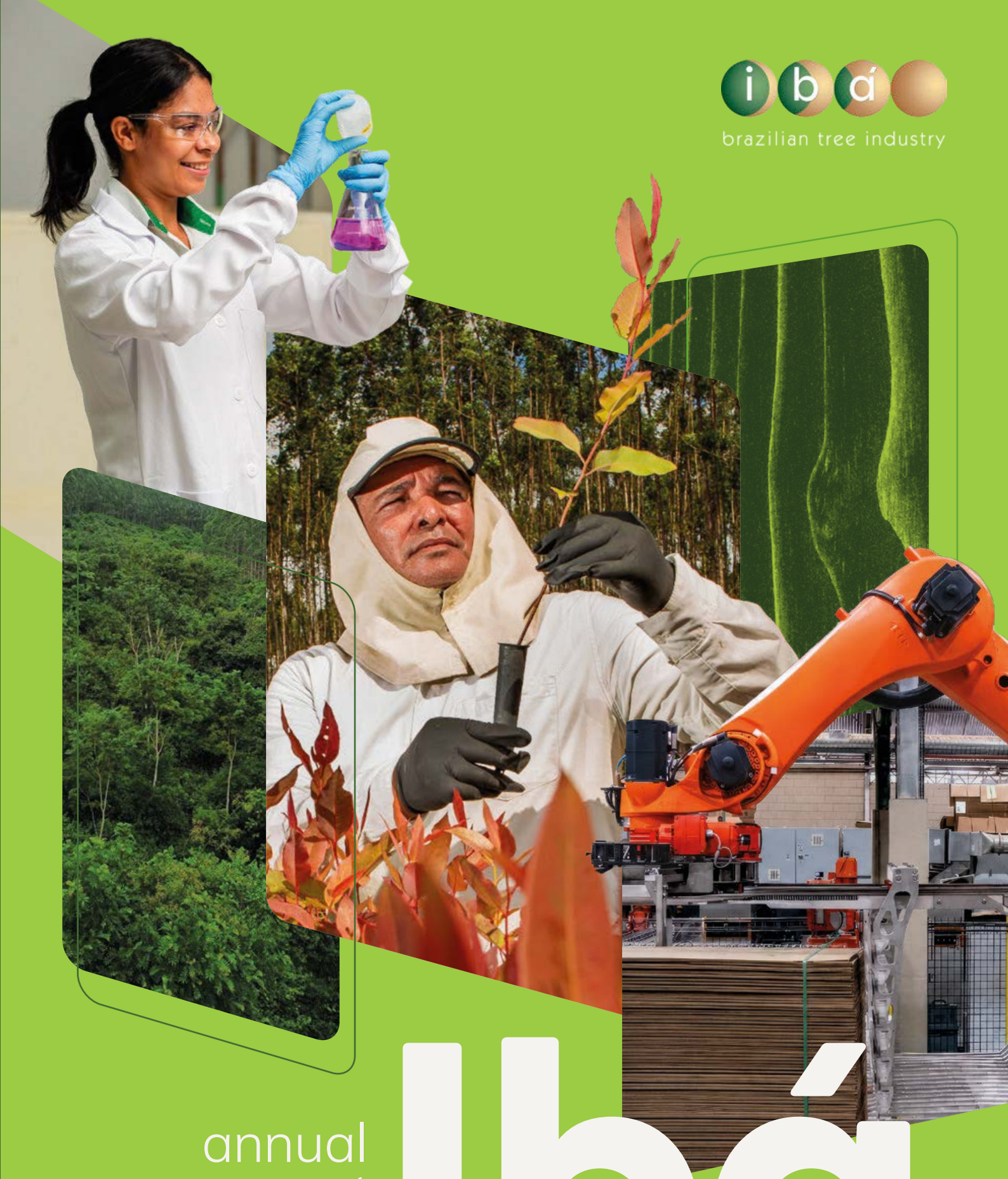
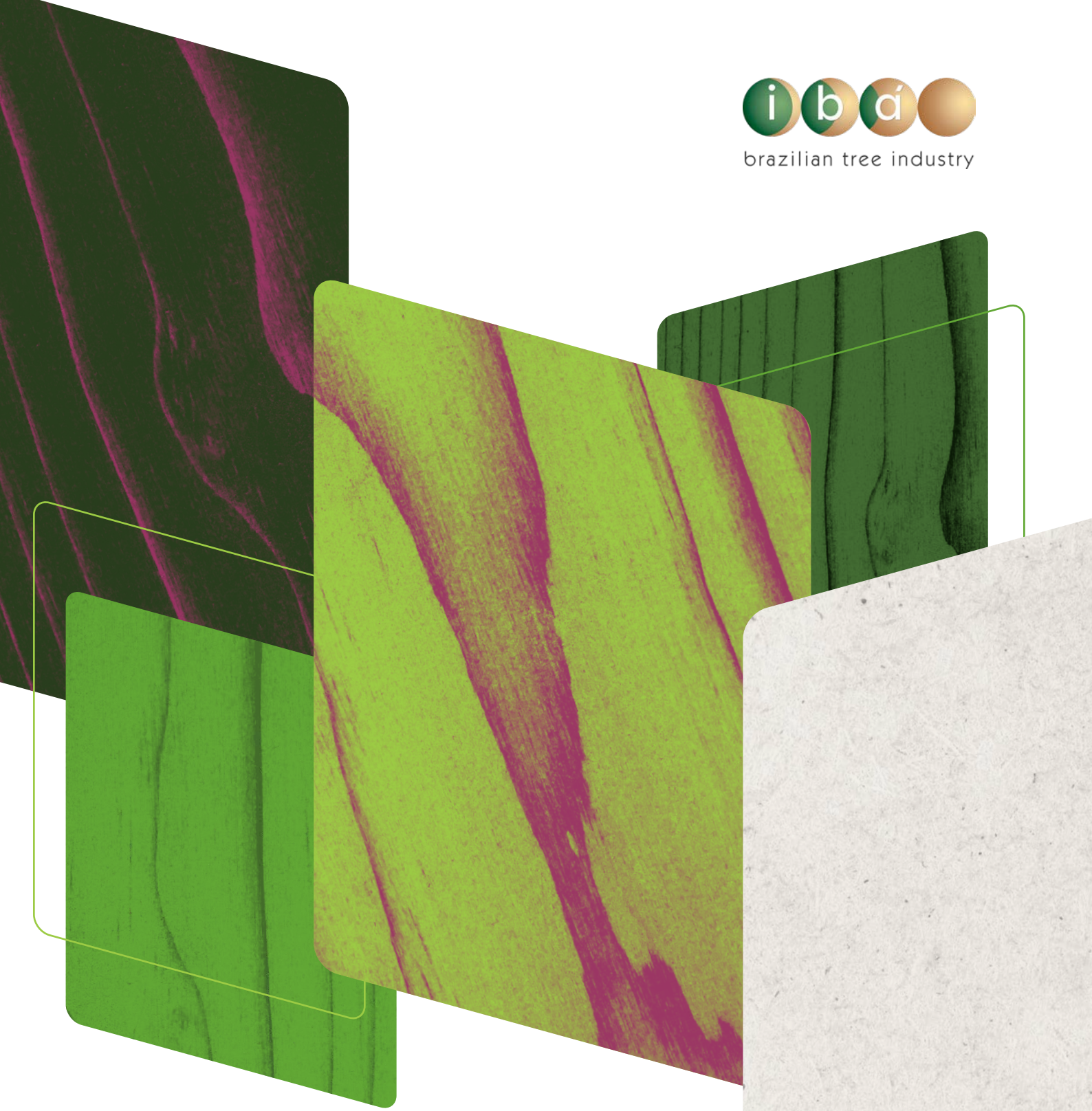
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TTG Brasil

Opening message

Even in the face of so many challenges, our tree plantation sector has yet again demonstrated its resilience and competitiveness

A look back at 2025 shows a scenario marked by complexity. We have seen an increase in geopolitical tensions, ongoing conflicts in various regions of the world, the rise of protectionist measures destabilizing global trade chains, and the weakening of multilateral mechanisms. The world as we've known it since the post-World War II era has broken apart.

In Brazil, we face multiple internal challenges: persistent social, regional and fiscal imbalances, a lack of infrastructure (which includes highways, ports, railways and connectivity), labor shortages, and the long cycle of high interest rates. Additionally, redirection of industrial overcapacity in certain countries has impacted several productive segments here in Brazil, including some that had conquered international markets.

Even in the face of so many challenges, our tree plantation sector has yet again demonstrated its resilience and competitiveness. The data gathered in this report depict a sector that continues to expand its contributions to the national economy, generating jobs and income, attracting investments, promoting innovation and offering concrete solutions to the serious environmental challenges of our time.

In 2025, the sector set historical records for pulp production and exports, with 29.4 million tons produced and 20.7 million tons exported. Brazil is the world's largest global exporter and second largest producer of cellulose pulp, behind only the United States. We are also the 7th largest player in the global market for paper and wood panels, and 9th in lumber. Gross revenue for the sector reached R$ 249.4 billion and accounted for 4.99% of the value added by agricultural activity.

This sector directly employs over 710,000 workers, according to the Annual Social Information Report and General Register of Employees and Unemployed (RAIS/CAGED).

Once again, the sustainable growth of its forest base merits attention. The total area of tree plantations reached 10.73 million hectares in 2025, growth of 210,000 hectares. Small decreases in planted area were seen in some states, while Mato Grosso do Sul continued to be the main driver of expansion with growth on the order of 222,000 hectares.



2.2
million
trees planted every day
for industrial uses

This growth takes place in previously anthropized areas, such as low-productivity pastures, which are replaced by forest cover that begins to provide a series of ecosystem services. Today in Brazil, according to the Federal University of Goiás's Pasture Atlas, there are over 100 million hectares of land with some level of degradation that can be converted into sustainable agricultural and forestry production systems, such as planted forests (forestry) and agroforestry and integrated crop, livestock and forest systems that produce food, grain, fiber and energy.

Every day, our industry plants about 2.2 million trees. As they grow, these trees stock carbon and offer various ecosystem services. They also are the source of renewable, recyclable and biodegradable products used by 4.3 billion people around the world. Packaging, books, notebooks, furniture, wood panels, laminate flooring, fabrics produced from cellulose such as viscose, sanitary papers and countless other products are part of global daily life thanks to the work carried out in Brazil's tree plantations.

At the same time that it produces, generates jobs and spreads development, the sector conserves and remains a differential in Brazilian land use. There are millions of hectares of natural areas conserved by companies in the sector. These conservation areas are interspersed with commercial plantations to form ecological corridors in the landscape, in forest mosaics that help protect soil, regulate water resources and preserve biodiversity.

In the segment of forest restoration, an activity that Ibá has also come to represent in recent years, we see the first steps of a nascent industry with various business models that combine generation of carbon credits, native species forestry and trade of non-timber products. This movement dialogs with Brazil's climate commitments such as Planaveg, which involves restoring 12 million hectares of native vegetation.

This industry also faces challenges like its own economic and financial viability, which involves access to funding and guarantee systems that are compatible with the segment's profile. Another important issue is making demand consistent and structured. On this path, it is essential to establish a national carbon market that is predictable and has access to international markets, as well as forest concessions programs. Initiatives like these could make the segment a potential exporter of high-quality carbon credits.

An additional challenge to resolve is the national land ownership issue, a structural bottleneck in the country that leads to legal uncertainty. Finally, the research, development and innovation system must be strengthened. This is another case in which the commercial tree plantation sector has been useful in defining pathways for this nascent activity.

In fact, this partnership between planting trees for industrial purposes and restoring native vegetation is embodied in the concept of the forest continuum, which reinforces the idea that conservation, productive use and restoration can coexist.

Large swaths of native forests or interlinked plantations connect to form ecological corridors, ensuring biodiversity and high levels of carbon storage, protecting ecosystems against fragmentation and integrating conservation areas with sustainable management areas.

This concept was presented at the COP30 in Belém, through a study entitled *The protagonism of Brazilian forests in the Global Climate Agenda*, a partnership between Arapyaú, Itaúsa, Agroicone, the Brazil Coalition on Climate, Forests and Agriculture, Imazon, Amazônia 2030, CEBDS, Uma Concertação pela Amazônia and Ibá. Now in 2026 the study is in its second edition, with coverage of all of Brazil's biomes, and is being presented at key international sustainability and climate events.

The future points to forests that are not only conserved but also integrated with development, consolidating this resource as natural capital and a strategic asset of incalculable economic and social value.

Veracel



Forest restoration is a segment that Ibá has come to represent in recent years

The following pages reveal in detail the results, indicators and advances that support this trajectory. More than just a portrait of 2025, they illustrate the continuous evolution of a sector that continues to invest, innovate and believe in Brazil.

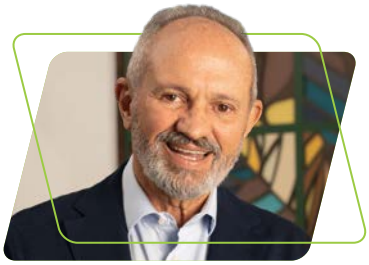
And in the case of our sector, the climate change scenario also requires a careful look at investments for resilience in the plantations. Success on this front will require a combination of different solutions, including conventional genetic improvement, integrated pest management, adaptive silvicultural practices and approaches from modern biotechnology.

It is in this environment that the broad sector represented by Ibá needs to continue doing what it has learned over decades: producing efficiently, believing in science, developing human capital, responsibly conserving, and working so that the country can occupy an increasingly relevant place in the low-carbon economy. We remain attentive to the challenges, confident that Brazil has what it needs to transform its extraordinary natural assets, combined with technical knowledge and business capacity, into development that effectively improves the lives of Brazilians and people around the world.

We hope you find this report useful.



HORACIO LAFER PIVA
Chairman, Ibá Deliberative Council

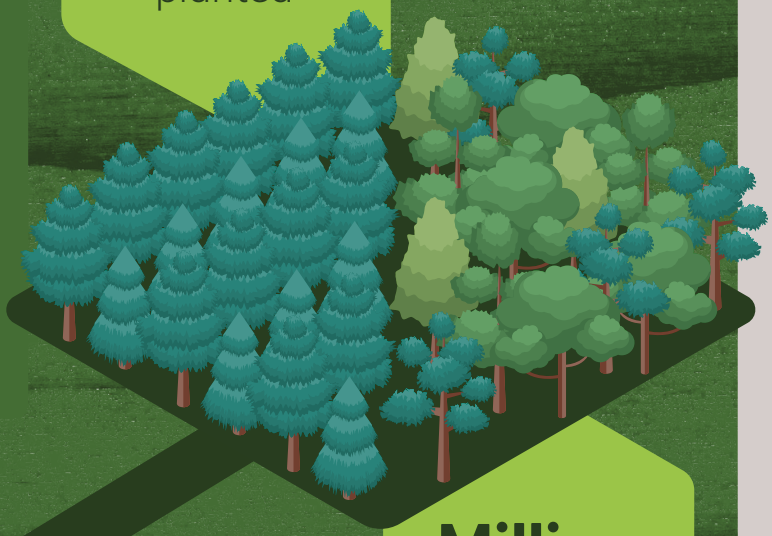


PAULO HARTUNG
President of Ibá

Present in the lives of 4.3 billion people

The Brazilian tree plantations sector is one of the country's great success stories. Constructed over the decades through science, innovation and ongoing productivity gains, this industry has made Brazil a global forest powerhouse and provides renewable and recyclable products from natural sources for use in the daily lives of 4.3 billion people around the world. At the same time, it drives an expansive production chain, generating jobs, income, exports and investments in various regions of the country. This economic strength comes alongside a production model that combines tree plantations for industrial uses and also for preserving native vegetation, growing use of renewable energy, carbon removal and sequestration, and ecosystem services. The tree plantations in Brazil give rise to paper, packaging, furniture, floors, fabric, energy, and an increasing variety of solutions for a low-carbon economy.

10.73
million
hectares
planted



Million
hectares
conserved



US$ 14.9
billion
in exports



92%
of the energy consumed comes from renewable sources

4.99%
of the value added from agriculture/ ranching


Green steel
Energy
Flexible screens
12:30
Paper Bags
Packaging
Book
Cardboard boxes
Wooden toys
Paper packaging
Cake
Diapers
Paint
Hot dogs
Laminate flooring
Paper
Paper towels
Wooden table
Screen
Clothing
Acetate eyeglasses
4.3 billion
people use products made from Brazilian raw materials

1 Economic aspects of the sector



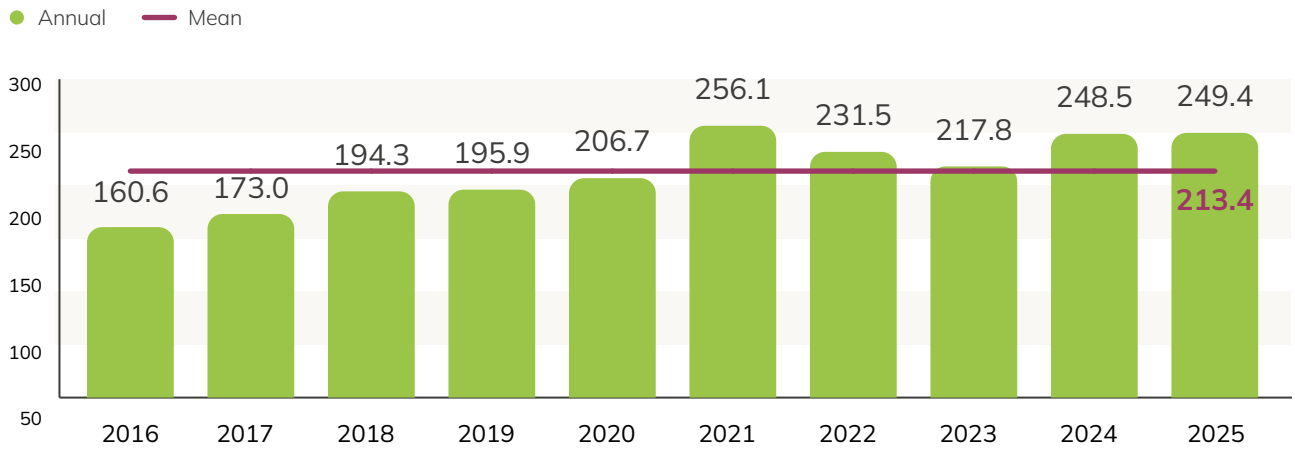
In a year marked by uncertainties in the economic environment, geopolitical tensions, greater pressure on global value chains, and persistent challenges to Brazil's competitiveness, the Brazilian industrial tree plantation sector has again demonstrated its solid nature. It remained competitive on a global scale, intensive in science and technology, connected to the climate agenda and capable of promoting development in different regions of the country.

In recent decades the sector has consolidated a highly efficient and tropicalized production model in Brazil based on renewable raw material. The combination of forest productivity, industrial integration, innovation, sustainable management, certifications, logistics and international presence has positioned this industry as a global reference.

This performance maintained the resilience of this industry during a year of price accommodation for the main international forest commodities. The gross revenue generated by the tree plantation chain reached R$ 249.4 billion in 2025, remaining high and slightly above the R$ 248.5 billion recorded the previous year (Figure 1). This result positions revenue for the sector significantly above its historical average for the past ten years, estimated at R$ 213.4 billion, which demonstrates that this activity has firmly established a new level of macroeconomic relevance.

Figure 1

Gross revenue from forest production, at current prices [R$ billion]



Source: Quarterly National Accounting (Contas Nacionais Trimestrais, CNT), IBGE (2021) | Developed by: ESG Tech



Compared to 2024, the gross value added by the sector registered growth of

1%

Gross revenue remains at a high level within the context of accommodation of international average prices in some segments, which partially offset advances in physical production in certain links of the chain. Still, the tree plantation production chain preserved its relevance in the Brazilian economy, maintaining a 1% share of the national added value in 2025.

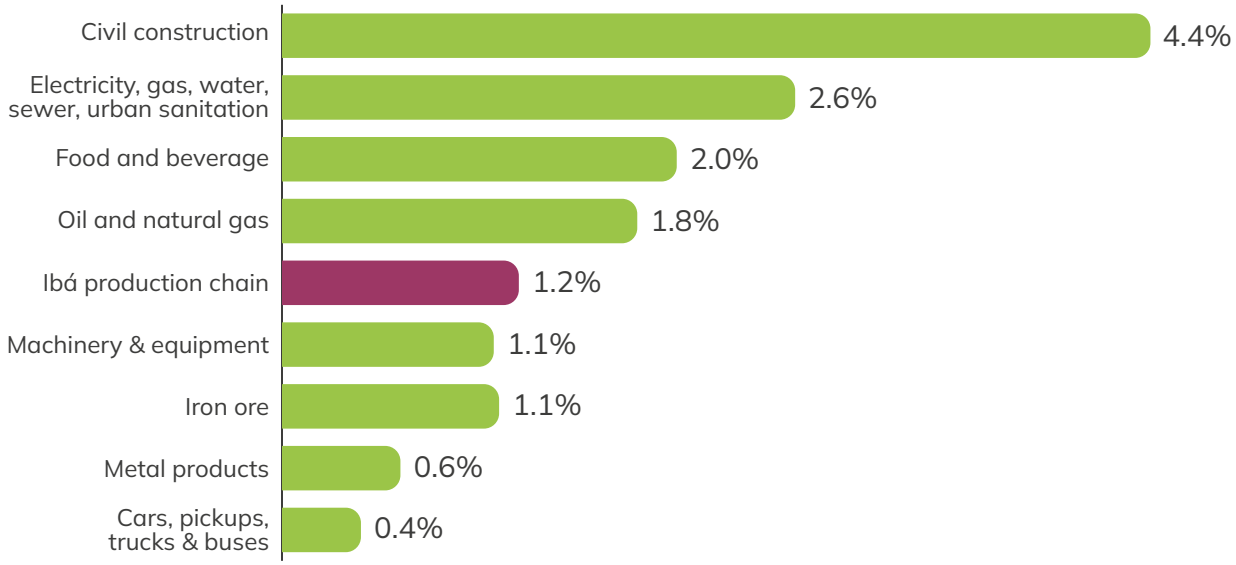
Estimated gross value added by the sector totaled R$ 106.9 billion, growth of 1% compared to 2024. Over a ten-year horizon the compound annual growth rate remained at 6.3%, reinforcing the consistent trajectory of value generated by this productive chain.

In the context of the Brazilian industry (considering the average for the past ten years) the tree plantation production chain remained among the country's leading economic activities. Of the 34 main sectors that comprise the national economy, it occupies 5th position with 1.2% of the total for all economic activities (Figure 2). Ahead of the forest chain were construction; electricity, gas, water, sewage and urban cleaning; food and beverages; and oil and gas.

The transversal nature of the tree plantation chain allows it to act in an integrated manner, both in the primary base and in industrial transformation. In the agricultural sector, production from activities related to tree plantations accounted for 4.99% of the value added from agriculture in 2025 (Figure 3), within a scenario where other significant agricultural crops expanded sharply in rural GDP.

Figure 2

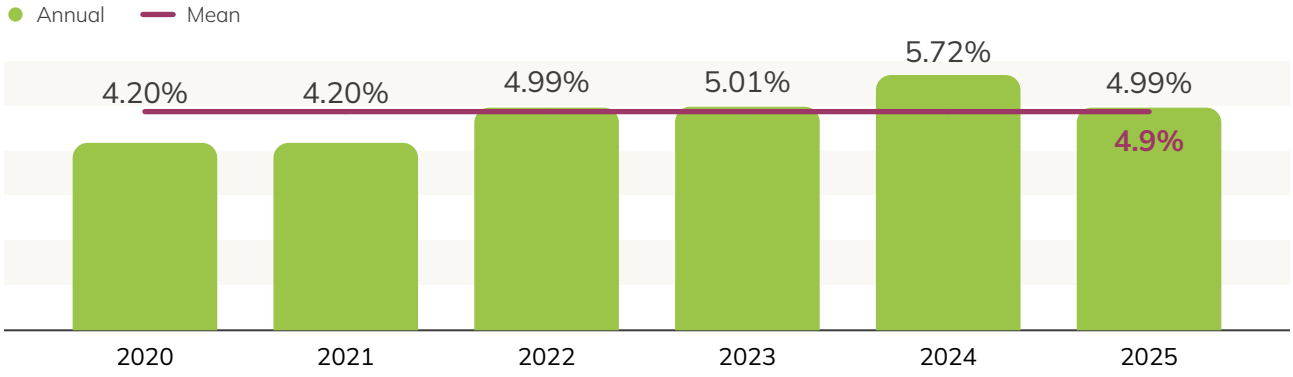
Share of the value added by the tree plantation production chain in total economic activities [average for the past 10 years, %]



Source: IBGE (2021), IBGE (2025) | Developed by: ESG Tech

Figure 3

Share of value added by production from tree plantations to agriculture/ ranching activity [%]



Source: Quarterly National Accounting (Contas Nacionais Trimestrais, CNT), IBGE (2021) | Developed by: ESG Tech

Turnover in this sector accounts for

4.99%

of the value added by farming and agriculture

The share of products from tree plantations in the processing industry remained stable over the period, and reached 4.6% in 2025 compared to 4.7% in 2024. Isolated fluctuations reflect the different growth rates of other activities. Still, the sector maintained its relevance as a supplier of essential inputs and as a driver of decentralized regional development.

Exports and trade balance

The productive chain of tree plantations for industrial purposes maintained its prominent position in Brazilian foreign trade in 2025. Once again, in an international scenario marked by demand adjustments, price accommodation and greater complexity in global value chains, the sector reaffirmed its contribution to the country's export agenda and its competitiveness.

