2} = carbon stored at age 2 (t)

t₁ = age 1 (years)

t₂ = age 2 (years)

- CO₂ equivalent (t): CO_{2e} = C * CO_{2conv}
- C: carbon stock (t): C = [V * D * BEF] * (1+R) * CF

Where:

V = merchantable volume (m³);

D = density of the wood (g/cm³);

BEF = biomass expansion factor (dimensionless);

R = root-to-shoot ratio (dimensionless);

CF = carbon fraction (dimensionless);

CO2conv = conversion factor: carbon to carbon dioxide

Data sources:

- V: Merchantable volume

Obtained from Lacan's forest inventory

- D: Density of the wood

Eucalyptus: $D = \beta_0 + \beta_1 * \text{age}$, where $\beta_0 = 359.91$ and $\beta_1 = 19.99$, coefficients obtained from: Plantar CDM project: <https://cdm.unfccc.int/Projects/DB/TUEV-SUED1242052712.92/view>

Pinus: $D = \beta_0 + \beta_1 * \text{age}$, where $\beta_0 = 303.95$ and $\beta_1 = 3.4276$, coefficients obtained from the regression adjustment as of publication:

<https://revistas.ufpr.br/floresta/article/viewFile/5506/4036>

- BEF: Biomass Expansion Factor

Eucalyptus: $BEF = \beta_0 + \beta_1 * \text{age}$, where $\beta_0 = 0.44$ and $\beta_1 = -0.045357143$, coefficients obtained from IPCC (2003): <https://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf.html>

Pinus: $BEF = \beta_0 * [\text{age}]^{\beta_1}$, where $\beta_0 = 3.2871$ and $\beta_1 = -0.3684$, coefficients obtained from publication: <https://cbmjournal.biomedcentral.com/articles/10.1186/1750-0680-6-6#Sec8>

- R: Root-to-shoot ration

Eucalyptus: $R = \beta_0 + \beta_1 * \text{age}$, $\beta_0 = 0.36$ and $\beta_1 = -0.038571429$, coefficients obtained from IPCC (2003): <https://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf.html>

Pinus: $BEF = \beta_0 + \beta_1 * \ln(\text{age})$, where $\beta_0 = 0.4502$ and $\beta_1 = -0.1215$, coefficients obtained from publication: <https://cbmjournal.biomedcentral.com/articles/10.1186/1750-0680-6-6#Sec8>

- CF: Carbon Fraction

Eucalyptus and Pinus: 0.474, from IPCC (2020): <https://www.ipcc-nggip.iges.or.jp/public/2019rf/index.html>

- CO2conv: carbon to carbon dioxide conversion factor

Eucalyptus and Pinus: 3.6667, from IPCC (2020): <https://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf.html>

10. About Lacan Asset Management (Vinci Compass Group) and Lacan Florestal

Lacan Investimentos e Participações Ltda. is the asset manager of Funds I, II, III and IV, all in the class of Equity Investment Funds (FIP). In November 2024, there was a change in shareholder control, as the company was acquired by Vinci Compass.

The integration into Vinci Compass, completed in November 2024, strengthened governance standards and highlighted the incorporation of environmental, social and governance (ESG) factors into decision-making and business strategy. This evolution reinforces Lacan's commitment to investors, partners and other stakeholders, as well as reaffirms its leadership in the management of sustainable forestry assets.

Vinci Compass Lacan and investee companies, which we refer to jointly in this report as Lacan Florestal, continue to develop and expand solutions for removing carbon from the atmosphere, conserving and enhancing biodiversity, generating social value and seeking financial returns, aligning positive impact and efficiency in resource management.

11. About Grupo Report

Grupo Report is a pioneer in sustainability consulting since 2002, which operates in eight business fronts, including sustainability reporting, strategy, climate journey, digital solutions, indices & ratings, sustainable finance, corporate education, and communication. With over 1000 projects completed and serving more than half of Brazil's top 500 companies, the company reaffirms its commitment to promoting corporate sustainability, offering customized and impactful solutions to its clients, thus contributing to a more sustainable and resilient future.

Climate Journey Team

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