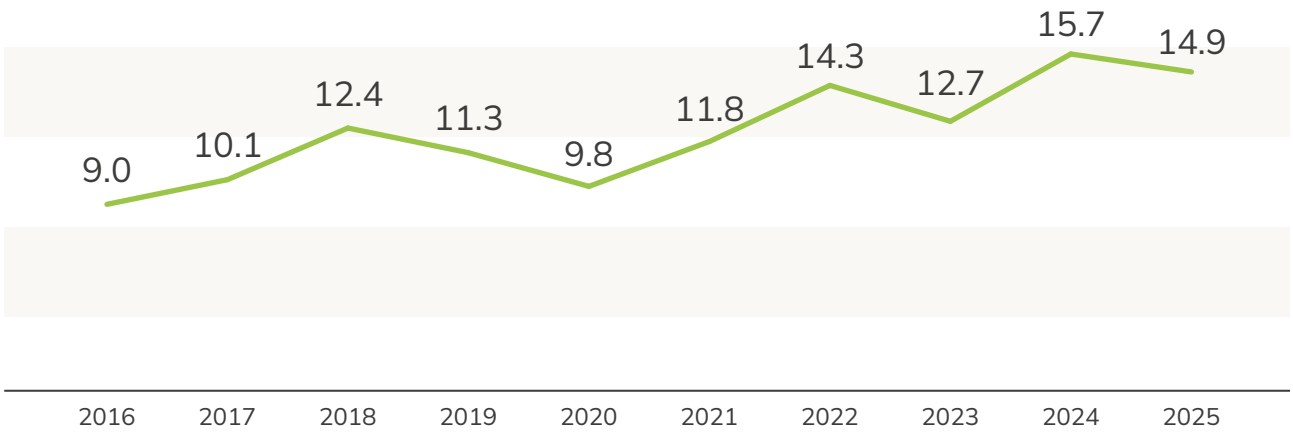
US$ **14.9** billion

in exports

Exports in the sector totaled US$ 14.9 billion in 2025 (Figure 4), the second highest value recorded in the last decade. This result confirms the structural relevance of the Brazilian tree plantation industry. Despite the slight accommodation compared to the record observed in the previous year, exports maintained a consistent long-term trajectory, with a composite annual growth rate (CAGR) of 5.8% over the last ten years. This performance reinforces the industry's ability to meet international demand for renewable forest-based products, contributing to the generation of foreign exchange, strengthening Brazil's trade balance and advancing the bioeconomy on a global scale.

Figure 4

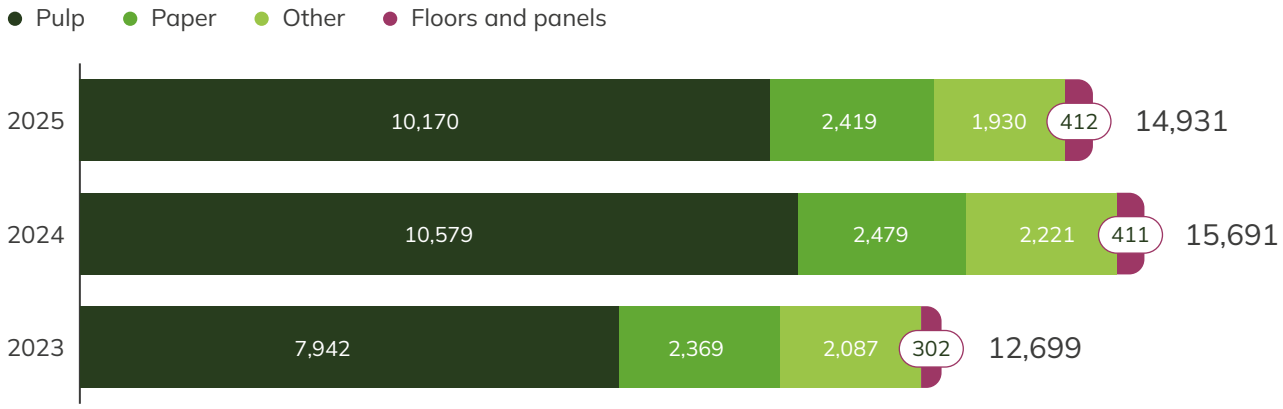
Exports from the sector [US$ billion]



Source: Comex Stat (2025) | Developed by: ESG Tech and Ibá

Figure 5

Exports from the sector, by product [US$ million]



Source: Comex Stat (2025) | Developed by: ESG Tech and Ibá
Note: Other segments: chips, charcoal, plywood, lumber and others

Pulp remains the main product on the sector's export agenda, with 68% of the total value exported by the sector in 2025. This performance demonstrates the competitiveness and international positioning of the Brazilian industry, alongside other forest-based items such as paper, packaging, wood panels, laminate flooring, plywood and other products in the chain (Figure 5).

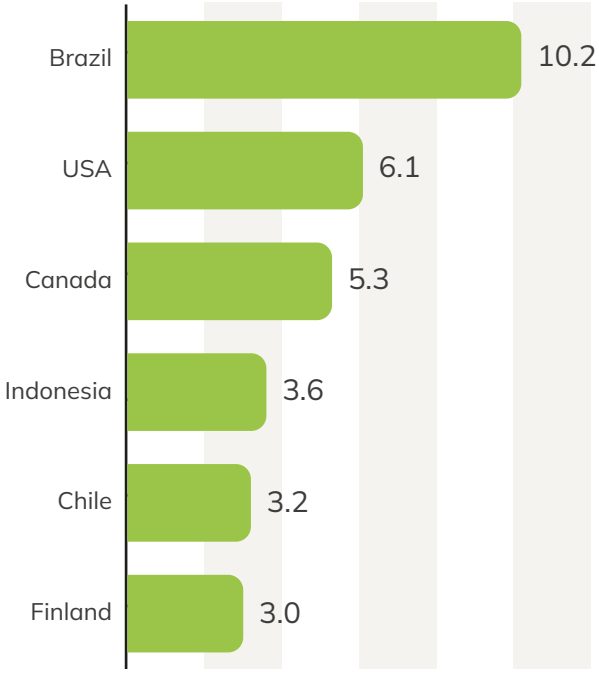
Brazil continues to be a global reference in the production of cellulose pulp. Brazilian pulp exports totaled approximately US$ 10.2 billion in 2025 (Figure 6), a value significantly higher than in 2023 when they reached US$ 7.9 billion, although slightly below the level observed in 2024.

This result reflects the high installed production capacity in the country and the consolidated competitiveness of the Brazilian pulp industry in the global markets. It also demonstrates the strength of a sector that over the past decades has combined science, technology, sustainable management, industrial efficiency and continuous investment to consolidate its global leadership.

With broad insertion internationally, the sector serves markets with different demand profiles. It enjoys significant concentration in three central destinations, China, Europe and North America, which together absorbed the largest share of the exported value (Figure 7).

Figure 6

Leading pulp producing countries in 2025 [US$ billion]



Source: Comtrade (2025) | Developed by: ESG Tech

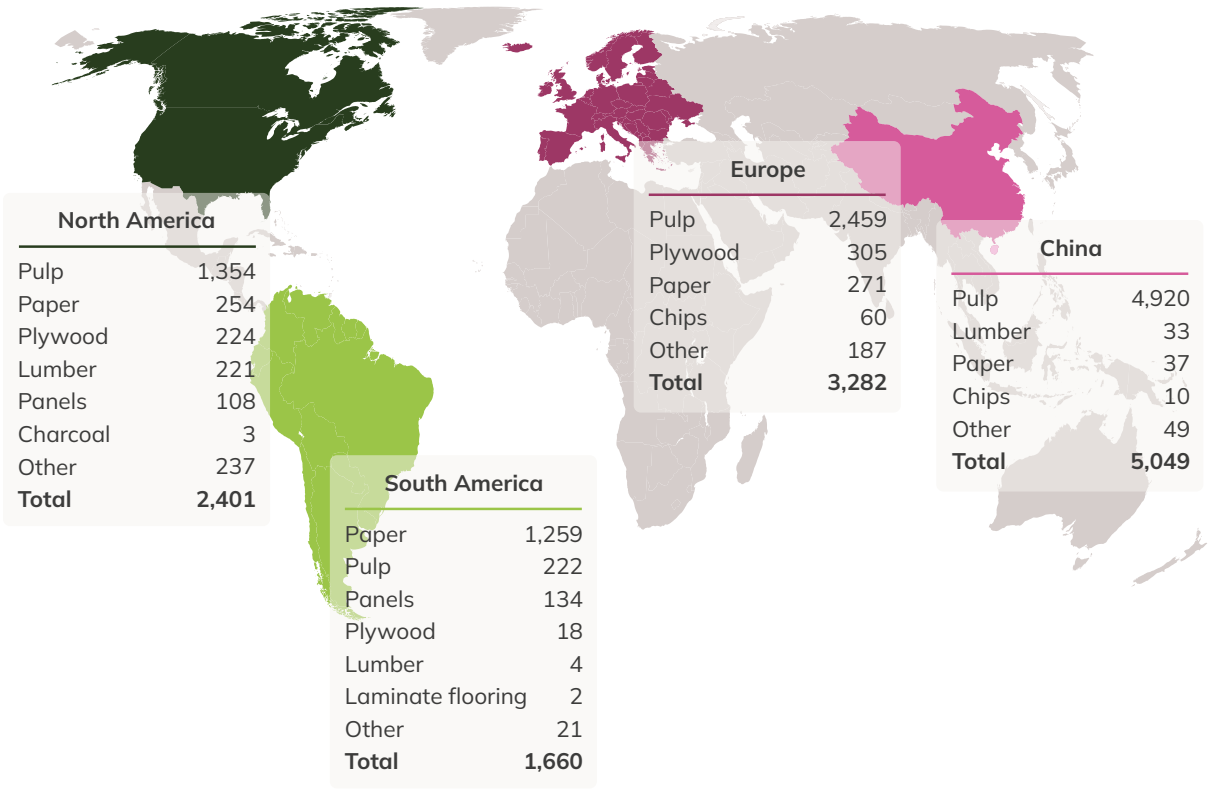
China remained the main destination for Brazilian tree-based exports, with purchases totaling US$ 5 billion which were totally concentrated in pulp. Europe was in second place with US$ 3.3 billion in exports, also predominantly pulp, as well as paper, plywood

and other forest products. North America was the third largest destination, with shipments of US$ 2.4 billion and more diversified purchases including pulp, paper, lumber, panels, plywood and other products.

South America also maintained a relevant share with total exports of US$ 1.7 billion to the region, highlighting the central role of these products in the regional agenda.

Figure 7

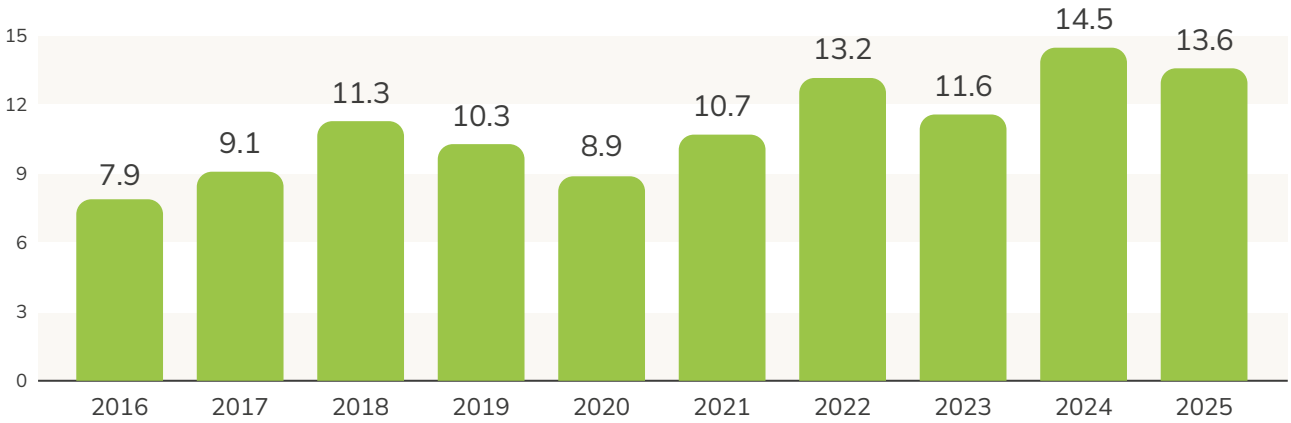
Leading export destinations for the tree plantation production chain [US$ million]



Source: Comex Stat (2025) | Developed by: ESG Tech and Ibá
Note: The values correspond to the total exported for each destination/region. Other destinations not shown in this figure also comprise total exports for the sector.

Figure 8

Total trade balance over time [US$ billion]



Source: Comex Stat (2025) | Developed by: ESG Tech and Ibá



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In 2025, the sector's surplus reached

US$ 13.6 billion

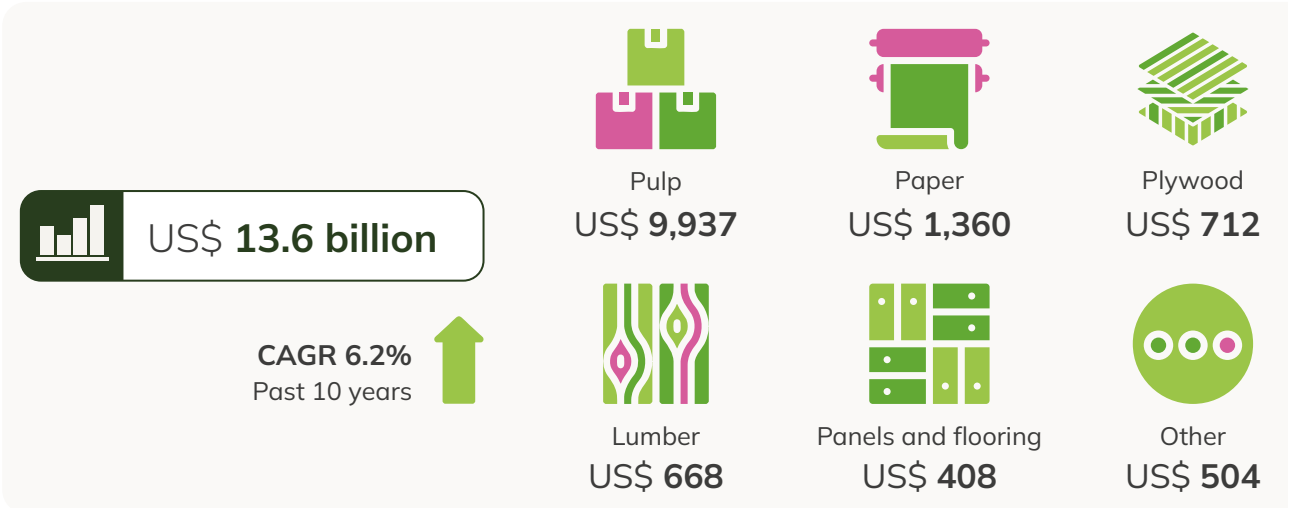
In 2025, surplus for the sector reached US$ 13.6 billion (Figure 8), the second largest balance over the past ten years.

The balance in 2025 exceeds the average recorded over the past decade by approximately 20%. In the long-term horizon, the sector exhibits a composite annual growth rate (CAGR) of 6.2% for the trade balance over the last ten years, reflecting the consistent expansion of exports.

Pulp maintained its position as the main contributor to the sector's positive trade balance, followed by paper, plywood, lumber, panels and flooring (Figure 9).

Figure 9

Trade balance by product in 2025 [US$ million]



Source: Comex Stat (2025) | Developed by: ESG Tech and Ibá
Note: Other products such as charcoal and wood chips.

Tax generation

In 2025, the tree plantation production chain maintained its upward trend in fiscal contributions, totaling approximately R$ 29.3 billion in federal and state taxes (Figure 10). This advance over the previous year reaffirms this sector's structural importance to the Brazilian economy, especially within a context of searching for greater efficiency in production and international competitiveness. The consolidation of this indicator, which has been part of Ibá's Annual Report since 2022, provides a more accurate reading of the value generated throughout the production chain.

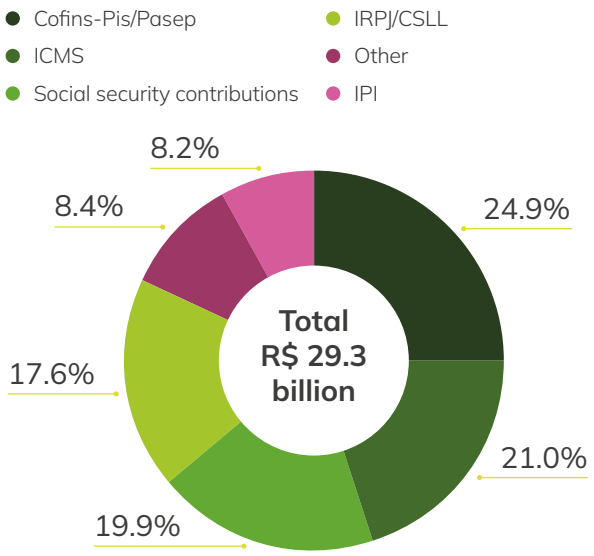
Of the total collected, R$ 23.2 billion correspond to federal taxes (Figure 11). State taxes reached R$ 6.1 billion, estimated based on the ICMS noted by the companies; this reflects the dynamic nature of industrial activity, the sector's distribution throughout Brazil, and its role in generating revenues for the states.

The total tax credits accumulated by member companies reached R$ 6.5 billion in 2025, remaining at a high level. Changes in the composition of these credits can be seen: while the ICMS tax fell to R$ 3.8 billion, there was significant growth in COFINS, which reached R$ 2.2 billion, as well as the PIS, which reached R$ 0.5 billion. This indicates changes in the dynamics of calculation and accumulation for these taxes along the production chain. IPI taxes remained stable at R$ 100 million.

This movement suggests that large volumes of credits still remain to be recovered, along with a higher concentration of federal taxes, which can reflect both the sector's profile as an exporter as well as the cumulative incidence of taxes in certain stages of production. This reinforces the need for improvements in the tax environment in order to reduce distortions and increase investment predictability.

Figure 10

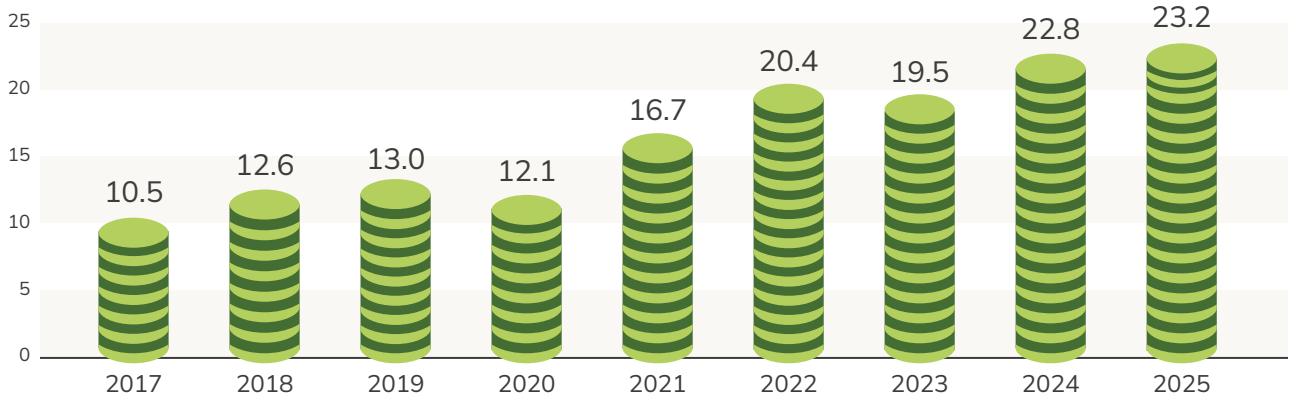
Tax generation [%]



Source: Brazilian Federal Revenue Service & Ibá (2025) | Developed by: ESG Tech

Figure 11

Federal taxes levied [R$ billion]



Source: Brazilian Federal Revenue Service & Ibá (2025) | Developed by: ESG Tech

At the municipal level, ISS collection totaled R$ 531.8 million, which represents a significant growth compared to the previous year. This result highlights the sector's relevance for local finances, especially in municipalities where tree plantations and industrial activities play a central role in the economy.

The expansion of this collection directly contributes to the strengthening of public investment capacity in essential areas like infrastructure, health and education, and also generates multiplying effects in regional development.

Job creation

In 2025, the tree plantation sector maintained a significant presence in the Brazilian labor market, guaranteeing about 713,000 direct jobs. This number remained practically stable compared to the previous year, even with greater accommodation of economic activity and international prices in some segments of the chain (Figure 12).

The sector is a source of work and income in various regions of the country, especially in municipalities where tree-related activity plays a relevant role in local economic dynamics.

For indirect jobs, the sector was responsible for a total of approximately 2.05 million posts in 2025, maintaining its ability to mobilize a wide network of suppliers, service providers and associated activities. When we also considered the induced effects related to driving sectors such as commerce, transport, food, services and local consumption, the total impact of this chain reached approximately 3.83 million people.

The amount of wages billed grew to R$ 32.1 billion in 2025, indicating qualitative gains in the labor market. This indicator reflects gradual transformations in the occupational profile, driven by modernization of forest-related and industrial operations. The introduction of automated systems, digital monitoring and precision agricultural management have shifted the labor profile toward more technically complex functions, which translates into higher average wages.

This scenario is even more relevant considering the cycle of expansion expected in the sector. With approximately R$ 75 billion in investments expected by 2029 to expand the forest base and industrial capacity, demand for skilled labor is expected to gradually increase. Along these lines, the sector has been working to expand professional training and modernize the labor market in several regions of the country. The combination of investments, innovation and economic expansion becomes a vector for human development and income distribution in the territories where the sector operates.

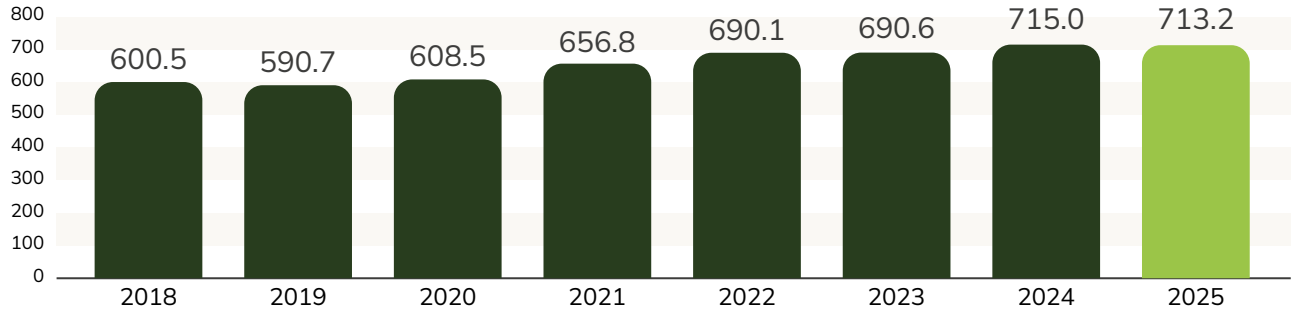
713
thousand
direct jobs

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Figure 12

Direct jobs generated [1000 staff]



Source: RAIS, 2025 & ESG Tech (data from May 20, 2026) | Developed by: ESG Tech

Cost index

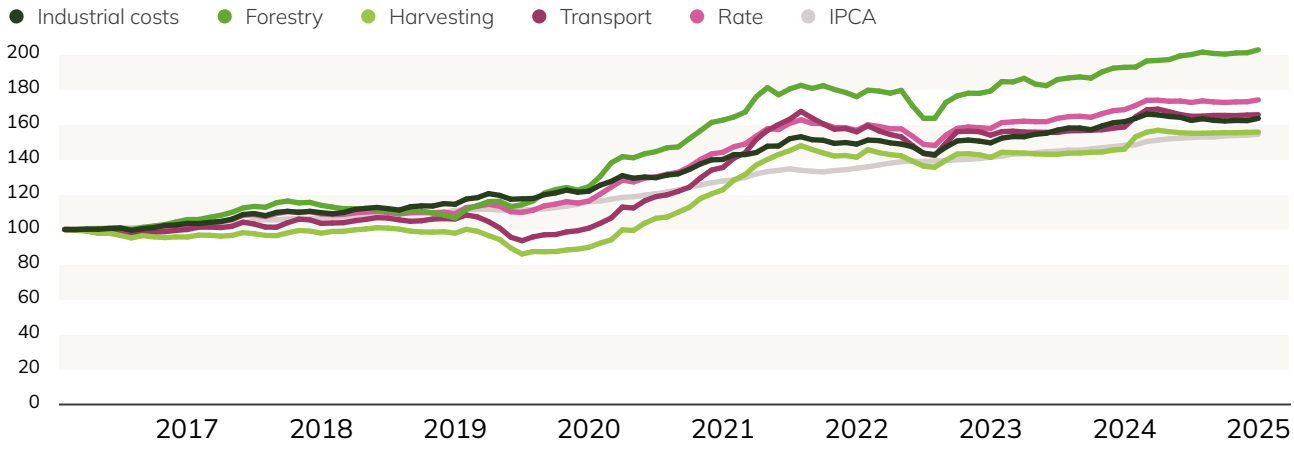
Throughout 2025, costs for the tree plantation production chain evolved more moderately compared to what as seen in the previous year, reflecting an environment of greater macroeconomic stability and lower exchange pressure on industrial inputs. Still, factors such as fertilizer prices, fuels and specialized services continued to have a relevant impact on cost structure for companies in the sector.

Between 2024 and 2025, the overall index of costs in the forest sector registered an increase of 3.36%, slower than in the previous period and below the official national inflation rate. During this same period, the Broad Consumer Price Index (IPCA) accumulated an increase of 4.26%, indicating that the change in costs in the forest sector in 2025 was contained, in relation to overall inflation of the economy (Figure 13).

This behavior signals a more balanced adjustment between operating costs and market conditions after the cycle of increase observed in previous years, and reflects both normalization of some relevant inputs as well as efficiency gains throughout the production chain. The result helps preserve the sector's competitiveness, especially within a context of more stable international prices and greater discipline in cost management.

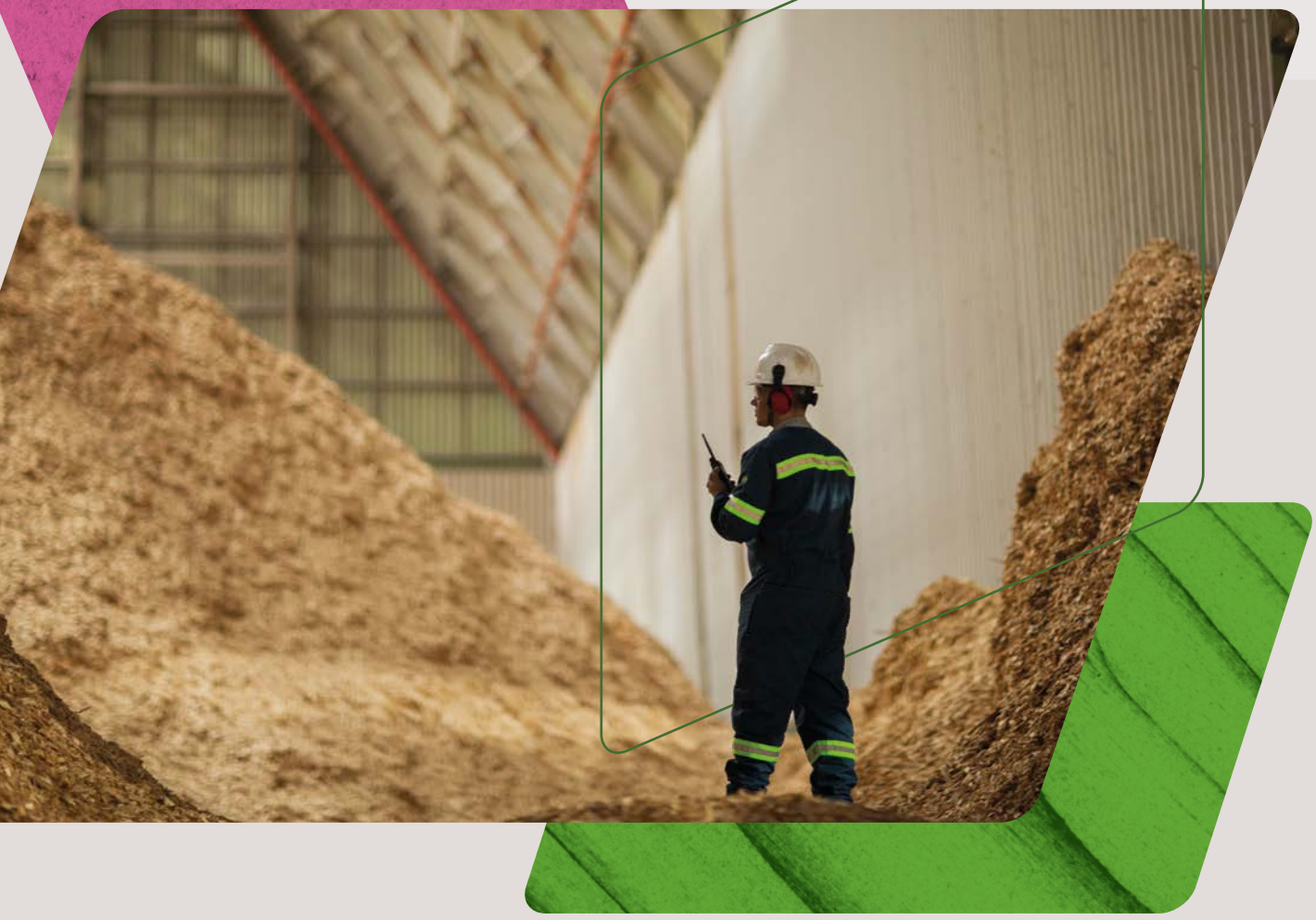
Figure 13

Cost index for the forest-based sector [January 2017 = 100]



Source: Developed by ESG Tech (2025)

2 Industrial production



The factory base of the tree plantation sector firmly establishes it as one of the country's most efficient chains, integrating innovation in the field and industry with a strong presence in global trade. This segment transforms renewable raw material into inputs to supply areas including construction, the packaging industry, consumer goods sectors including high-tech segments and green chemistry.

The market service structure is based on two types of regional dynamics. On one side there are the segments involving greater transformation such as packaging, which are distributed in a decentralized network of manufacturing units to ensure pervasive presence and proximity to consumer centers. At the same time, pulp production is expanding from robust, large-scale centers where this activity is concentrated, most notably the area of Mato Grosso do Sul known as Cellulose Valley. This hybrid arrangement provides the sector both efficient logistics in domestic distribution as well as competitive costs to ship its products abroad, driving decentralized development and infrastructure in the territories where it operates.

Within a scenario of fierce international competition, the Brazilian forestry industry remains at the forefront with continuous investments in innovation, energy efficiency, logistics and the circular economy. This model expands companies' resilience in the face of climate change and breakdowns of global trade, positioning the country as a strategic leader in the global transition toward a sustainable, low-carbon economy.

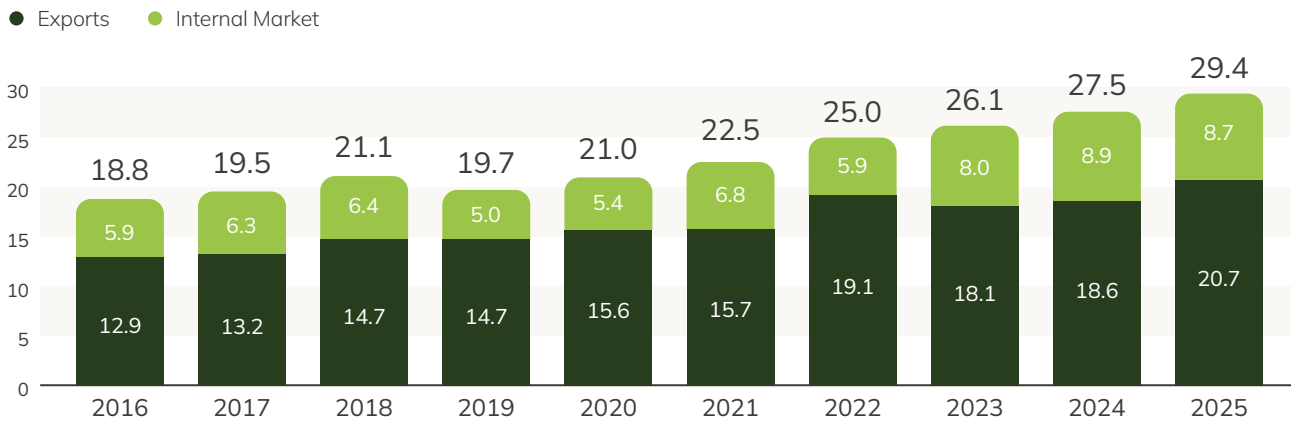
Pulp

29.4
million
tons of pulp produced

Brazilian production of cellulose pulp reached a new record in 2025 with a total of 29.4 million tons, representing a 7% gain over 2024. This performance was mainly driven by the increase in short fiber pulp production, which totaled 26.1 million tons for the year. Long fiber pulp production reached 2.7 million tons, while high-yield pulp totaled 570,000 tons. Of the total volume produced in 2025, 20.7 million tons were exported, while the domestic market absorbed 8.7 million tons (Figure 14).

Figure 14

A. Destination of Brazilian pulp production [million tons]



B. Brazilian pulp production [million tons]



Source: Ibá (2025) | Developed by: ESG Tech
Note: totals throughout this report may not sum precisely due to standard rounding of individual data points.



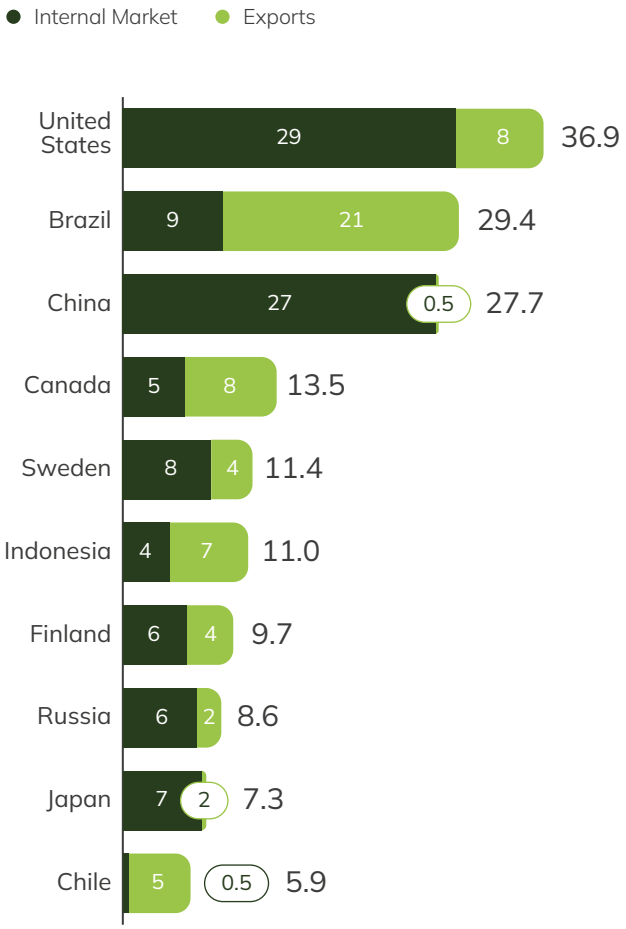
Brazil is the world's leading pulp exporter

In contrast to the decline in national manufacturing activity, this sector continued to stand out for its production, maintaining Brazil's status as a global leader in pulp exports with 20.7 million tons shipped. In the world ranking of the largest pulp producers, Brazil held steady in second place in 2025, behind only the United States. American production totaled 36.9 million tons, followed by Brazil with 29.4 million tons and China with 27.7 million tons (Figure 15).

Pulp accounted for 68% of the total value invoiced by the tree plantation sector in foreign trade in 2025, the same level of participation as the previous year. The geographical distribution of shipments has also maintained the same pattern of recent years: China was still the leading individual destination for Brazilian pulp with 48.4% of purchases, followed by the European countries, which absorbed 24.2% of the total (Figure 16).

Figure 15

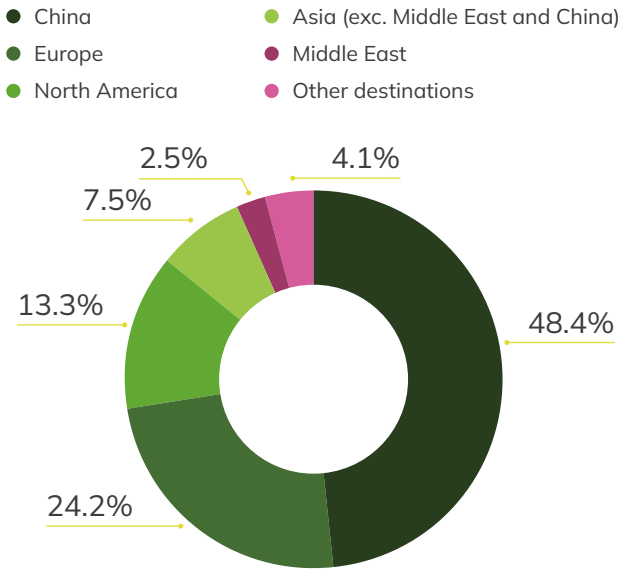
Leading pulp-producing countries [million tons]



Source: Brazil: Ibá (2025); Domestic market for other countries: FAO (2024); Exports Comtrade (2025) | Developed by: ESG Tech

Figure 16

Leading destinations for Brazilian pulp exports from the tree plantation sector in 2025 [%]



Source: Comex Stat (2025) | Developed by: ESG Tech and Ibá

Brazilian paper production totaled

11.3

million

tons in 2025.

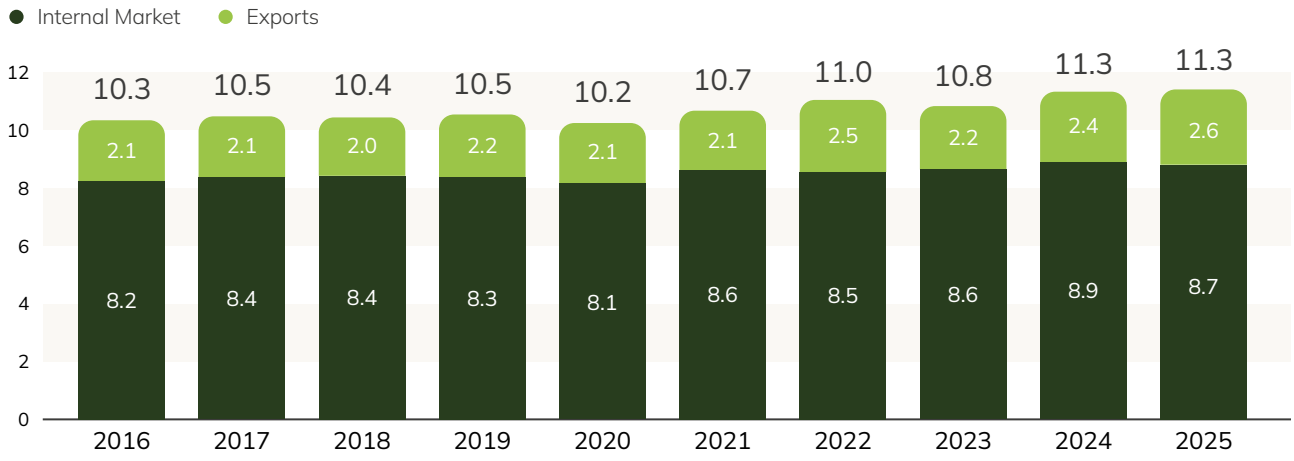
Paper

Brazilian paper production totaled 11.3 million tons in 2025, remaining at the same basic level as 2024 (Figure 17). The domestic market absorbed 77% of this total, the equivalent of 8.7 million tons, solidifying the domestic market's status as the main anchor of this segment.

Packaging paper continued as the main segment for domestic production, accounting for about 56% of the total in 2025. With the exception of the Other Papers category, which demonstrated growth over the previous year, production of the other types of paper in Brazil remained stable in the annual comparison (Figure 18).

Figure 17

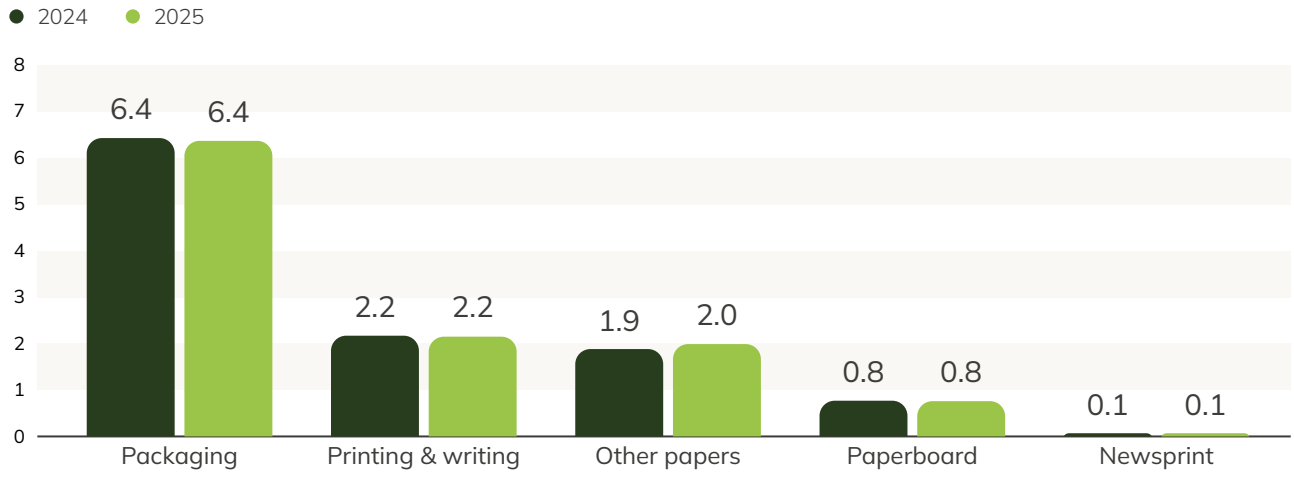
Destinations for paper production [million tons]



Source: Ibá (2025) | Developed by: ESG Tech

Figure 18

Paper production in Brazil, by type [million tons]



Source: Ibá (2025) | Developed by: ESG Tech
Note: Since 2024, data on Sanitary Papers has been disclosed in the Other Papers category

Brazil ranked

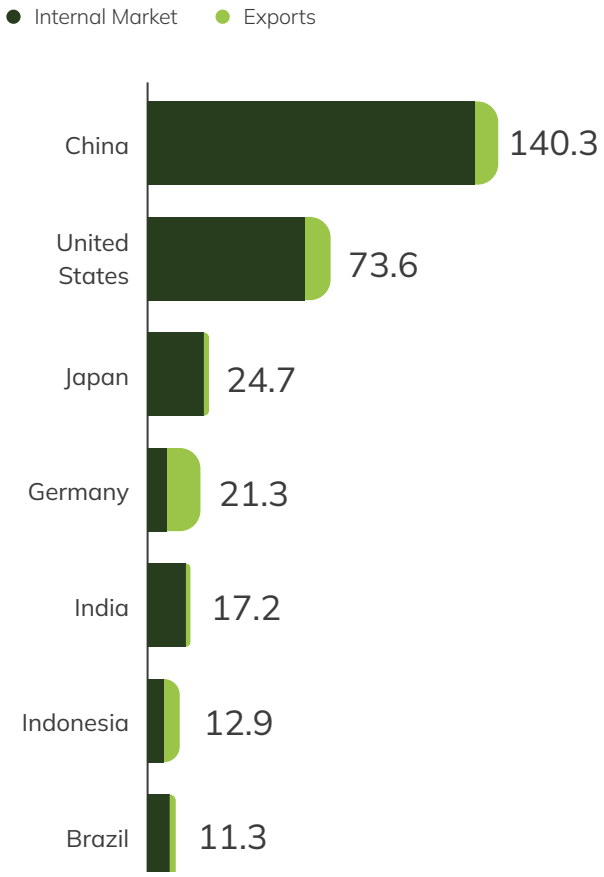
7th

among the world's leading producers of paper in 2025.

With production of 11.3 million tons, Brazil ranked 7th among the world's leading paper producers in 2025, while China retained the lead with 140.3 million tons, concentrating a significant portion of the world's supply (Figure 19). And in the corrugated cardboard segment, Brazil held 6th place in the global ranking, according to data from EMPAPEL.

Figure 19

Leading paper-producing countries [million tons]

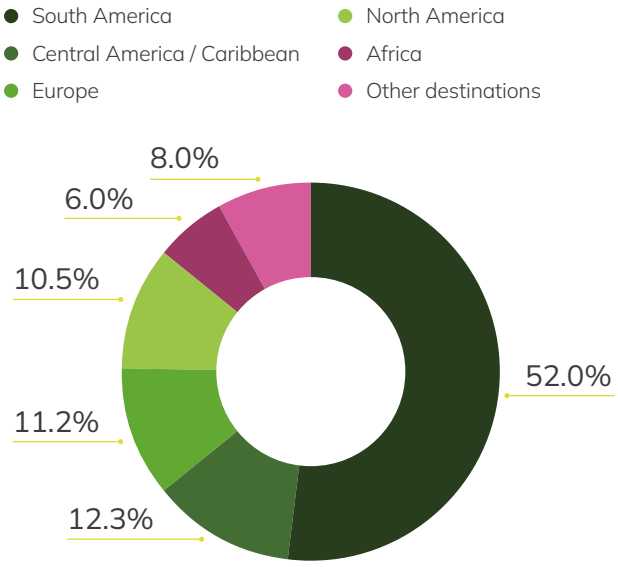


Source: Brazil: Ibá (2025) | Other countries: FAO (2023)
Developed by: ESG Tech

In the exports, South America remained the main destination for Brazilian paper in 2025, concentrating 52% of the total amount shipped. Next came Central America and the Caribbean, with 12.3%, and Europe, which accounted for 11.2% of exports of this product (Figure 20).

Figure 20

Leading destinations for Brazilian paper exports from the tree plantation sector in 2025 [%]



Source: Comex Stat (2025) | Developed by: ESG Tech and Ibá

TTG Brasil

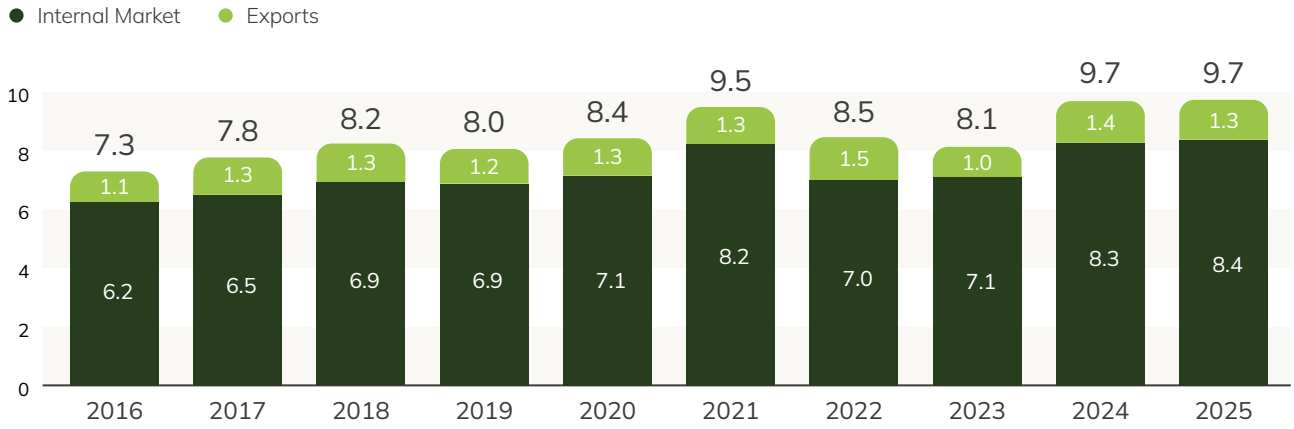


Wood panels

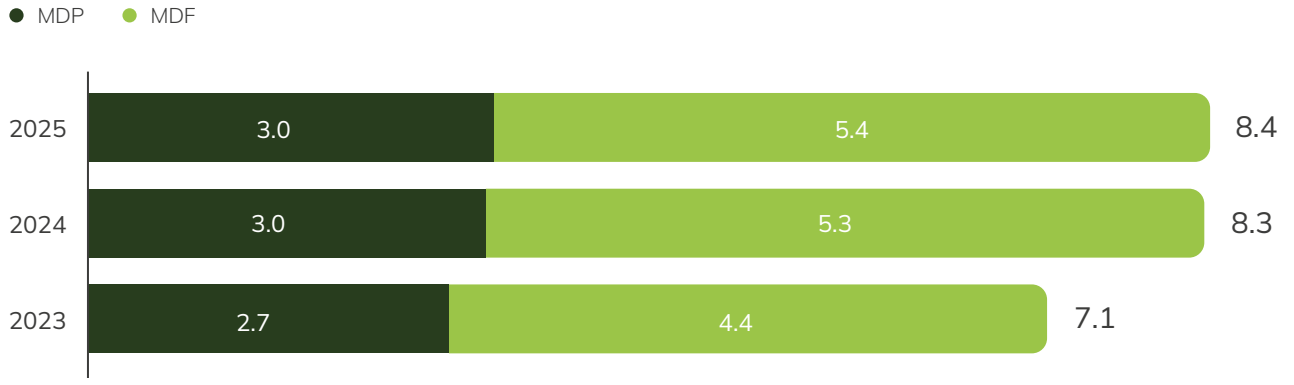
In 2025, Brazilian production of wood panels remained at its highest level in the historical series with a total of 9.7 million cubic meters, the same level recorded in 2024 (Figure 21 A). In the domestic market, MDF panels accounted for the largest share of sales with 5.4 million cubic meters, corresponding to 64% of the total sold in 2025 (Figure 21 B). Meanwhile, MDP panels accounted for 3.0 million cubic meters, the equivalent of 36% of the total.

Figure 21

A. Sales of wood panels by destination [million m³]



B. Domestic sales of wood panels [million m³]

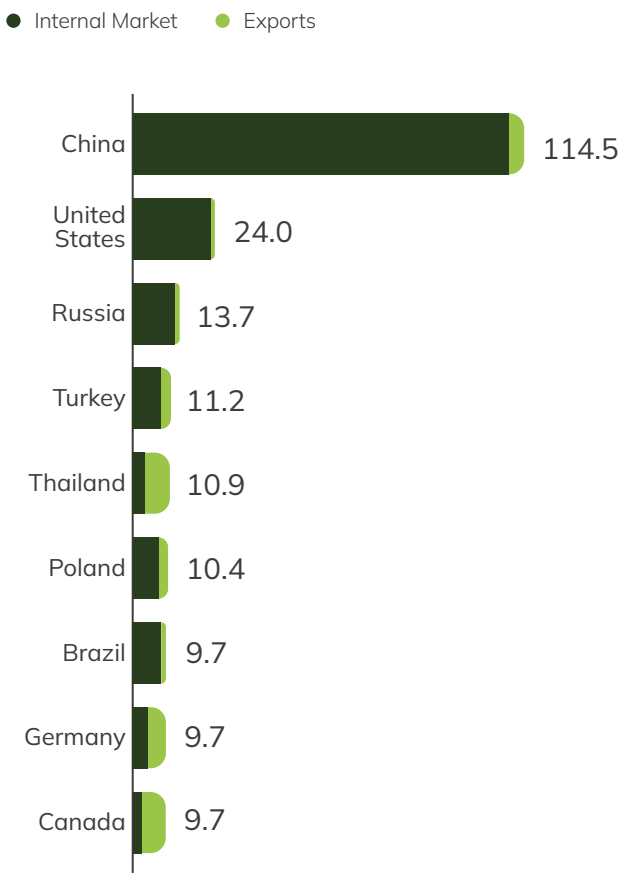


Source: Ibá (2025) | Developed by: ESG Tech

In 2025 Brazil advanced one place over the previous year to reach 7th place in the world ranking of reconstituted wood panel producers, with production of 9.7 million cubic meters (Figure 22). This volume was on a par with Germany and Canada, which also produced 9.7 million cubic meters. China, in turn, maintained its trend from previous years and firmly established itself as the world's largest producer of this category of goods, with production of 114.5 million cubic meters.

Figure 22

Leading producers of wood panels [million m³]

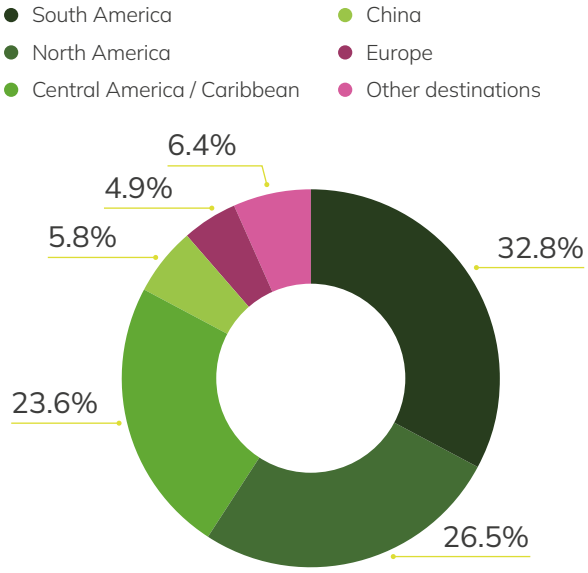


Source: Brazil: Ibá (2025); other countries: FAO (2024) | Developed by: ESG Tech

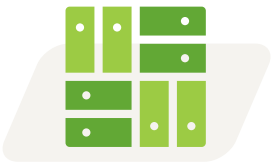
In 2025, South America remained the main destination for Brazilian paper wood panels, concentrating 32.8% of the total quantity exported. Next was North America, with 26.5%, and Central America and the Caribbean, which had a significant share with 23.6% of exports of this product (Figure 23).

Figure 23

Leading destinations for panel exports from the tree plantation sector in 2025 [%]



Source: Comex Stat (2025) | Developed by: ESG Tech and Ibá



Production of laminate flooring totaled

10

million

m²

Laminate flooring

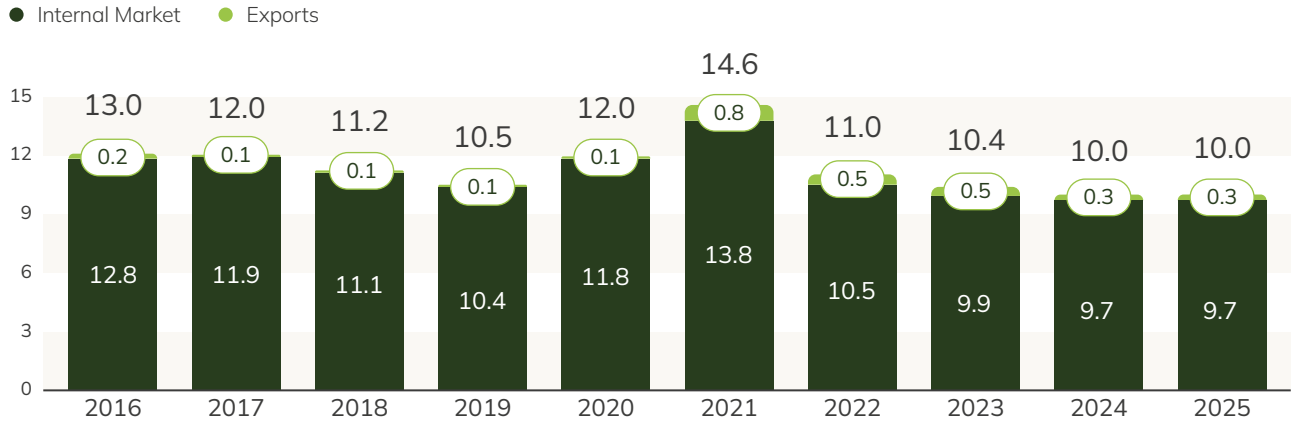
Production of laminate flooring in Brazil remained stable in 2025 and totaled 10 million square meters, the same level as the previous year (Figure 24). Domestic sales accounted for 97% of national production. In foreign trade, South America further consolidated its position as the main destination for laminate flooring exports in 2025.



Sylvamo

Figure 24

Destination for laminate flooring production [million m2]



Source: Ibá (2025) | Developed by: ESG Tech

Exports grew

5.2%

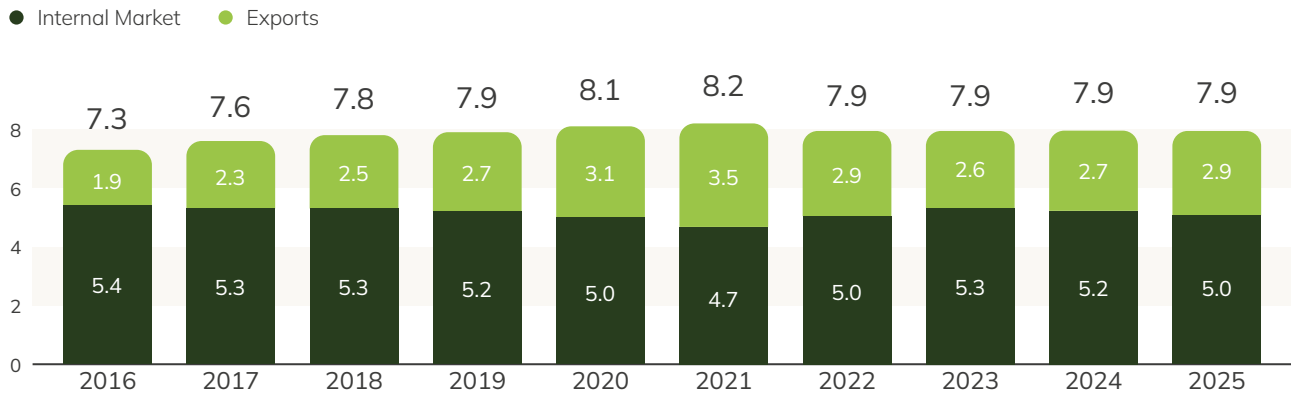
Lumber

Brazilian production of lumber from conifer trees planted for this purpose has hovered around 8 million cubic meters in recent years, and totaled 7.9 million cubic meters in 2025 (Figure 25). During the same period exports grew by 5.2% compared to 2024, while the internal market remained relatively stable.

In 2025 Brazil stayed at 9th place in the world ranking of conifer lumber producers, with 7.9 million cubic meters of this product (Figure 26). The United States remained at the top of the ranking, with 62.5 million cubic meters, followed by Russia in second place with production of 35 million cubic meters.

Figure 25

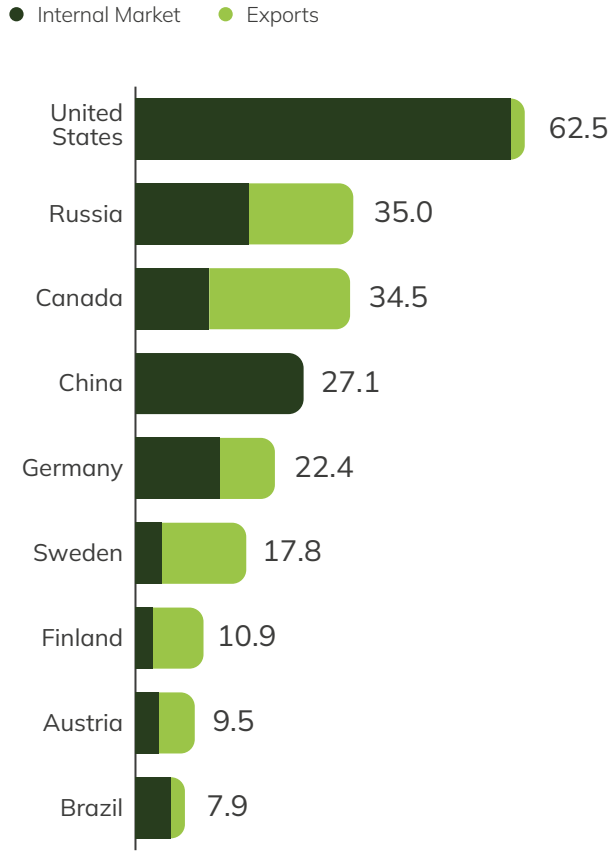
Destination of conifer lumber production [million m³]



Source: Brazilian exports in 2025 (Comex Stat 2025), others FAO (2024) | Developed by: ESG Tech
Note: Estimated domestic market for 2025. Only conifers are considered, since the total value is influenced by native forests.

Figure 26

Leading lumber-producing countries [million m³]

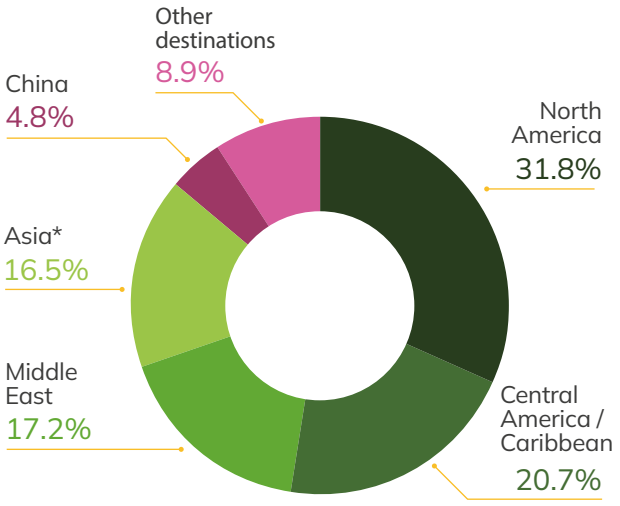


Source: Brazil: Ibá (2025); other countries: FAO (2024)
Developed by: ESG Tech

Despite the reduction in Brazilian exports of lumber to North America, this region remained the main destination for this product in 2025, concentrating 31.8% of the total exported (Figure 27). Next were Central America and the Caribbean with 20.7%, while the Middle East accounted for 17.2% of exports, surpassing Asia's share in the period.

Figure 27

Destinations for lumber exports from the tree plantation sector in 2025 [%]



Source: Comex Stat (2025) | Developed by: ESG Tech and Ibá
*Excludes Middle East and China.

Charcoal

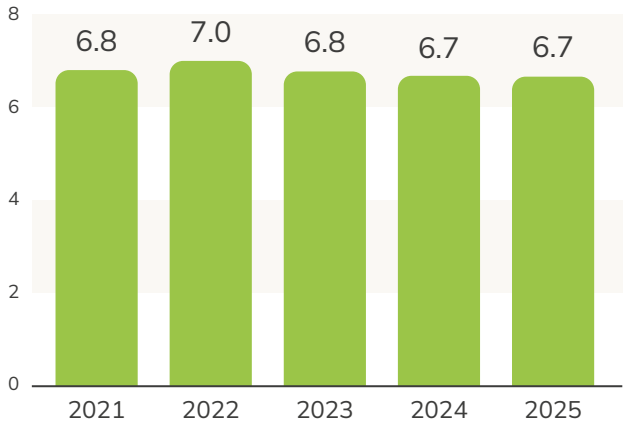
World's largest producer of charcoal

Brazilian production of charcoal for use as a bioreducer in steel manufacturing remained stable between 2024 and 2025, totaling 6.7 million tons (Figure 28). This result reinforces a scenario of stable production, after the oscillations observed in previous years.

Domestic consumption remains the main destination for charcoal produced in the country and absorbs nearly 100% of national production, especially the steel industry, which uses this input as an energy source and reducer.

Figure 28

Brazilian charcoal production [million tons]

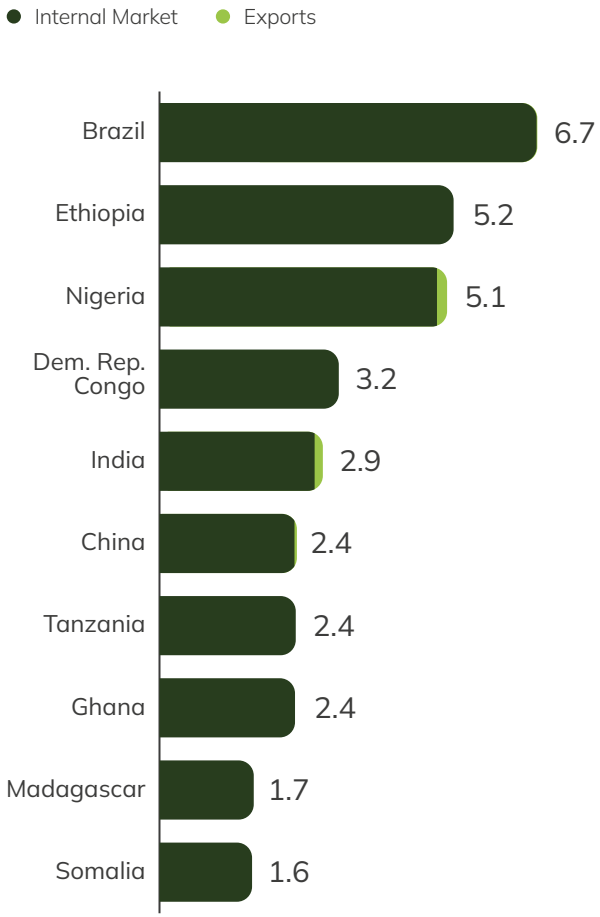


Source: SINDIFER, IBGE and ESG Tech (2025) | Developed by: ESG Tech

In the international context, Brazil continues as the world's largest producer of charcoal, with 6.7 million tons (Figure 29). Next are Ethiopia and Nigeria, with production of 5.2 million and 5.1 million tons, respectively. As with Brazil, most of the production of these countries also goes toward domestic consumption. The global trade in charcoal represents a small share of the market, since this product is mostly consumed in its countries of origin.

Figure 29

Global charcoal production [million tons]



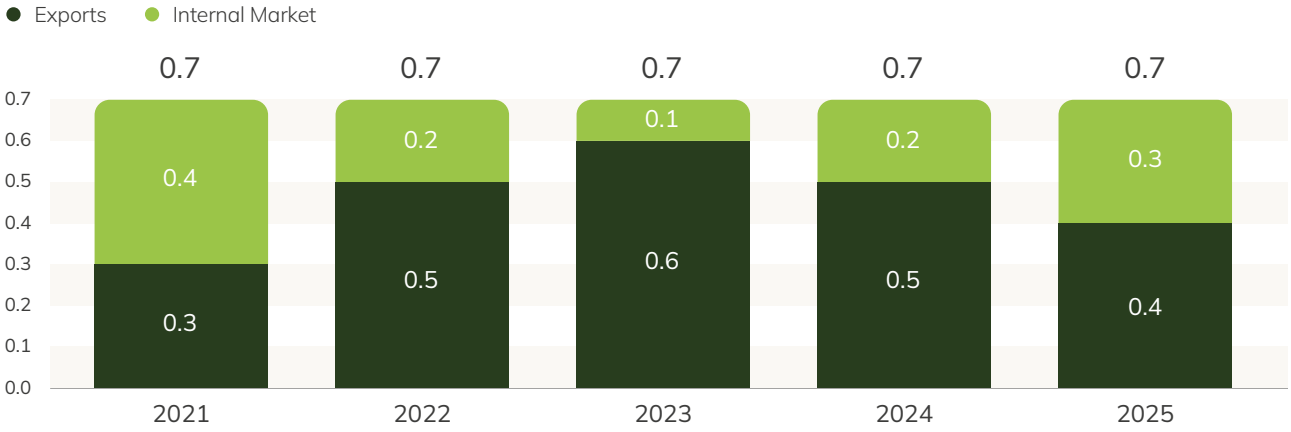
Source: SINDIFER, IBGE and ESG Tech (2025): Developed by: ESG Tech

Pellets

Pellet production in Brazil grew over the past decade but remained stable during the last four years, at around 700,000 tons (Figure 30). In 2025 exports fell 8.3% compared to 2024, while the domestic market absorbed this volume and grew 19.4% in the same period. At current levels of production, Brazil ranked 17th in the global rankings of the leading pellet producing countries in 2025.

Figure 30

Destinations for pellet production [million tons]



Source: Comex (2024) | FAO (2023) |
Developed by: ESG Tech Note: Production value estimated for 2025



Sylvamo

3 Products and innovation





Irani Papel e Embalagem

The Brazilian tree plantation sector is driven by its strategic objective to produce better and more efficiently, with less impact and a greater capacity to respond to the needs of society. This drive is reflected in the disruptive innovations in the forests, in manufacturing and in product development. It is present in the continuous improvement of forest management, modernization of factories, use of by-products, and the development of new products capable of replacing fossil-based materials.

Tree plantations are a platform that offers renewable solutions. From wood, cellulose, lignin, resin and other forest-based components, the sector creates a multitude of bio-based products that are used in different production chains worldwide. These products help us package, protect, wear, construct, clean, educate, transport, feed, care for our health, and make our environments more comfortable.

While their presence is widespread and often silent, these products are essential. They are present in the paper used in education and communication, in money and documents, in the packaging that protects food and medicine, in sanitary papers, laminate floors, wood panels, clothes made with cellulose fibers, hygiene products, furniture, components used by the food industry, in pharmaceutical and cosmetic applications, and in solutions that are still being developed in laboratories.

Today, products originating in Brazilian tree plantations are present in the life of 4.3 billion people around the globe. In many cases, these items are so incorporated into our daily lives that their renewable origin passes unnoticed. But there is science, technology and sustainable management behind each of these applications. By transforming planted trees into recyclable, biodegradable or compostable products, the industry contributes to a more circular and less carbon-intensive economy.

This movement also looks to the future. Nanocellulose, lignin, bio-oils, microfibrillated cellulose, bioplastics, renewable resins and new frontiers for paper packaging expand the possibilities for integration between the forestry sector and other areas such as fashion, food, construction, packaging, cosmetics, automotive manufacturing and even the aeronautics industry. What used to be seen just as a product or a by-product now has new functions, greater added value, and a strategic role to play in the transition to an economy that is less dependent on fossil raw materials.

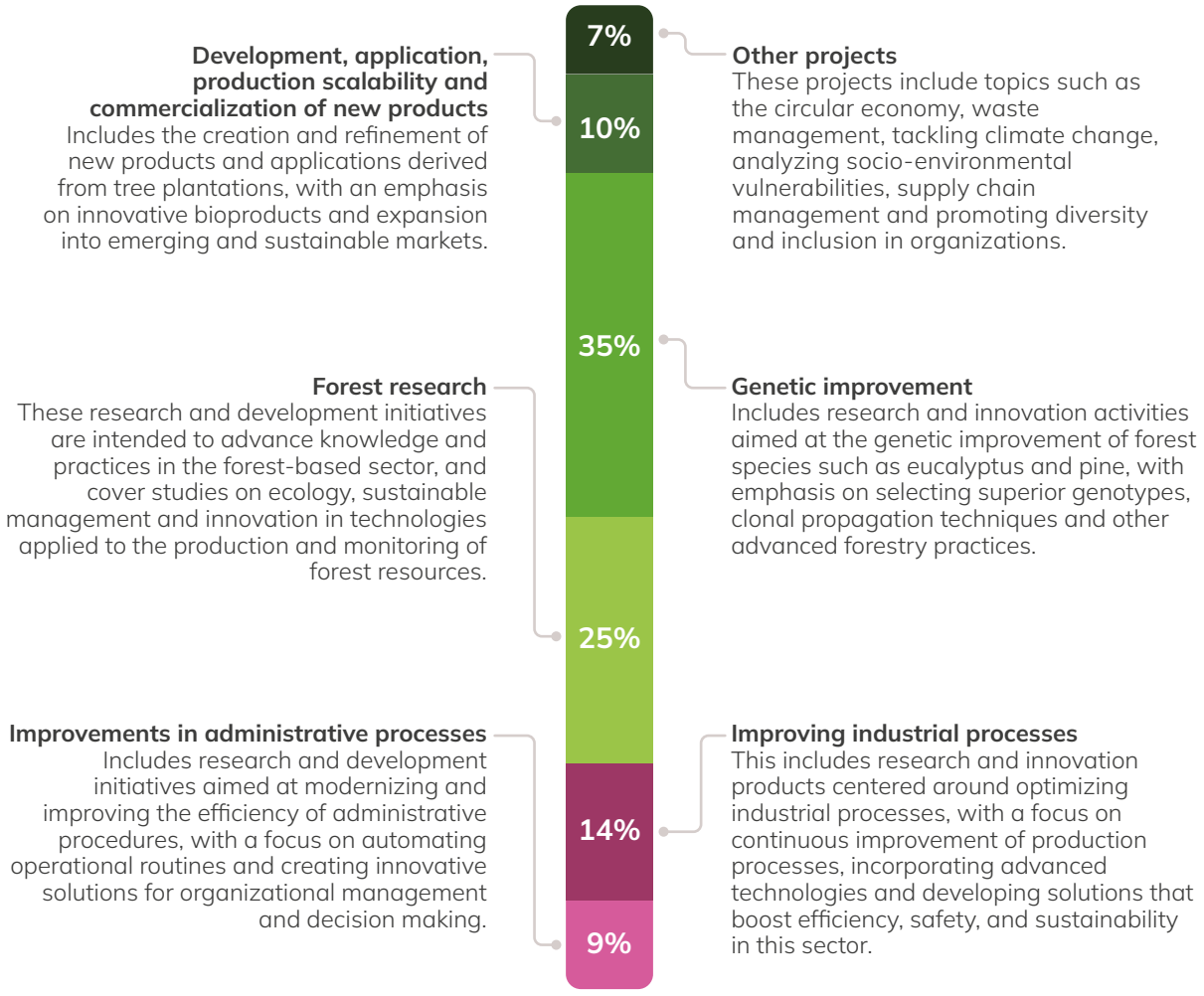
Research, development and innovation

In 2025, the companies that participated in the survey conducted by Ibá and ESG Tech to draft the Ibá Annual Report allocated R$ 353 million to projects in the area of research, development and innovation (RD&I) in order to strengthen the competitiveness of forest-related and industrial activities.

For the projects carried out in 2025, 35% focused on genetic improvement of planted species, followed by other forest-based research (25%) and improvements in industrial processes (14%). There were also projects focusing on the development of new products (10%), improvement of administrative processes (9%), and other initiatives (7%). This demonstrates the sector's interest in expanding the productivity, quality and climate resilience of cultivated forests, as well as advancing efficiency, reducing costs and boosting competitiveness (Figure 31).

Figure 31

Distribution of RD&I projects by area [%]



Source: Ibá (2025) | Developed by: ESG Tech



Veracel

In the area of development, 91% of companies carried out these projects with internal resources, 65% established partnerships with universities and research institutions, and 48% involved startups (Figure 32). The companies allocated R$ 2.7 million to initiatives in partnerships with universities and research institutions, which include granting 129 university scholarships and support for 60 academic papers, including final projects, theses and dissertations.

Figure 32

% of companies by type of partnerships [%]



Sources: Ibá (2025) | Developed by: ESG Tech
Note: one single project may involve multiple modalities.

In 2025, the forestry sector registered 1,101 patents and intellectual property assets. These patents and assets range from optimization of industrial processes to the development of new chemical compounds. In the field of genetic improvement, 44 new cultivars were approved by the Brazilian Ministry of Agriculture and Livestock: 41 eucalyptus species and 3 pine.

In 2025, 24% of the companies that responded to the survey had access to incentives related to Brazilian Law 11.196/2005 (known as the Lei do Bem), which establishes tax breaks for corporate technological innovation. These include deducting RD&I expenses from corporate income taxes (IRPJ) and CSLL (Social Contribution on Net Income), reduced IPI (Industrialized Products Tax) on equipment acquisition and accelerated depreciation and amortization, in addition to income tax exemption on remittances abroad to register intellectual property. These incentives totaled R$ 47.8 million, and contributed to the development of various projects, representing an essential stimulus for innovation in the forest-based sector.

4 Forest areas



The sector plants on

10.73

million

hectares

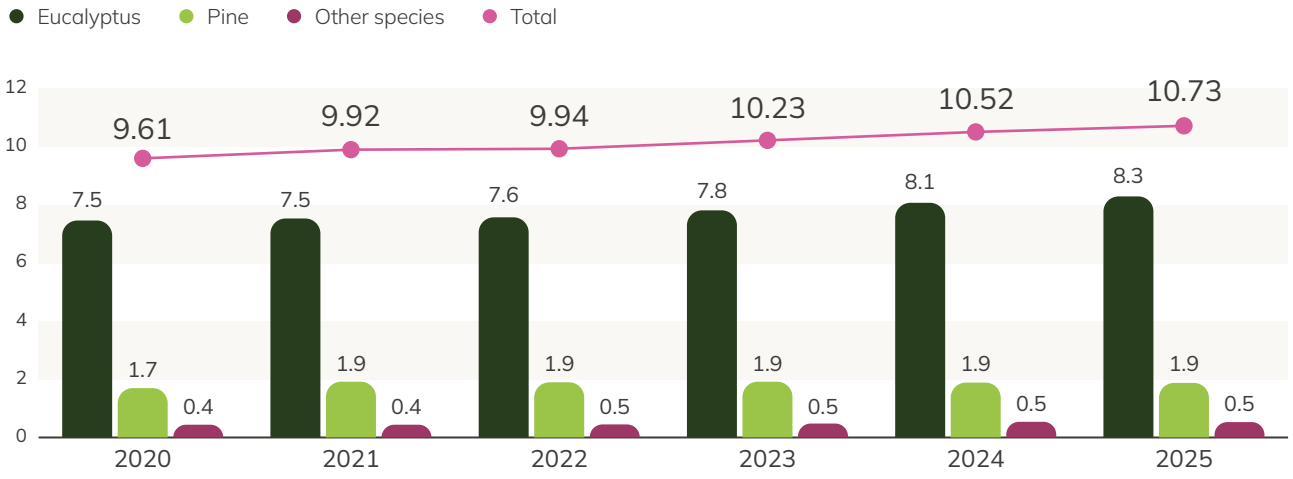
The area of tree plantations for industrial purposes in Brazil maintained its upward trajectory in 2025 to reach 10.73 million hectares, based on remote sensing data obtained from satellite imagery from Canopy Remote Sensing Solutions. This result represents growth of 2% compared to the 10.52 million hectares registered in 2024, following the cycle of investments in the sector and growing demand for products from renewable sources (Figure 33).

This expansion mainly occurred in areas that were previously anthropized (many of which were pastures with low productivity), now transformed into productive forest cover. The Pasture Atlas developed by the Federal University of Goiás[1] indicates that there are over 100 million hectares of land with some level of degradation in Brazil which have the potential to be restored or converted into sustainable systems that produce food, grain, fiber and energy. By replacing degraded areas, plantations of eucalyptus, pine and other species promote carbon sequestration and provision of ecosystem services such as protecting soil, regulating water flows and protecting biodiversity.

This is a sector that plants, harvests and replants, rain or shine. Every day, 2.2 million seedlings are planted for industrial purposes.

Figure 33

Distribution of planted area in Brazil by species, 2020–2025 [million hectares]

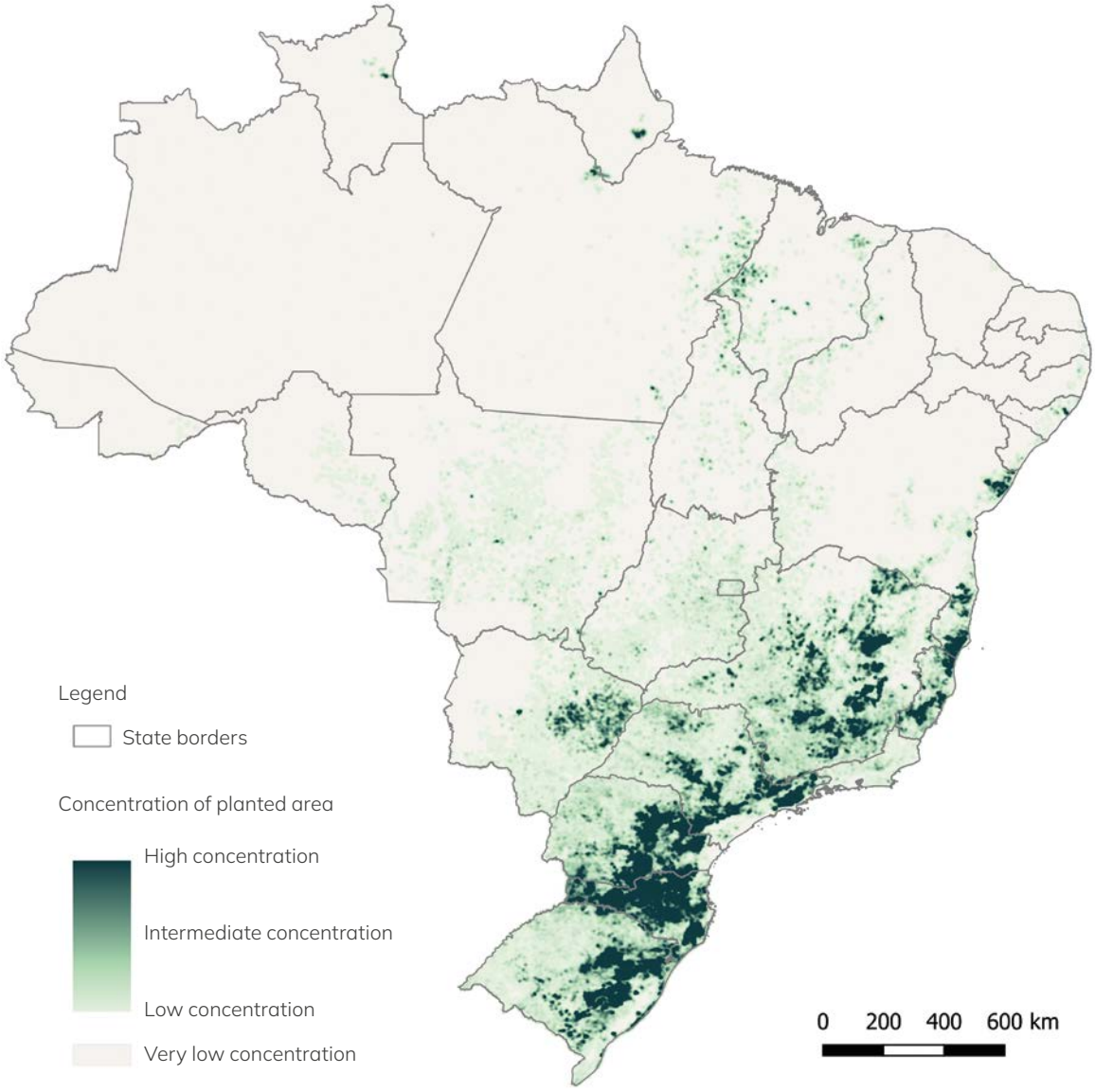


Source: Canopy Remote Sensing Solutions - CANOPY (2025) | ESG Tech (2025)

1 https://atlasdaspastagens.ufg.br/

Figure 34

Distribution of planted area in 2025 by state [hectares]



Source: Canopy Remote Sensing Solutions - CANOPY (2025) | ESG Tech (2025)

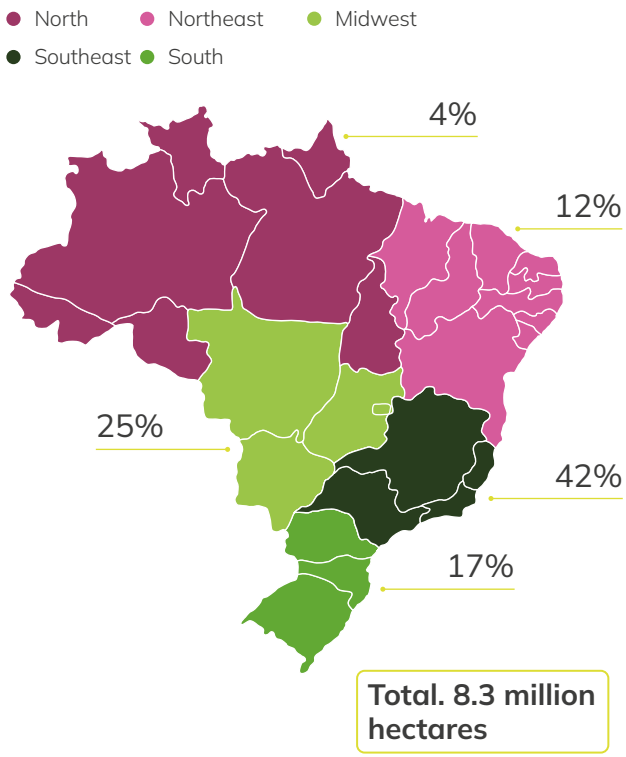
The states with the largest areas of tree plantations for commercial uses are Minas Gerais, Mato Grosso do Sul, São Paulo, Paraná and Santa Catarina (Figure 34). In 2025 slight decreases in planted area were seen in some states, while Mato Grosso do Sul remained the main driver of expansion in this activity with an increase in the order of 222,000 hectares, reaffirming the potential of new forest frontiers in the country.

Eucalyptus cultivation remained the main pillar of Brazilian forestry in 2025, with an estimated area of 8.3 million hectares. This species is central in supplying the production chains involving cellulose pulp, paper, panels, bioenergy and other renewable forest-based products.

The regional distribution of tree plantations shows the consolidated presence of eucalyptus in the Southeast, with approximately 3.5 million hectares (Figure 35), and advances in the Midwest with roughly 2 million hectares, driven by the installation and expansion of new, large mills. The South adds another 1.4 million hectares of planted area.

Figure 35

Distribution of eucalyptus plantations in 2025 by region [%]

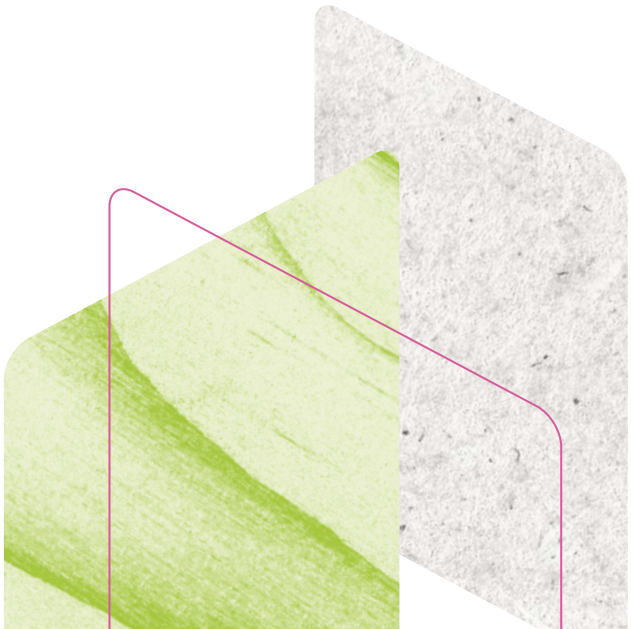


Source: Canopy Remote Sensing Solutions - CANOPY (2025)
ESG Tech (2025)

At the state level, Minas Gerais remains the country's leading producer of eucalyptus with 2.2 million hectares, corresponding to roughly 27% of the country's total area. This position is associated with the state's long tradition in the charcoal, cellulose and steelworks production chains. In second place is Mato Grosso do Sul, which reached 1.7 million hectares and 21% of Brazil's eucalyptus plantations and further consolidated its position as the main driver in the recent expansion of domestic forestry. The state registered growth of 14.65% during just the 2024–2025 period.

The growth in Mato Grosso do Sul has been driven by robust state policies for the sector and large industrial ventures that are already established, in the process of installation, or announced. This movement impacts the regional economy, employment and income, and also signals new opportunities for neighboring states such as Mato Grosso and Goiás because of the favorable soil and climate conditions and the availability of anthropized areas. Goiás has been preparing for this new cycle with a Sustainable Forest Development Plan aimed at attracting investments, expanding plantations and strengthening the forest chain. Meanwhile, in Mato Grosso there was expansion of 23,700 hectares of eucalyptus in 2025, reaching a total of approximately 169,000 hectares planted. Like Goiás, Mato Grosso also launched its own Forest Development and Biomass Plan, which was accompanied by the signing of an Environmental Commitment Agreement between the state government and the State Public Prosecutor's Office determining the expansion of 700,000 hectares of planted forests by 2040, in addition to the implementation of mechanisms for traceability of biomass, refinement of Sustainable Supply Plans (PSS), and incentives to incorporate reforestation instead of using native vegetation for energy purposes.

Pine plantations, which have an average productive cycle of 14 years, totaled 1.9 million hectares in Brazil in 2025, practically stable compared to the previous year. Cultivation of this species is concentrated in the South of the country, with approximately 89% of the total area and the equivalent of 1.67 million hectares (Figure 36). In this region there is a historical presence of industrial chains associated with this raw material, such as the panel, lumber and paper sectors. The Southeast region accounts for about 10% of the national area or 190,000 hectares, with 155,000 of these hectares in the state of São Paulo.

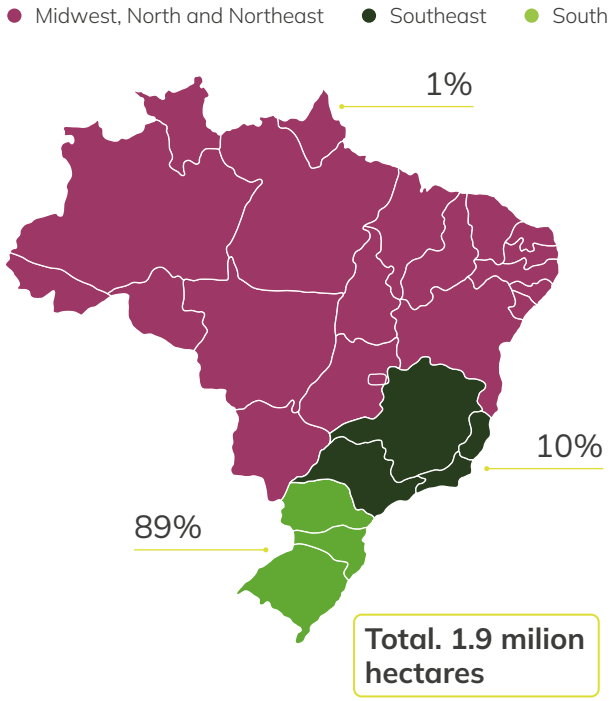




Veracel

Figure 36

Share of pine plantation area in 2025 by region [%]



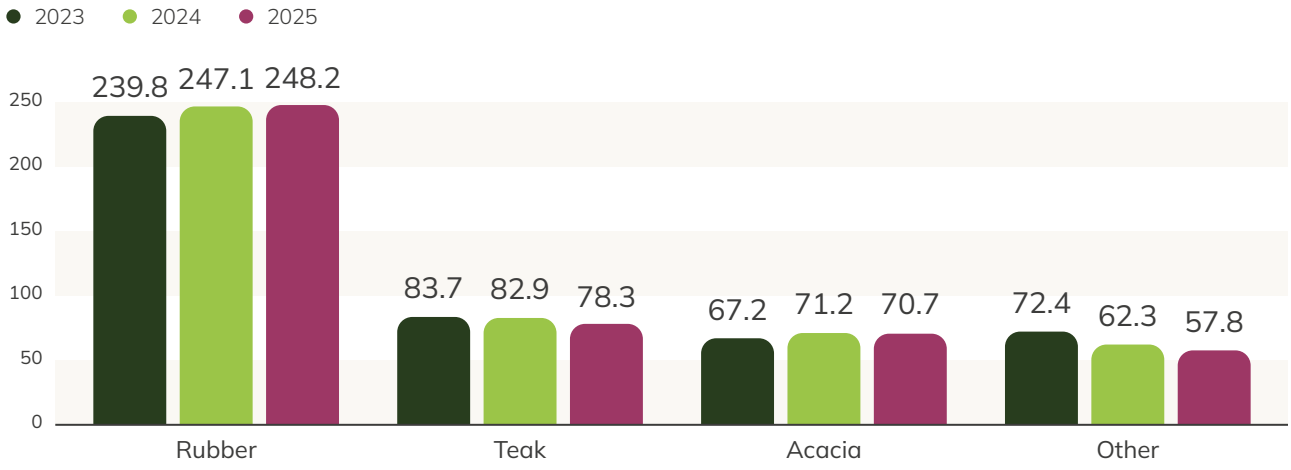
Source: Canopy Remote Sensing Solutions - CANOPY (2025)
ESG Tech (2025)

In 2025, the area of Brazilian plantations containing other forest species in Brazil remained close to 500,000 hectares (Figure 37). Although these species account for a smaller share than eucalyptus and pine, they play a relevant role in specific market niches (industrial as well as agroforestry).

Hevea brasiliensis, which produces natural rubber, remains the leader in this group with approximately 248,000 hectares of plantations, the only species to register expansion during the period. *Tectona grandis* (teak) and *Acacia spp.* (acacia) had a small decrease in area.

Figure 37

Area planted with other species, 2023–2025 [1000 hectares]



Source: Canopy Remote Sensing Solutions - CANOPY (2025) | ESG Tech (2025)

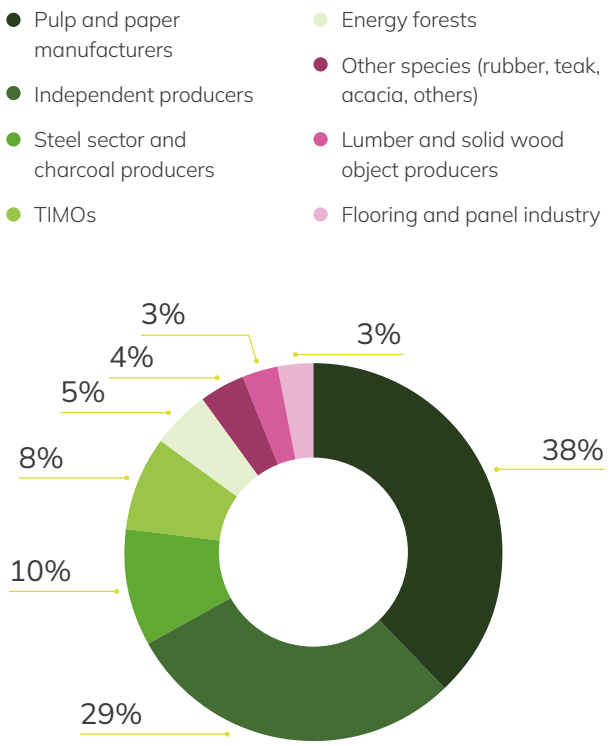
Wood supply chain

The 10.73 million hectares of tree plantations for commercial purposes can also be analyzed considering the segments that hold these areas.

According to Ibá's estimates, the largest portion of these areas is linked to the pulp and paper industry, followed by independent producers, the steel sector and charcoal producers and forest investment funds (TIMOs) (Figure 38). The independent producers are a diverse group that ship their production to different markets according to demand, supplying different chains such as cellulose, wood panels, grain drying, thermal energy generation for the food and ceramic industries, and production of essential oils used in cosmetics, pharmaceuticals and cleaning products.

Figure 38

Share of planted area by land owner [%]



Source: Ibá (2025) | ESG Tech (2025) | TIMOs: timber investment management organizations

Looking at ownership, we can see that 65% of the tree plantations in Brazil are owned by companies, while the rest is linked to the production chains via contractual arrangements that include leasing (14%), partnerships (9%) and forest outgrower programs (8%). The share of timber acquisitions in the spot market remains residual, accounting for only 4% of the total, according to reports from Ibá member companies.

Through outgrower programs, companies in the sector establish partnerships with producers and offer technical support, inputs (like seedlings with high-quality genetics) and often access to lines of funding, making it possible for them establish and responsibly manage tree plantations containing eucalyptus and pine. This strategy helps diversify income in rural areas, boost productivity on rural properties, and ensure greater predictability in the supply of raw material to the industry. This model of territorial and contractual organization provides a balance between secure supply and operational flexibility while also contributing to economic dynamism, better living conditions for these producers, and development in the regions where forest activities take place.

In addition to productive support, outgrower programs have advanced in incorporating good management and governance practices into the rural environment. The contracts include strict social and environmental criteria including land regularization, compliance with environmental legislation and adopting measures aimed at worker health and safety. Demand related to alignment with forest certification standards like FSC® (Forest Stewardship Council®) and PEFC (Programme for the Endorsement of Forest Certification) is also growing; these standards ensure implementation of responsible forest management practices and expand product access to more demanding markets.

Productivity

34.5

m³/ha.year is the average productivity of eucalyptus plantations

In 2025, the average yield for eucalyptus plantations in Brazil was 34.5 m³/ha.year (over bark), considering an average age of 7 years (Figure 39 A). This allows us to produce more in a smaller area, contributing to more efficient land use and more secure industrial supply. This is an advantage that was built over decades, the result of investments in science, technology, genetic improvement, mechanization, precision agriculture and modern techniques for sustainable management that dialog with Brazil's climate, soils and landscape conditions.

There are still significant variations between states, with average yields ranging from 20 to 40 m³/ha.year. These differences reflect a mix of the soil and climate conditions, technological level, management history and productive strategies adopted in each region.

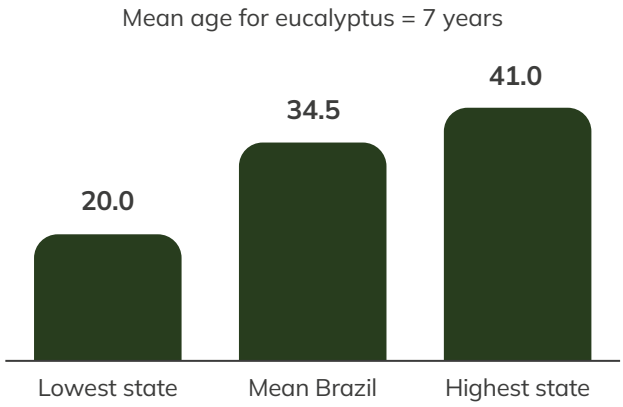
However, the effects of climate change pose new challenges to forest productivity in the short, medium and long term. Changes in rainfall patterns, prolonged droughts, more frequent extreme events and increased incidence of pests and diseases make forest production more complex and require the permanent capacity for adaptation and resilience. Overcoming these challenges will depend on continuing investments in science, innovation, biotechnology and sustainable management.

Average national productivity for pine (over bark) in 2025 was estimated at 31.1 m³/ha.year, with an average age of 16.4 years (Figure 39 B). Regional differences are also present in this genus, with yields ranging from 26.2 m³/ha.year to 34.1 m³/ha.year.

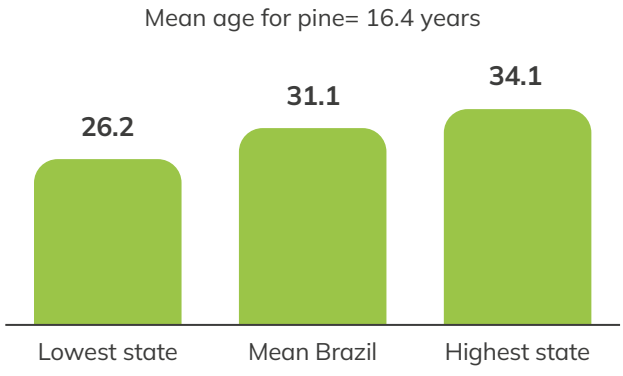
Sampling data from Ibá member companies were used to calculate the national average, along with market data which broadened the representativeness of the indicator. Additional methodological details are available in the technical notes section of this report.

Figure 39

A. Eucalyptus productivity in 2025 [m³/ha.year]



B. Pine productivity in 2025 [m³/ha.year]



Source: Ibá & ESG Tech (2025) | Developed by: ESG Tech

Integrated crop, livestock and forest systems

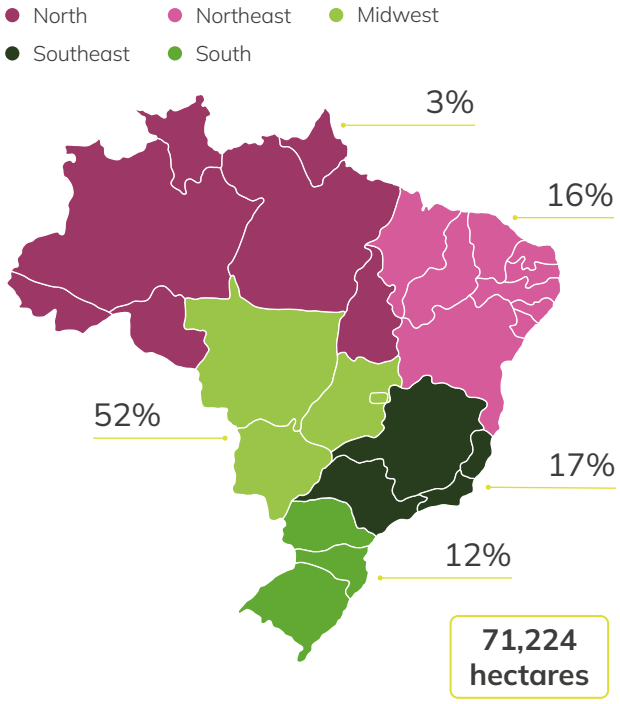
Integrated crop, livestock and forest systems offer a sustainable land use strategy that combines different production systems in the same area simultaneously, in succession or rotation. In 2025, considering only systems involving a forest component, the area occupied by these systems in Brazil reached 71,200 hectares. By region, distribution remained concentrated in the Midwest, which accounted for 52% of the total area, especially Mato Grosso do Sul, the national center for these systems. The Southeast was next with 17% of the area, driven mainly by Minas Gerais (Figure 40).

The data indicate that much of the mapped area involve systems that integrate tree plantations and livestock (also known as silvopasture systems). In these arrangements, the tree plantations play a strategic role by providing thermal comfort to animals, helping to improve microclimates, promoting soil and water conservation, boosting carbon sequestration and storage and diversifying the producer's income by adding in wood production. Mato Grosso do Sul concentrates about 27,000 hectares of silvopasture systems and remains a national reference in this modality. Minas Gerais comes in second with approximately 9,000 hectares, which reinforces the role of the Southeast in diffusing these integrated systems.

Between 2022 and 2025, the area occupied by the forest component of integrated production systems presented an accumulated expansion of 95% (Figure 41), indicating advances in the adoption of integrated productive models that incorporate tree plantations and reinforcing this strategy's potential to promote gains in productivity, diversify production and make land use more sustainable.

Figure 40

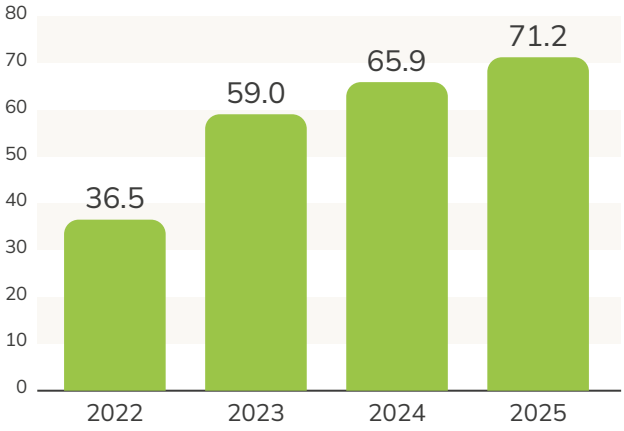
Distribution of integrated systems involving forests, by region [%]



Source: Canopy Remote Sensing Solutions - CANOPY (2025)
ESG Tech (2025)

Figure 41

Integrated production areas in Brazil involving tree plantations [1000 hectares]



Source: Canopy Remote Sensing Solutions - CANOPY (2025)
ESG Tech (2025)

5 Sustainability



The Brazilian tree plantation sector is a global reference for large-scale bioeconomy. Starting from a renewable raw material that is managed through science, technology and sustainable practices, it produces a multitude of bioproducts which are essential for our daily lives and also offer alternatives to those made from fossil sources. Through its practices, this industry shows that it is possible to produce and conserve at the same time.

The sector plants, harvests and replants trees for productive purposes while conserving extensive areas of native vegetation. Forest mosaics, an important sustainable management technique, intersperse commercial plantations with conservation areas, forming ecological corridors that help protect the soil, regulate water flows and preserve biodiversity.

Tree planted for industrial and restoration purposes play an important role in the climate agenda. As they grow, they remove carbon from the atmosphere and store it in their biomass.

The sustainability of the sector is also expressed in its relationship with the territories where it is located. The presence of companies and forest producers drives local economies, generates jobs and income, supports social initiatives and strengthens regional development agendas. Its work together with communities, suppliers, workers and different audiences reinforces the importance of a socio-environmental agenda that is built on an ongoing basis and integrated into its business strategy.

This chapter combines the main environmental, social and governance indicators for the tree plantation sector, including conserved areas, biodiversity, water resources, climate change, forest certification, energy, the circular economy, community relations, human rights, diversity and inclusion, governance, supply chain, sustainable finance and the carbon market. The data presented here were mainly obtained from information provided by Ibá member companies through a structured questionnaire that was applied in partnership with ESG Tech, with continuous methodological improvements compared to previous editions.



An estimated

7.15

million

hectares of native vegetation are conserved by the sector

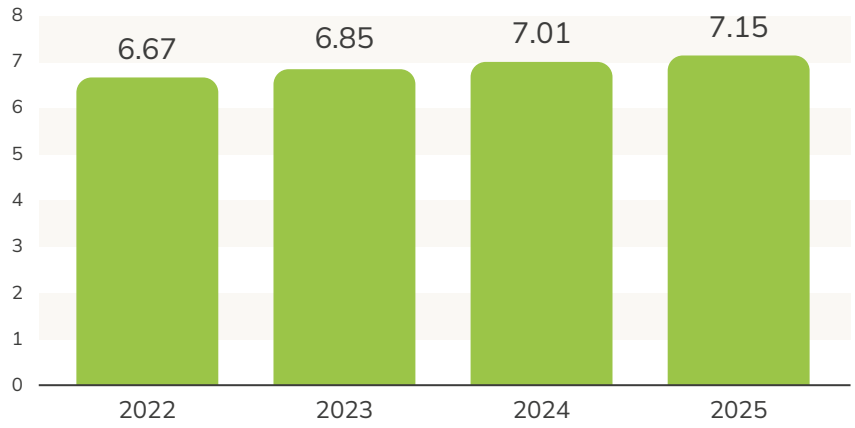
Conserved areas

The combination between production and conservation is one of the hallmarks of the tree plantation sector. Commercial plantations of different ages and clones are planned at the landscape level and interspersed with areas of native vegetation to form forest mosaics that encourage connectivity between habitats and help protect soil, preserve biodiversity and regulate water flows. There are an estimated 7.15 million hectares of native vegetation set aside for conservation and maintained by the sector; these lands help provide ecosystem services in different Brazilian biomes (Figure 42).

Of this total, approximately 39,800 hectares are conserved as Private Natural Heritage Reserves (RPPNs), a conservation unit modality created through voluntary commitments by companies to protect areas of relevant environmental importance in perpetuity, especially to preserve biodiversity.

Figure 42

Areas conserved by the tree plantation sector 2022–2025 [million hectares]



Source: Ibá (2025) | Developed by: ESG Tech
Note: The total conserved area was estimated from the ratio between planted area and conserved area reported by associates in relation to the total planted area in Brazil.

Restoration

Brazil has unique conditions that enable it to take on a leadership role in the global green economy, transforming restoration and native-species forestry into new vectors of economic, climate and socio-environmental development. In recent years, the country has solidified more mature production models, with technical and operational capacity to generate jobs, attract investments, remove carbon from the atmosphere, preserve biodiversity, and promote positive impacts in the territories where its projects are implemented.

The companies in the various industrial segments and involved in carbon credit projects which Ibá represents have worked actively in forest restoration, with approximately 57,500 hectares under their management currently in the process of recovery. Over the past five years, over 18.5 million native trees have been planted for this purpose. This result reinforces the evolution of forest restoration — an activity Ibá has represented since 2024 — as a nascent industry in Brazil which is supported by business models that integrate restoration, native-species forestry, the sale of timber and non-timber products, high-integrity carbon credits, and the development of regional production chain.

Companies in the various segments represented by Ibá manage approximately

57,000

hectares in the process of recovery



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Studies indicate that this is a significant opportunity: according to research by McKinsey[2], Brazil could move up to US$ 26 billion per year in activities related to forest restoration and the carbon market, with the potential to generate approximately 880,000 jobs. At the same time, growth in global demand for low-carbon forest products reinforces the potential of native-species forestry as a sustainable alternative for expanding the supply of legal and traceable tropical timber that is not linked to deforestation.

Despite technical advances, the main challenge in expanding the sector remains access to long-term financing. The country already has consolidated methodologies, supply chains for seeds and seedlings that are expanding, modern monitoring systems and increasingly qualified labor. However, the lack of financial instruments that are fully suited to the risk profile throughout the project maturation cycle and the requirements for guarantees still limit entry of new investors and slow growth in this market. Within this context, recent investments demonstrate the value of public/private partnerships to accelerate the agenda for restoration and native-species forestry.

In 2025, transactions supported by BNDES and the Climate Fund began to play a strategic role in structuring this new market, showing that forest restoration is no longer just an environmental agenda and has become recognized as green infrastructure, a climate asset and economic opportunity. These contributions inaugurate a new chapter in forest restoration and native-species forestry in Brazil. The strategic action of BNDES and the Climate Fund demonstrates that the sustainability agenda and economic attractiveness can move forward together. Instruments like such as letters of guarantee, guarantee funds, insurance, future purchase contracts for carbon credits and hybrid capital structures will be key to expanding the scale of projects.

In addition to funding, strengthening this new economy depends on a more favorable regulatory environment that involves legal certainty, tax incentives (Sudam and Sudene), access to international carbon markets and mechanisms that boost demand for environmental products and services from sustainable sources. Predictability of the demand for carbon credits is a central theme, especially considering the connection with regulated

2 Greener shores: Brazil's $100 billion decarbonization opportunity (McKinsey, 2024). Available at: https://www.mckinsey.com/capabilities/sustainability/our-insights/greener-shores-brazils-100-billion-decarbonization-opportunity

international markets and the implementation of Article 6 of the Paris Agreement, including authorizations for international transfers of mitigation results. The land issue also remains one of the country's main structural bottlenecks, and can generate legal uncertainty and challenges to the implementation of large-scale projects. In this context, forest concessions for restoration represent an important alternative, allowing private companies to remediate degraded public areas in return for the right to trade carbon credits and other environmental assets without disputes over land ownership.

Another strategic challenge is to expand research, development and innovation. Large-scale restoration and native-species forestry require technical knowledge about seeds, seedlings, genetics, management, productivity, monitoring, carbon permanence, biodiversity and climate adaptation. In this scenario, the experience accumulated by the tree plantation sector is essential to illuminate pathways forward, reduce risks and hasten the consolidation of this emerging industry.

The impacts of this agenda go beyond the environmental scenario. Forest restoration strengthens nurseries, drives regional production chains, creates opportunities for traditional communities, young people and women, improves water and food security and stimulates innovation in the territories. Each restored hectare also represents income generation, professional training and local development, solidifying a new business model involving nature-based solutions.

With its vast biodiversity, experience, business capacity and vocation for forestry, Brazil has what it needs to become a world reference in restoration and forestry of native species. In order for this to happen, it will be essential to expand cooperation between government, the private sector, academia, communities and civil society, transforming restoration and forest production involving native species into a strategic agenda of economic development, competitiveness and climate-centered leadership in national and international scenarios.

Biodiversity



89%

conduct systematic monitoring of fauna and

78%

conduct flora monitoring

Biodiversity monitoring is a well-established practice for companies in the sector in order to document fauna and flora in the areas they manage. It is one of the main instruments to assess the effectiveness of sustainable management strategies, track ecosystem dynamics, and support evidence-based decision-making. These programs are carried out on an ongoing basis, making it possible to identify changes in species makeup and abundance, evaluate trends over time, and direct improvements in conservation, restoration and sustainable landscape management practices. Of the member companies with forest operations, 89% carry out systematic monitoring of fauna and 78% monitor flora (Figure 43), covering different taxonomic groups and environments. In addition to this widespread participation, the continuity of these initiatives is notable. More than half of companies have been conducting this type of monitoring for over ten years, showing this practice is well-established as an ongoing component of forest management.

Figure 43

Percentage of companies that monitor fauna and flora [%]

89%
of member companies with forest operations monitor **fauna**



78%
of member companies with forest operations monitor **flora**

Source: Ibá (2025) | Developed by: ESG Tech
Note: Member companies without forest operations were excluded from the percentage.

The accumulated results of these monitoring programs show the significant biological wealth present in the areas managed by companies in this sector. A survey carried out by Ibá in 2022 registered the occurrence of more than 8,310 species in forest management units, including flora, mammals, birds, fish, reptiles, amphibians, invertebrates and fungi. Of these, over 5,400 species were flora and 2,800 were fauna, corresponding to roughly 13.9% and 2.4% of the species known in Brazil, respectively. These results demonstrate the impressive representativeness of the biodiversity recorded in the areas managed by companies in this sector, showing that these landscapes play a relevant role in preserving biodiversity. Considering that these areas represent approximately 2% of Brazil's territory, the richness of recorded species reinforces the importance of integrating productive areas with areas set aside for conservation and restoration, forming multifunctional landscapes that can reconcile forest production with maintaining habitats, providing ecosystem services, and contributing to the ecological balance of landscapes.

These efforts also link into complementary initiatives to enhance biodiversity and maintain various ecosystem services. One example is that 70% of forest-based companies carry out or support formal programs in beekeeping, an activity that contributes to pollination, biodiversity maintenance and income generation in rural areas.

Management of water resources

Managing water resources is central to the sustainability of forestry activity, and guides practices from the field to industrial operations.

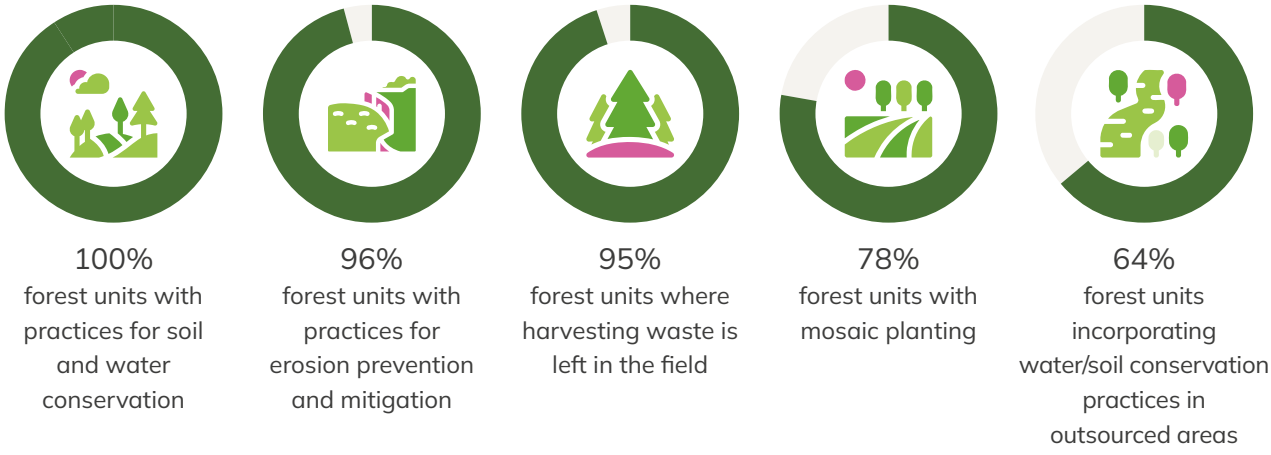
The tree plantation sector adopts an integrated approach to water conservation throughout the entire production chain, supported by strict internationally recognized certification standards such as FSC® and PEFC that establish guidelines for the responsible and shared use of this resource. Notable practices in the forest stage are strategies that consider the landscape in a systemic manner (Figure 44). For example, mosaic planting (which is adopted in 78% of forest management units) combines productive areas involving different clones and trees of different ages with conservation areas, which helps balance hydric flows and reduce variations in water availability. Another important practice is to select species and clones that have water demands which are compatible with the availability of this resource in the microbasin where the plantations are located.

The sector also performs long-term monitoring (both quantitative and qualitative), which makes it possible to better understand the relationship between forest management and water dynamics in watersheds, supporting more efficient decisions over time. In 2025, monitoring of qualitative aspects was carried out in 79% of forest management units, and quantitative monitoring in 69%. Environmental conservation and restoration activities also play a relevant role. Protection of springs and riparian forests, along with the recovery of degraded areas, contributes to aquifer recharge, reduction of erosive processes and improvement of water quality. The sector also carries out initiatives aimed at soil conservation, such as keeping harvesting residues in the field as soil cover and adopting techniques to prevent erosion, which are essential to maintain the integrity of water resources.

Work in forest nurseries involves strict control of irrigation and water reuse practices to optimize the use of this resource. The volume of water used to produce a seedling has dropped by 24% since 2016.

Figure 44

Main indicators of water resource conservation [%]



Source: Ibá (2025) | Developed by: ESG Tech

In the industrial environment, water efficiency remains one of the main indicators of environmental performance. Companies in the sector have already reduced the quantity of water used to produce 1 ton of pulp by 84% compared to the 1970s. In integrated pulp and paper mills, approximately 99% of captured water returns to the environment after proper treatment or as steam, while in paper, packaging, floors and panels operations this rate reaches 97%. Moreover, optimization practices have been widely adopted: 89% of pulp and paper manufacturing units reuse and/or recirculate water, a level that reaches 74% in paper or packaging mills and 54% in the flooring and panel segment. These strategies are central to reducing the uptake of fresh water, with reuse in internal stages of the production process whenever possible.

In this way, the sector expands its positive impact on its own areas, on outsourced properties and on neighboring territories, promoting landscape-scale conservation. The result is a model that combines forest productivity with protection of water resources, contributing to water security and long-term sustainable development.

Climate change

In the Brazilian context, planted and native forests represent one of the most relevant mechanisms for carbon capture and storage and are widely recognized as nature-based solutions. Through photosynthesis, trees remove carbon dioxide (CO_2) from the atmosphere and store it in their biomass throughout their growth cycle.

In forests (whether tree plantations or native forests), this carbon is stored in trunks, branches, leaves, roots, the leaf litter, dead wood and in the organic matter in the soil. While native forests serve as important long-term carbon reservoirs, planted forests combine continuous storage and renewal of these stocks through successive cycle of growth, harvesting and replanting, maintaining the removal of CO_2 from the atmosphere over time.

But the forest sector's contribution to the climate extends beyond carbon removal. Through an integrated logic that permeates the entire value chain, from the forest stands to post-use, the industry combines different mechanisms to mitigate climate change that include:

- Carbon removal and storage, through sustainable management of tree plantations and conservation of native vegetation.
- Avoiding emissions through circularity, waste utilization and energy self-sufficiency based on renewable sources.
- Replacing carbon-intensive materials and energy sources with forest-based products, contributing to the decarbonization of other segments of the economy.

In 2025, the amount of carbon stored in tree plantations for productive uses was estimated at 1.95 billion tons of carbon dioxide equivalent (CO_2eq). In the areas of conserved native vegetation, this level reached 3.16 billion tons of carbon dioxide equivalent. These numbers show the climate dimension of a sector that plants, harvests and replants for productive purposes while conserving natural areas in Brazil's various biomes.

During the industrial stage, the main contribution to reducing emissions is the use of predominantly renewable energy, with an emphasis on biomass and other byproducts of the production process itself. This enhances efficiency across the production chain, reduces dependence on fossil fuels, and reinforces the sector's contributions in the transition to a low-carbon economy.



Irani Papel e Embalagem

In 2025, 85% of the responding companies reported having greenhouse gas (GHG) inventories, which indicates greater capacity to measure and monitor emissions during operations. Of these companies, 79% publicly disclose their results. Furthermore, 53% have already set emission reduction targets that cover scopes 1 (direct emissions from operations), 2 (indirect emissions associated with energy consumption) and 3 (emissions throughout the value chain).

In addition to mitigation, climate adaptation has become strategically relevant for the forest chain. Changes in rainfall patterns, prolonged periods of drought, extreme events and greater incidence of pests and diseases make forest production more complex and less predictable. For this reason companies have invested in climate risk analysis, monitoring, remediation of degraded areas, expansion of conservation areas, diversification of suppliers, renewable energy systems and greater energy self-sufficiency.

As carbon markets grow, both in Brazil and internationally, initiatives such as expanding plantation areas in degraded areas, restoring native ecosystems, conserving carbon stocks and replacing more emissions-intensive materials with products from renewable sources have the potential to expand their climate contributions. Realization of this potential depends on the existence of clear rules, environmental integrity, legal certainty, and adequate recognition and accounting of the climate benefits generated by these activities.

This movement can already be observed in the tree plantation sector, where various companies that plant trees for industrial purposes report that they have projects to generate carbon credits from removals or verified emission reductions.

The circular economy



62%

of the companies reported having "zero landfill" programs

For years, the sector has been thinking about the circularity of its products and its forest and industrial operations. These practices continue to evolve, in scale and sophistication.

A variety of waste products and co-products are generated during the production process. Of these, 87.4% are destined for energy generation, 4.3% are used as soil corrections and fertilizer, 3.8% are recycled or reused and 1.5% are composted.

The remaining materials are directed towards other industries, left in the field to protect and fertilize the soil, or sent along other recovery routes. These additional options such as blending, co-processing, refining, controlled incineration, autoclaving and effluent treatment complement this portfolio of solutions, and expand the possibilities for finding value in waste and byproducts.

As a result of these circular economy strategies, only about 1% of these materials are sent to landfills (Table 1).



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Table 1

Waste destination [%]

DESTINATION FOR CO-PRODUCTS, BY SHARE	%
Energy generation	87.4%
Soil corrections and fertilizers	4.3%
Recycling and/or reuse	3.8%
Composting	1.5%
Sent to landfills	1.4%
Used as raw material in other industries	0.9%
Left in the fields to protect and fertilize the soil	0.4%
Other destinations	0.3%

Source: Ibá (2025) | Developed by: ESG Tech

In 2025, 62% of the companies reported having "zero landfill" programs, while others move toward goals in this direction. Some companies already report having zero waste certification, consolidating practices that are aligned with eliminating waste throughout the life cycle of materials.

Companies have been adding value to waste by inserting them into new production chains and also encouraging the redirection of recyclable materials to recycling cooperatives, which strengthens positive social impacts.

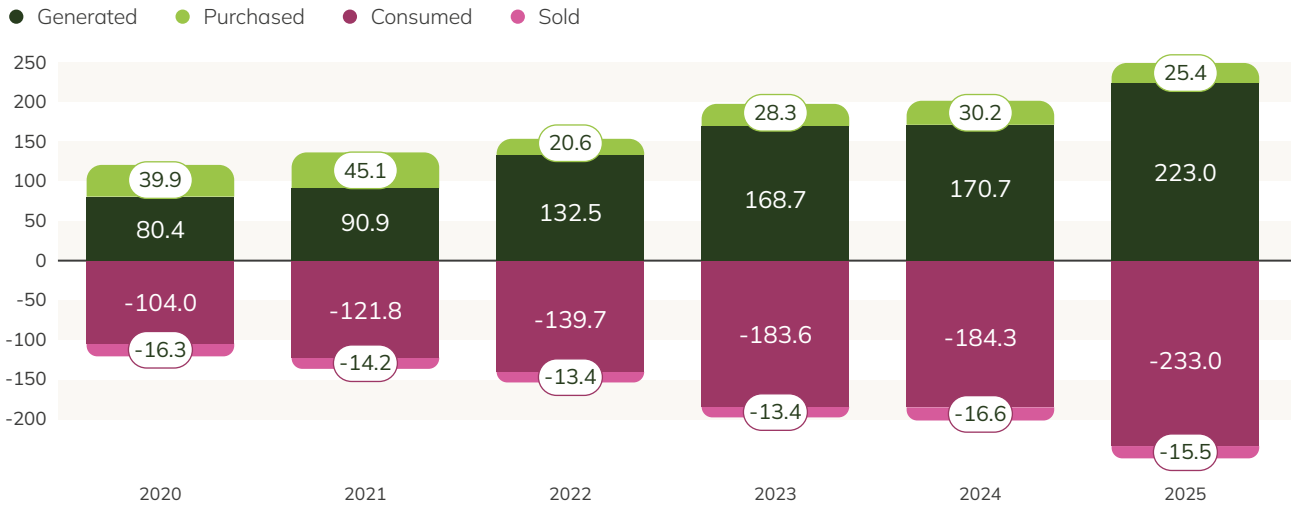
Energy

The energy transition is one of the strategic pillars for tackling climate change, and plays a central role in the tree plantation sector's competitiveness and sustainability. This sector has invested in reducing the use of fossil energy sources. The integration between industrial production and the use of forest biomass to generate energy creates a relevant structural advantage, making it possible to transform renewable resources into energy and close productive cycles with more efficient carbon use.

In 2025, the sector's total energy consumption reached 233 million gigajoules (GJ), reflecting expansions in production and installed capacity. At the same time, in-mill energy generation grew approximately 30%, reinforcing the level of energy self-sufficiency in the sector. This in-house energy production now meets 96% of the consumption needs in pulp mills. As a result, energy purchases from the public grid fell 15.9% with greater internal use of the energy produced, with a consequent decrease of 6.7% in sales of surplus energy back to the grid (Figure 45).

Figure 45

Energy balance for forest-based companies [million GJ]

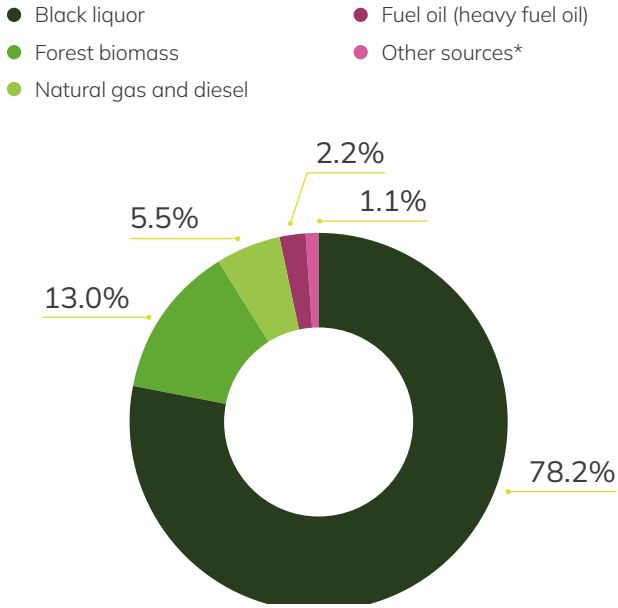


Source: Ibá (2025) | Developed by: ESG Tech

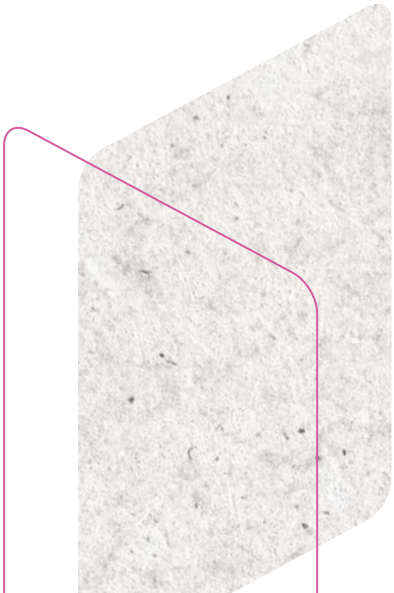
The forest-based sector has one of the cleanest energy matrixes in Brazilian industry, with 92% of the energy consumed coming from renewable sources. This performance is the result of strong integration between industrial production and the use of biomass for energy, especially black liquor (78.2%) and forest biomass (13%), which together account for over 90% of the sector's energy matrix. Alongside these sources, shares of other renewable alternatives have been growing, although still on a small scale (1.1%); these include methanol, dehydrated sludge from effluents, tall oil pitch, synthesis gas (syngas), vegetable oil and green hydrogen, demonstrating advancements in innovation and diversification of energy routes (Figure 46).

Figure 46

Source of energy production [%]



Source: Ibá (2025) | Developed by: ESG Tech
Note: *Other sources: methanol and dehydrated sludge from effluent treatment (renewable). Natural gas and diesel as non-renewable sources



Scrap recycling

The Brazilian paper sector has some of the highest recycling rates in the world. In 2025, the scrap recycling rate reached 60.4%, positioning Brazil among the countries with the best global performance in this indicator.

This result reflects the strong integration capacity of this chain, which ranges from structured collection systems involving significant participation by cooperatives and logistics operators to intensive use of recycled fibers in manufacturing processes, especially to produce paper for tertiary packaging.

Forest certification

Forest certification remains one of the pillars of the Brazilian tree plantation's sustainability strategy, a voluntarily and pioneering measure that has been adopted for over two decades. Of the area managed by the sector, 66% is certified.

Through independent audits, these systems demonstrate compliance with strict criteria that extend beyond legal requirements, ensuring good environmental, social and economic practices in responsible forest management as well as the traceability of wood throughout the production chain.

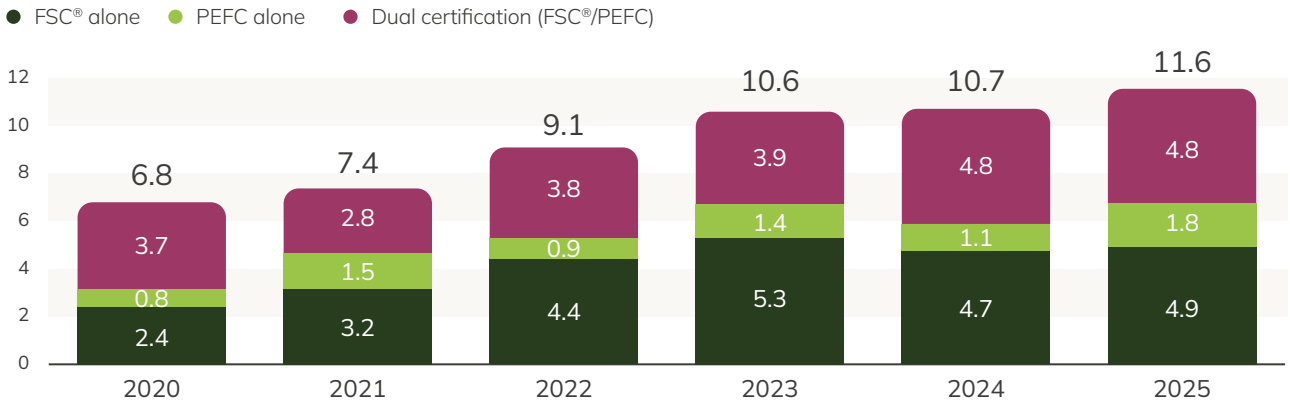
These standards cover all stages of the production chain, from planning and planting up through harvest, control of wood origins, environmental conservation, community relations, and worker health and safety.

In Brazil, the most commonly used systems remain FSC® and PEFC, and dual certification is common.

After continuous growth between 2020 and 2023, stability in 2024 and new expansion in 2025, total certified area (considering tree plantations as well as conservation areas and related areas) expanded from 6.8 million to 11.6 million hectares, an expansion of approximately 70% (Figure 47). In 2025 alone a significant increase in certified area was seen, with the incorporation of roughly 1 million more hectares compared to 2024. This growth was mainly due to FSC® certification, where the area certified by this seal expanded from 2.4 million to 4.9 million hectares; important growth was also seen in PEFC certified area, which grew from 0.8 million to 1.8 million hectares, with greater growth in relative terms.

Figure 47

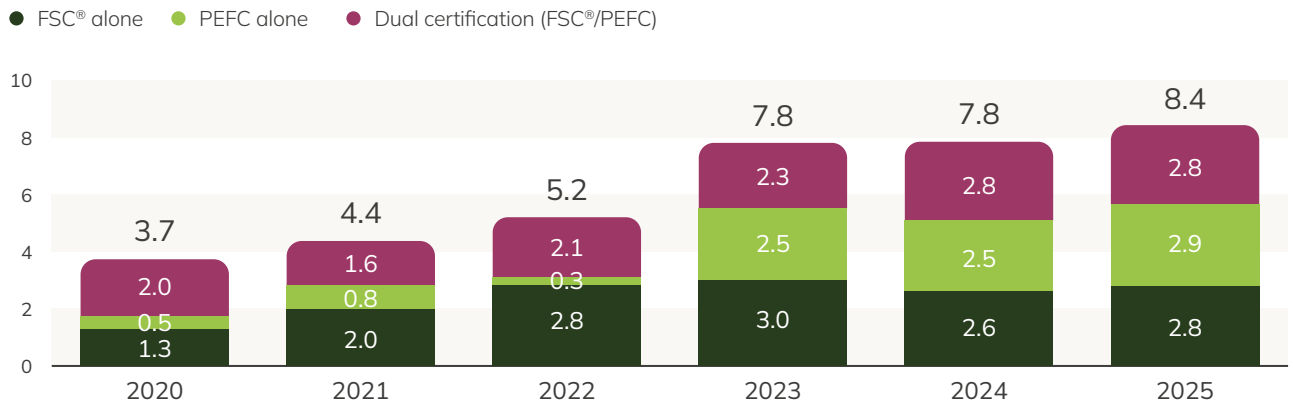
Total estimated certified area in the sector, by certification system [million hectares]



Source: FSC® (2025), PEFC (2025) and Ibá survey (2025) | Developed by: ESG Tech

Figure 48

Estimated certified area in the sector, by certification system [million hectares]



Source: FSC® (2025), PEFC (2025) and Ibá survey (2025) | Developed by: ESG Tech

66%

of the area managed by the sector is certified

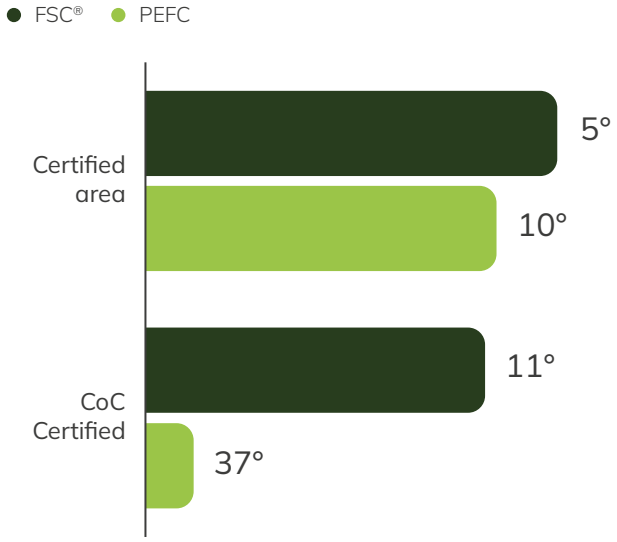
Considering only certified areas, the total reached 8.4 million hectares, which represents growth of 126% compared to 2020 (Figure 48). Areas with PEFC certification totaled 2.9 million hectares in 2025, the highest level recorded for this system in the country, consolidating its recent expansion. The area with dual certification (FSC®/PEFC) remained stable while areas with FSC® certification resumed growth to reach 2.8 million hectares, indicating better balance as well as the complementary nature of the two systems.

Along with forest certification, expansion in the group of norms adopted by the companies was also seen, most notably in ISO 9001 (quality management), ISO 14001 (environmental management) and ISO 45001/OHSAS 18001 (occupational health and safety).

Internationally, Brazil remains among the leading global players, in 5th place for FSC® certified area and 10th place for PEFC certified area. The country also remained in the top 11 for FSC® Chain of Custody (CoC) certification and 37th place for PEFC, reinforcing the strength of the traceability mechanisms and transparency throughout the production chain (Figure 49).

Figure 49

Brazil's position in the global ranking of FSC® and PEFC certification



Source: IBGE (2025), IBGE (2025) | Developed by: ESG Tech

Territory development and community relations

The tree plantation sector works from a vision of territorial development constructed through dialog, partnerships, active listening and ongoing relations with various groups.

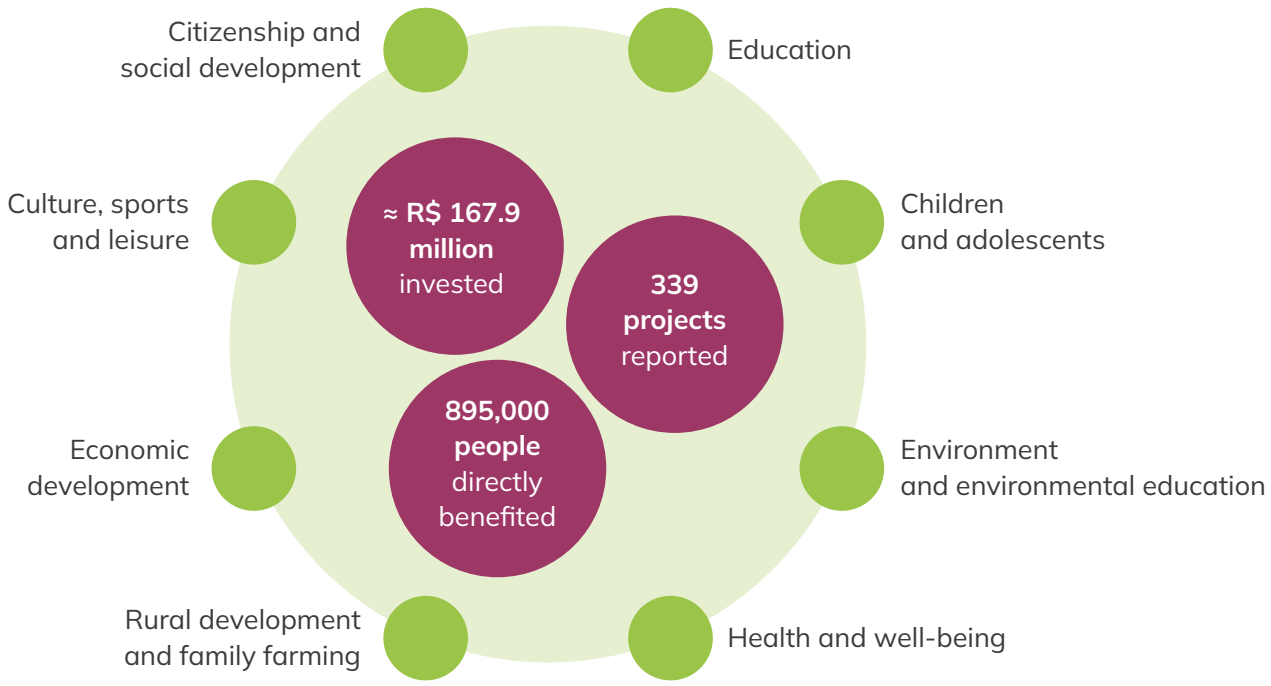
In 2025, all the companies that responded reported having formal mechanisms for engagement in their territories, including channels for reporting complaints.

The presence of a production chain that is intensive in capital, technology, formal job posts, industrial operations, logistics, energy, services and local suppliers helps to catalyze the economy, expand municipal tax generation and strengthen local production chains.

In 2025, approximately R$ 168 million was invested in social and environmental initiatives, with the implementation of over 300 projects that directly benefited roughly 895,000 people. These projects involve areas such as income generation, education, professional training, productive inclusion and environmental protection (Figure 50), with 88% of the companies carrying out specific projects with indigenous peoples and traditional communities, mostly centered around social and economic development and managing potential effects from corporate operations in these territories.

Figure 50

Investment in socioenvironmental projects In 2025



Source: Ibá (2025) | Developed by: ESG Tech



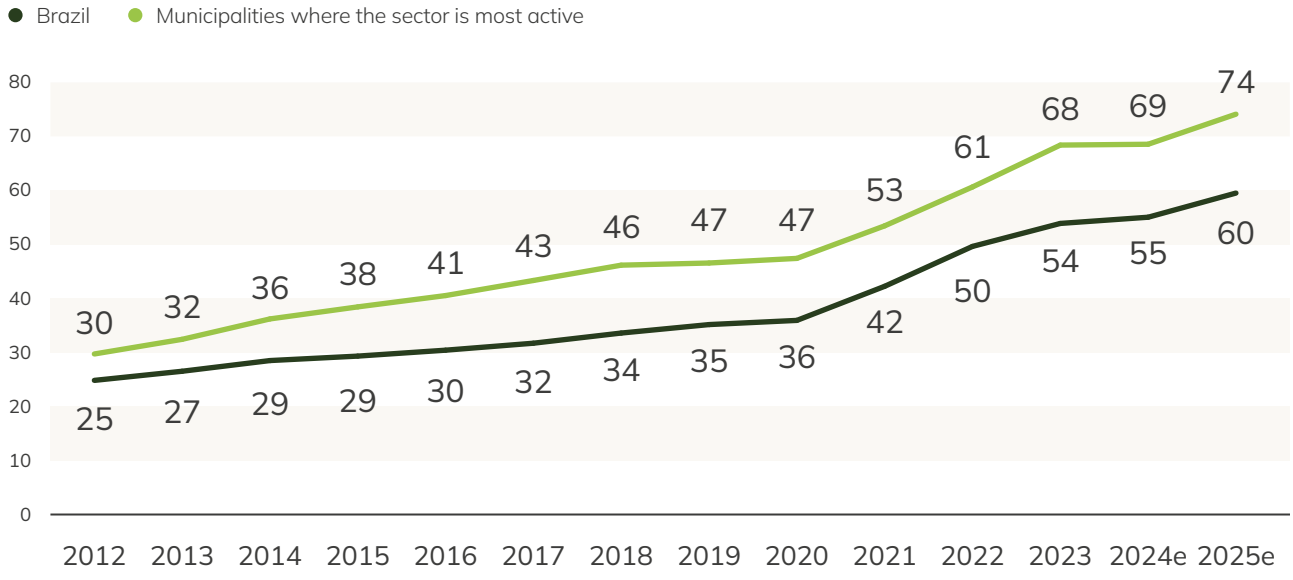
TTG Brasil

Municipal indicators help to reveal the results of this presence across territories. In recent years, the towns located in the tree plantation production chain have demonstrated per capita GDP rates that exceed the national average. Over the past decade, this indicator remained an average of 29% higher than the national rate. In 2025, while national per capita GDP reached roughly R$ 60,000, the level in the analyzed municipalities reached approximately R$ 74,000 per resident (Figure 51).

This difference can also be seen in the indicators of development. In 2025, towns in the tree plantation production chain recorded an average score of 52 points on the Sustainable Development Index for Brazilian Cities (IDSC), higher than the national average (Figure 52). This index evaluates municipal performance based on the 17 Sustainable Development Goals, making it possible to observe positive impacts in dimensions that extend beyond the economy.

Figure 51

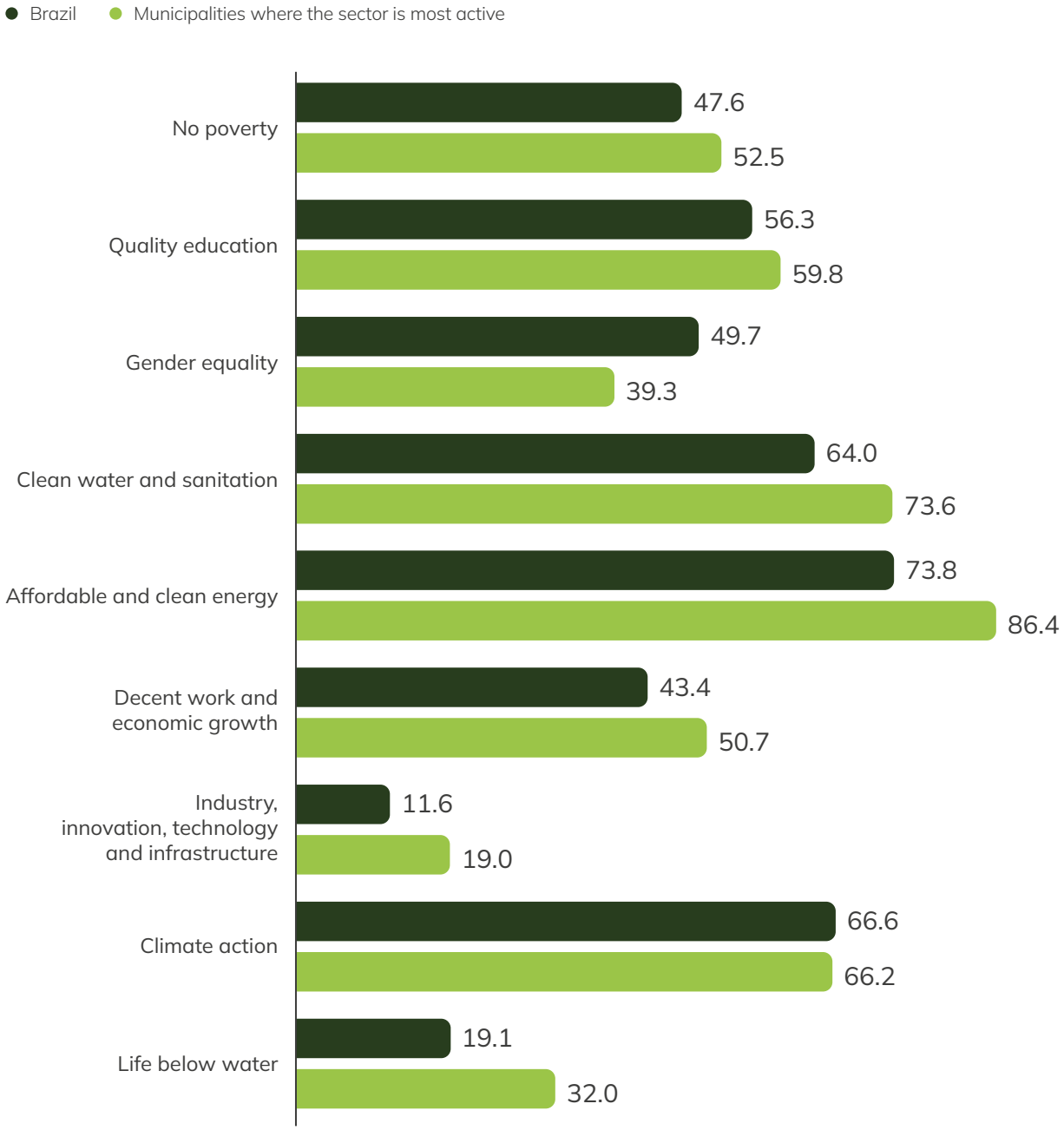
Change in per capita GDP [1,000 R$]



Source: IBGE (2023 and 2025) | Developed by: ESG Tech | *e: Values estimated for Ibá municipalities (see methodological notes).

Figure 52

Comparison of some IDSC goals [points]



Source: ICS & SDSN (2025) | Developed by: ESG Tech

Diversity and inclusion

The sector continues in its quest to construct spaces that are more equitable and representative. The *Panorama de Gênero do Setor Florestal* (Gender Overview of the Forest Sector) report produced by Rede Mulher Florestal (the Women's Forest Network) found that women account for 23% of the workforce in this sector, a significant advance compared to the 13% found when the first edition of the report was written. This scenario is accompanied by the strengthening of policies and initiatives related to diversity, equity and inclusion (DEI) within companies in the sector, which have expanded their activities to promote more inclusive workplaces and opportunities for development for various types of professionals.

The share of women in the workforce grew

13%

In 2025, 88% of the companies had internal initiatives for diversity and inclusion, with different levels of the hierarchy involved, most notably at the operational level, which was present in 100% of these initiatives.

This commitment is also reflected in the makeup of leadership roles. In 2025, 97% of the companies reported having people from diverse backgrounds in leadership roles. Of these companies, 82% stated that these groups accounted for up to 30% of leadership positions, showing advancement in the promotion of diversity in management roles and at the same time, opportunities to boost representativeness.

Still, the sector understands that there is still room for improvement, which is reflected in the significant progress in adoption of diversity and inclusion policies, for example. Also according to the report by Rede Mulher Florestal, 90% of companies reported having policies to combat gender discrimination, significant growth compared to the 45% recorded in 2019. The report also highlights the adoption of initiatives in line with ESG strategies and the Sustainable Development Goals, including corporate diversity goals, career development programs for women, and strategic roadmaps related to promoting gender equity.

Among Ibá member companies, 60% reported participating in external initiatives related to diversity and inclusion, and over half participate in collective initiatives and multi-sector forums such as Movimento Mulher 360 (Women 360 Movement), Rede Mulher Florestal, and Coalizão Empresarial para Equidade (Entrepreneurial Coalition for Equity).



Sylvamo

Corporate governance

Corporate governance is a structuring element for business sustainability and continuity, guiding decision making for companies and strengthening their ability to deal with an environment that is increasingly demanding in terms of integrity and generating long-term value.

This commitment is clearly reflected in the adoption of policies and corporate codes by all the responding companies, for example. The most common themes in these instruments are transparency, ethics and integrity; compliance anti-corruption; health and safety; environment and managing impacts; diversity and inclusion; human rights; and climate change.

In 2025, 79% of the companies reported having a sustainability strategy approved by upper leadership and monitored using performance metrics. The main areas with targets include management of water, health and safety, diversity and inclusion, energy, waste and biodiversity (Table 2).

Table 2

Companies with targets linked to ESG issues, by category [%]

ESG AREA	% OF COMPANIES
Water management	85
Health and safety	71
Diversity and inclusion	65
Energy management	62
Waste management	62
Biodiversity	50
Human capital (hiring and retaining talent, turnover management)	50
Territorial and socio-economic development	41
Ethics, integrity and transparency	38
Value chain management (customers and/or suppliers)	35
Technology and innovation	32
Engagement with stakeholders	32
Human rights	24
Access to sustainable financing	6

Source: Ibá (2025) | Developed by: ESG Tech

Incorporating sustainability into corporate strategy also is reflected in leadership engagement. In 2025, 44% of the participating companies reported linking their socio-environmental targets to variable compensation for upper leadership, a mechanism that brings corporate performance closer to social and environmental responsibilities.



44%

link social and environmental targets to variable compensation for upper leadership

Transparency is another part of this agenda. During the same year, 82% of companies reported having some type of public reporting about their ESG performance. Furthermore, 76% stated they use recognized frameworks to structure their reports and guide their strategies, such as the GHG Protocol or the GRI or SASB standards. These instruments strengthen governance in the sector by connecting targets, management, transparency and accountability, in line with demands from investors, partners, the market and society.

ESG in the supply chain

Globally, there is a movement to strengthen scrutiny and demand accountability for social and environmental performance in supply chains. In 2025, 75% of the participating companies stated that they require more robust ESG criteria from their suppliers that go beyond just legal compliance.



75%

look at ESG criteria in suppliers

Among the companies that demand these criteria, all verify supplier compliance via documentary analysis, and nearly half conduct this monitoring in a wide-ranging manner that covers their entire supply base. We can also see the strengthening of complementary approaches like onsite inspections and risk-based monitoring, which permit more directed and efficient management, especially for those suppliers considered critical. Beyond accountability, the sector has been expanding initiatives related to supplier engagement and development. These include training and qualification programs to comply with ESG criteria, defining targets and action plans to address deviations, and formulation of working groups for exchanging experience and continuous improvement. These activities help to strengthen the entire chain, promoting aligned practices and joint progress.

Sustainable financing

Sustainable financing is a central pillar on the road to a low-carbon economy and to promote a development model that respects the social and environmental limits of the planet. Here in Brazil, the pulp and paper industry has been playing a leading role. According to FEBRABAN (2023), between 2015 and 2022 the sector led in financial volume of labeled transactions in the country, accounting for 24% of the total.

And in line with this performance, in 2025 21% of the member companies that took part in the survey reported issuing bonds or debentures or securing sustainable financing. The captured resources were mostly directed toward environmental initiatives, highlighting the integration between financial strategy and sustainability.

This trend was also observed in the market. According to data from the ERM NINT consulting firm, between 2016 and 2025 the Brazilian forest sector accumulated over US$ 12 billion in sustainable borrowing transactions, with approximately US$ 2.36 billion of this total captured in just the past three years. Most were structured in the use of proceeds modality, in which the resources are directed towards specific uses such as tree plantations, sustainable forest management, ecological efficiency and activities in the pulp and cellulose chain.

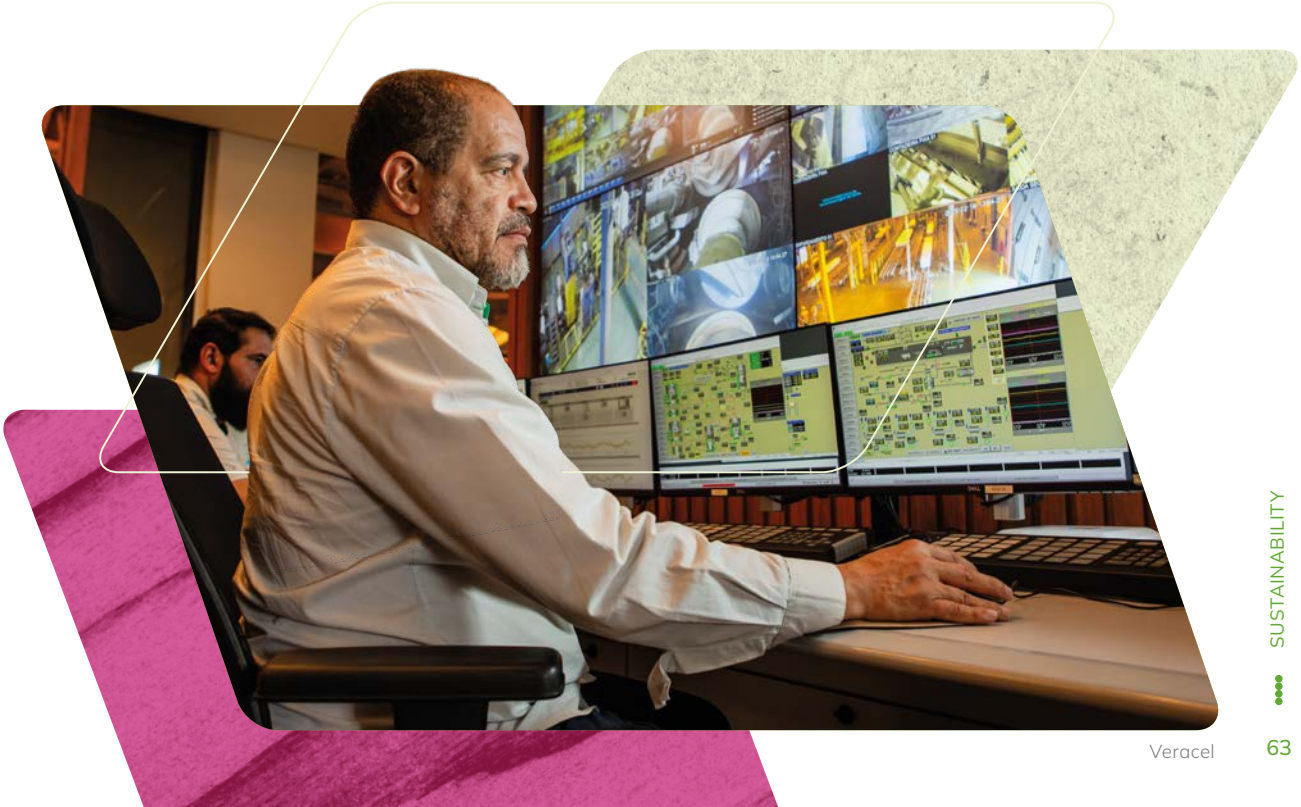
Along with the capital market, the companies accessed resources via public and private banks, investment funds, development credit lines, debentures, agribusiness receivables certificates (CRAs) and rural product bonds (CPRs).

BNDES plays a strategic role in this scenario by supporting investments in tree plantations, restoration, innovation and the bioeconomy, supplementing a financial ecosystem which is increasingly diversified and in line with the sector's long-term investment needs.

The sector's sustainable borrowing transactions generally involve longer financing time frames, often between five and ten years in the domestic market and potentially even longer in international offerings.

Meanwhile, the analysis also indicates a significant concentration of operations in larger-scale companies that have greater capacity to structure complex transactions and access capital markets (both domestic and abroad). This scenario suggests the existence of barriers to participation by smaller companies, particularly related to structuring costs, regulatory requirements and the need for ESG certifications, which indicates an important space for developing mechanisms to expand sustainable financial inclusion in the sector.

The combination between strong environmental activity, diversified instruments, access to international capital, growing use of performance-related structures and a high level of credibility assured by independent auditors reinforces the strategic role of the sector in solidifying the market for sustainable financing in Brazil, and its contribution to the global sustainability agenda.



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6 Historical series



Table 3

Area of tree plantations by state (total), 2016–2025 [hectares]

STATE	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
RO			26,318	27,319	8,822	8,822	12,153	12,405	12,666	12,762
AC					967	967	23	164	473	771
AM					382	382	362	390	390	417
RR			21,557	30,000	23,079	23,079	23,003	22,522	23,215	21,078
PA	208,129	211,008	212,957	212,436	193,602	193,602	197,717	208,132	203,618	204,614
AP	66,962	67,826	67,826	67,826	92,217	92,217	86,539	85,668	87,348	87,348
TO	163,106	164,751	156,461	156,432	103,766	106,923	106,545	109,186	109,340	104,505
NORTH	438,197	443,585	485,119	494,013	422,835	425,992	426,342	438,467	437,050	431,494
MA	221,859	228,801	225,052	237,859	279,238	297,213	301,181	302,376	308,809	308,254
PI	26,068	25,675	25,675	25,281	34,098	32,159	32,587	32,321	34,286	35,065
CE			650	867	342	342	21	656	876	859
RN					44	44	44	44	44	44
PB			5,614	6,109	82	82	144	143	143	177
PE			4,060	4,873	961	961	1,337	1,421	1,343	1,270
AL			21,000	21,512	13,863	13,863	16,997	16,970	17,535	18,613
SE			6,179	6,024	3,381	3,381	3,601	3,904	4,595	4,589
BA	649,570	646,152	593,404	599,562	639,707	661,608	664,415	656,809	659,321	664,483
NORTHEAST	897,497	900,628	881,634	902,087	971,716	1,009,653	1,020,327	1,014,644	1,026,953	1,033,353
MG	1,430,125	1,421,702	2,020,786	2,306,205	2,305,918	2,305,582	2,265,929	2,262,331	2,283,284	2,274,345
ES	251,278	251,600	231,073	231,421	270,631	279,821	274,535	280,604	280,169	276,265
RJ			30,574	29,764	29,903	30,325	29,632	28,873	28,202	28,340
SP	1,158,859	1,149,884	1,148,089	1,629,768	1,221,441	1,263,620	1,283,267	1,280,853	1,289,807	1,287,921
SOUTHEAST	2,840,262	2,823,186	3,430,522	4,197,158	3,827,893	3,879,348	3,853,363	3,852,661	3,881,463	3,866,871
PR	972,173	976,064	1,066,479	1,008,990	1,165,490	1,177,596	1,164,920	1,159,951	1,168,015	1,161,150
SC	668,218	666,555	664,238	642,310	1,004,844	1,031,694	1,025,014	1,050,326	1,044,172	1,039,357
RS	593,244	589,449	780,900	828,457	915,552	934,608	931,479	974,006	990,470	980,881
SOUTH	2,233,635	2,232,068	2,511,617	2,479,757	3,085,886	3,143,898	3,121,413	3,184,283	3,202,658	3,181,387
MS	906,077	930,016	1,104,717	1,125,435	1,052,720	1,073,523	1,134,478	1,355,445	1,569,931	1,796,141
MT	297,668	294,098	258,805	260,032	199,235	207,832	207,745	210,971	231,274	253,271
GO	141,606	141,606	8,425	169,094	189,179	191,528	181,962	172,361	170,993	167,327
DF			4,143	3,685	2,085	2,085				
MIDWEST	1,345,351	1,365,720	1,376,090	1,558,246	1,443,219	1,474,968	1,524,185	1,738,777	1,972,199	2,216,739
Other	75,379	75,023								
TOTAL	7,830,321	7,840,210	8,684,982	9,631,261	9,751,549	9,933,859	9,945,630	10,228,832	10,520,322	10,729,845

Source Poyry & Ibá up to 2017 | FGV IBRE, Ibá, & Canopy 2018–2021 | Canopy 2022–2025

Table 4

Area of tree plantations: eucalyptus, 2016–2025 [hectares]

STATE	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
MG	1,390,032	1,381,652	1,970,063	2,231,754	2,233,762	2,236,660	2,201,801	2,200,351	2,210,212	2,202,366
SP	946,124	937,138	1,035,874	1,417,708	945,114	981,315	999,987	997,543	1,002,923	1,001,114
MS	877,795	901,734	1,093,805	1,111,737	1,022,521	1,042,112	1,110,484	1,329,132	1,515,250	1,737,287
BA	612,199	608,781	585,258	589,336	637,765	648,143	650,332	643,094	639,480	642,171
RS	308,178	309,602	426,371	456,001	581,338	592,365	589,674	616,976	631,805	624,296
ES	233,760	234,082	225,520	225,311	260,170	264,094	258,533	263,946	262,549	259,546
PR	294,050	295,520	255,955	271,042	448,818	449,722	442,222	438,721	459,590	458,353
MA	221,859	228,801	200,612	199,911	268,912	286,931	290,846	290,076	301,717	301,511
MT	185,219	181,515	187,947	188,838	120,489	127,319	130,003	128,057	145,087	168,844
PA	133,996	135,843	151,888	154,402	167,354	167,354	166,215	175,125	171,481	171,994
GO	127,201	127,201	127,201	159,943	161,940	163,129	154,380	143,180	139,090	134,938
TO	116,798	118,443	149,886	149,291	98,988	101,669	100,477	101,625	101,152	96,419
SC	116,240	114,513	219,199	255,682	307,229	316,137	317,724	326,134	325,423	322,936
AP	65,026	67,826	67,826	67,826	68,462	68,462	86,256	85,386	87,065	87,065
Other	45,307	44,558	87,983	89,291	84,395	82,736	86,166	85,934	88,861	91,334
TOTAL	5,673,784	5,687,209	6,785,388	7,568,073	7,407,257	7,528,148	7,585,100	7,825,280	8,081,687	8,300,174

Fonte: Poyry & Ibá up to 2017 | FGV IBRE, Ibá, & Canopy 2018–2021 | Canopy 2022–2025

Table 5

Area of tree plantations by state: pine, 2016–2025 [hectares]

STATE	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
PR	661,684	661,684	789,194	733,200	704,177	713,769	713,524	710,837	689,715	684,420
SC	545,453	545,453	445,009	386,628	696,130	713,134	702,816	719,199	713,583	711,389
RS	182,508	182,508	264,725	281,548	291,589	289,354	282,842	286,922	283,982	282,391
SP	122,667	122,667	79,041	184,135	148,609	151,414	151,699	153,051	154,224	155,103
MG	34,764	34,764	50,295	74,451	40,311	38,445	36,778	34,211	33,752	32,779
GO	8,500	8,500	8,500	6,771	6,547	6,661	6,522	6,238	6,233	5,705
MS	5,282	5,282	2,574	4,652	8,194	6,637	4,179	3,733	3,377	7,928
Other	6,319	6,319	3,024	2,585	10,523	10,641	10,749	10,705	10,149	10,086
TOTAL	1,567,177	1,567,177	1,642,362	1,673,970	1,906,080	1,930,055	1,909,109	1,924,896	1,895,015	1,889,801

Source: Poyry & Ibá up to 2017 | FGV IBRE, Ibá, & Canopy 2018–2021 | Canopy 2022–2025

Table 6

Area of tree plantations by state: other species, 2016–2025 [hectares]

STATE	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
RS	102,558	97,339	89,804	90,907	42,625	52,889	58,963	70,108	74,208	73,719
PR	16,439	18,860	21,330	4,749	12,494	14,105	8,703	10,393	11,053	10,453
MT	112,449	112,583	70,858	71,194	77,964	79,733	60,304	82,193	79,262	76,138
GO	5,905	5,905	42,724	2,380	20,693	21,738	1,273	22,943	23,726	24,504
MS	23,000	23,000	8,339	9,045	22,005	24,774	541	22,580	23,441	23,484
PA	74,133	75,165	61,069	58,034	26,220	26,220	30,415	32,972	31,730	31,215
TO	45,878	45,878	6,574	7,141	4,777	5,254	2,259	7,561	8,019	7,743
SP	90,068	90,079	33,174	27,926	127,718	130,891	8,468	130,259	130,960	129,969
ES	15,000	15,000	5,553	6,110	8,758	13,904	1,035	14,675	15,215	14,262
MG	5,329	5,286	429	o	31,844	30,478	8,596	27,769	29,439	28,984
BA	34,000	34,000	8,146	10,226	1,907	13,431	1,660	13,673	13,587	13,237
Other	64,602	62,730	79,233	101,507	61,205	62,241	38,788	43,528	37,316	34,940
TOTAL	589,361	585,825	427,233	389,219	438,210	475,658	221,005	478,654	477,956	468,647

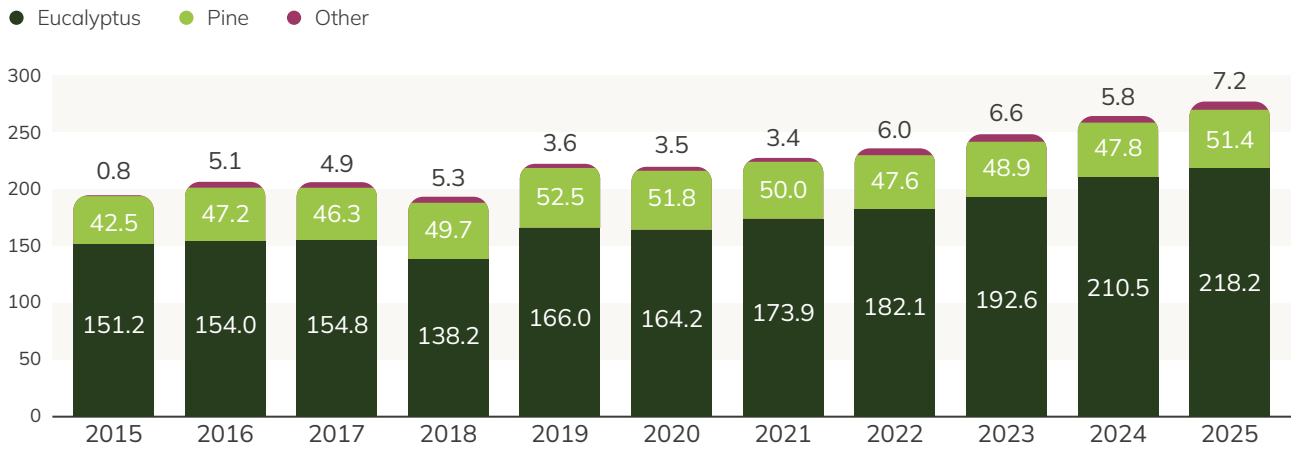
Source: Poyry & Ibá up to 2017 | FGV IBRE, Ibá, & Canopy 2018–2021 | Canopy 2022–2025



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Figure 53

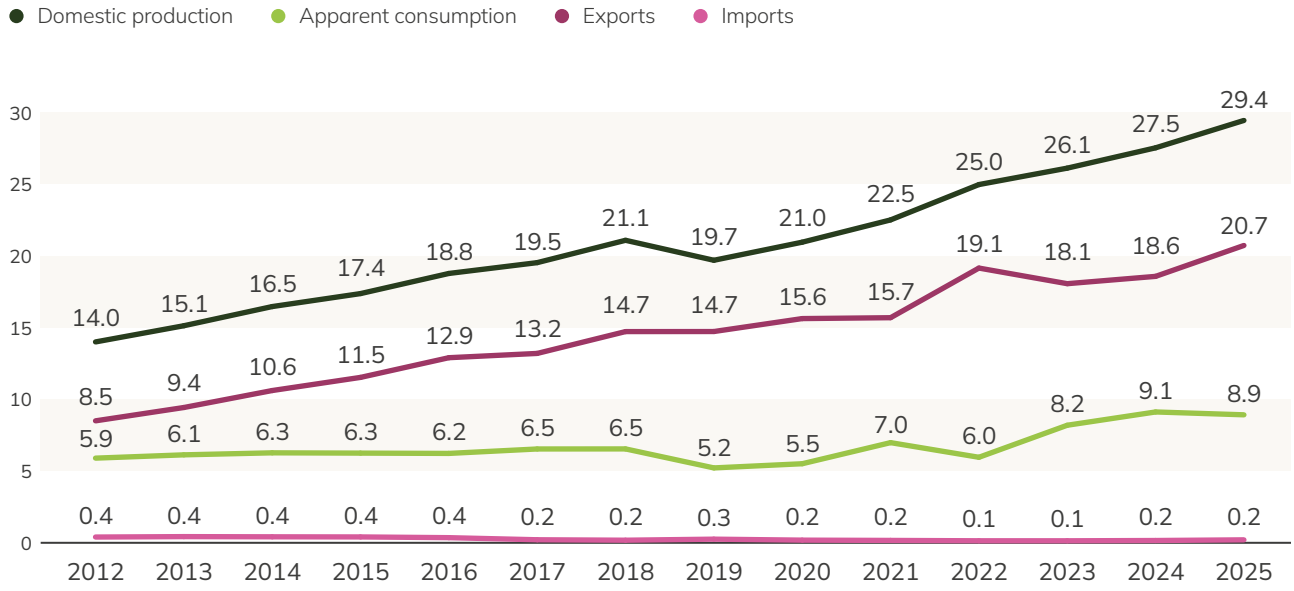
Wood consumption for industrial use, 2015-2025 [million m³]



Source: Poyry & Ibá up to 2018| FGV, IBRE, & Ibá 2019–2021| IBGE 2022– 2025 | Developed by: ESG Tech

Figure 54

Pulp production and consumption in Brazil, 2012–2025 [million tons]



Source: Poyry & Ibá up to 2018 | FGV, IBRE, & Ibá 2019–2021| Ibá 2022– 2025 | Developed by: ESG Tech
Note: Apparent consumption = production + imports - exports

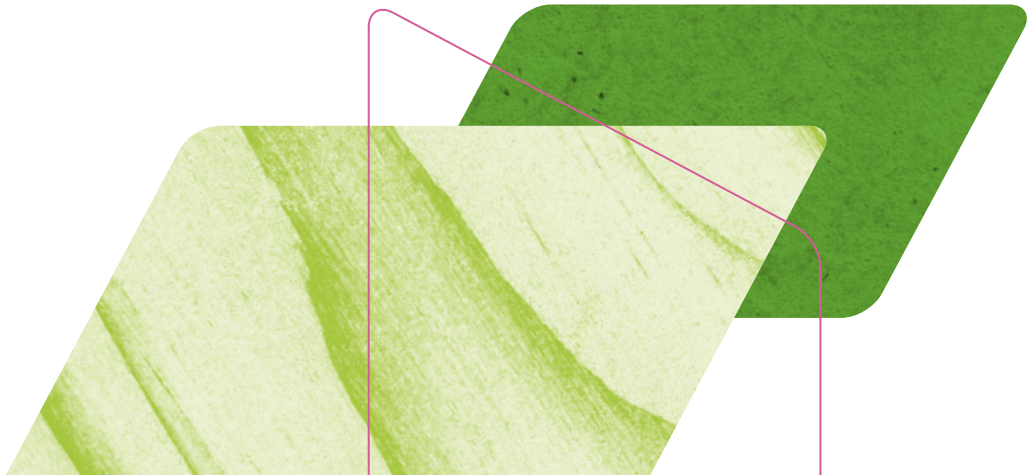
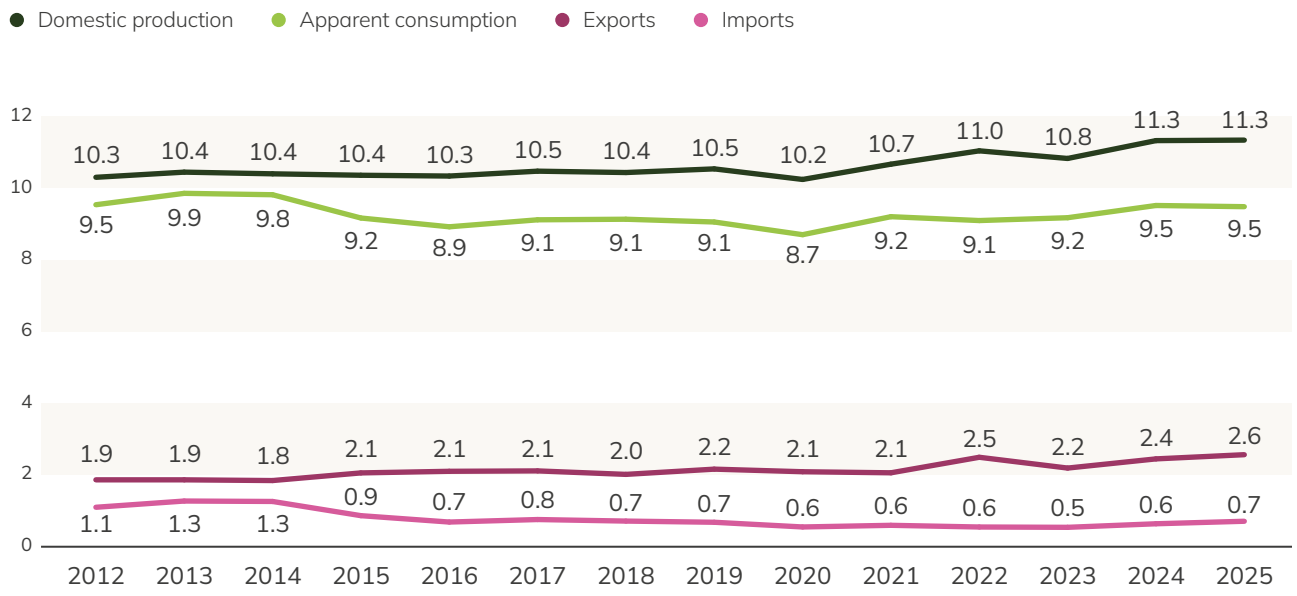


Figure 55

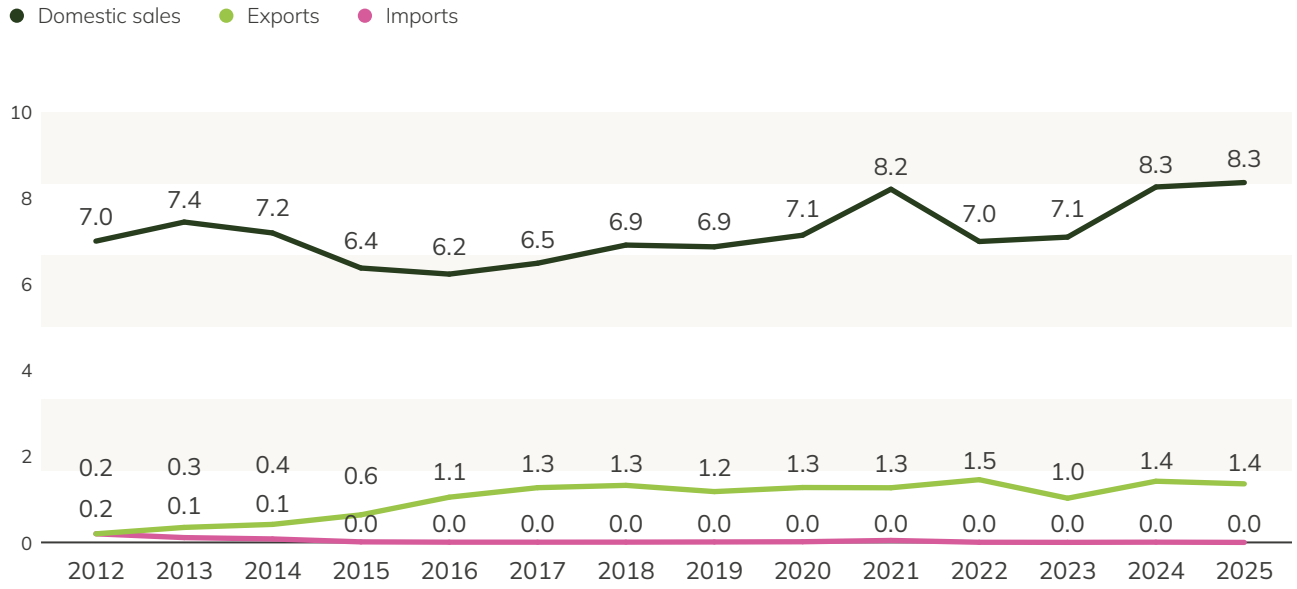
Paper production and consumption in Brazil, 2012–2025 [million tons]



Source: Poyry & Ibá up to 2018 | FGV, IBRE, & Ibá 2019–2021| Ibá 2022– 2025 | Developed by: ESG Tech
Note: Apparent consumption = production + imports - exports

Figure 56

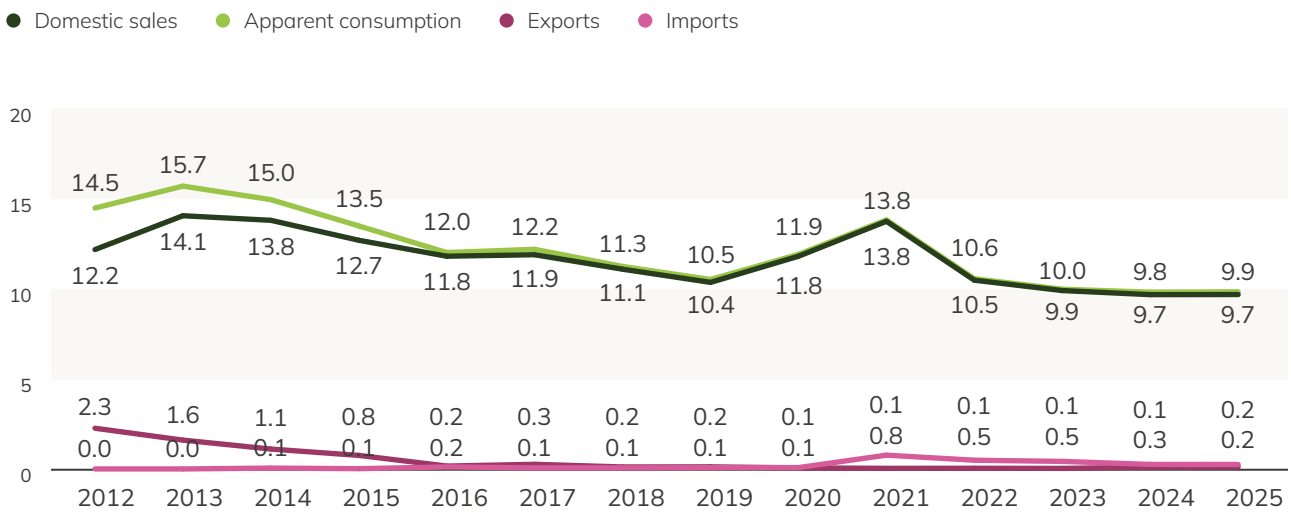
Domestic sales and foreign consumption of reconstituted wood panels in Brazil, 2012–2025 [million tons]



Source: Poyry & Ibá up to 2018 | FGV, IBRE, & Ibá 2019–2021| Ibá 2022– 2025 | Developed by: ESG Tech

Figure 57

Domestic sales, apparent consumption and foreign trade of laminate flooring panels in Brazil, 2012–2025 [million tons]



Source: Poyry & Ibá up to 2018 | FGV, IBRE, & Ibá 2019–2021| Ibá 2022– 2025 | Developed by: ESG Tech
Note: Apparent consumption = production + imports - exports

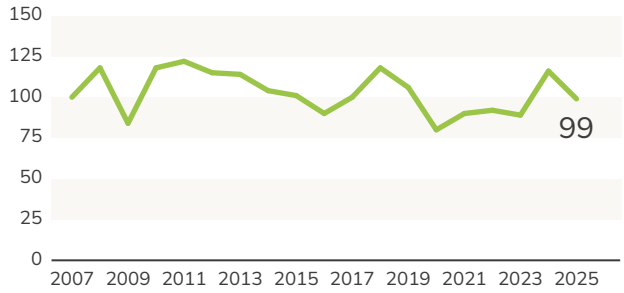


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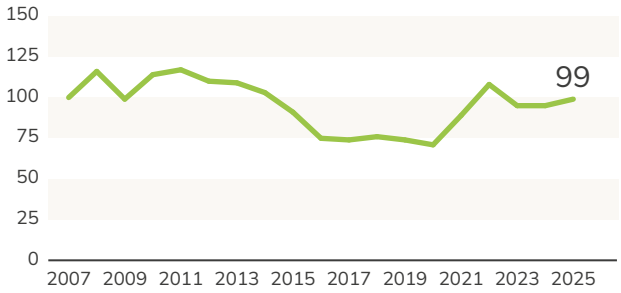
Figure 58

Nominal price indexes for industrial products, 2007–2025 [2007=100]

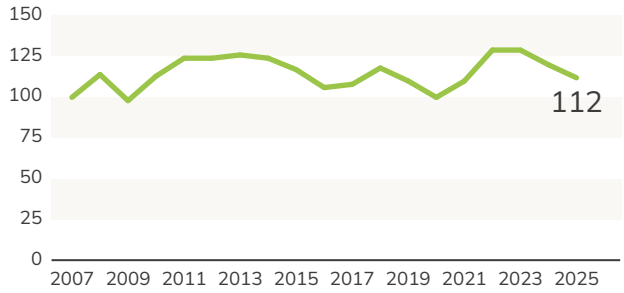
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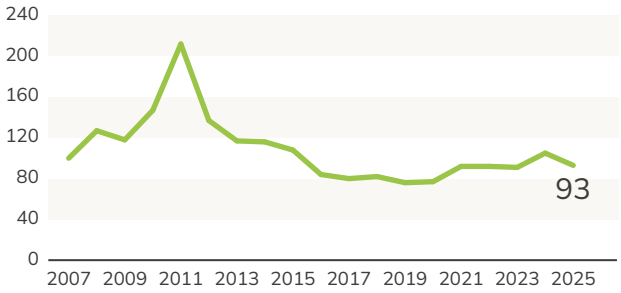
PANELS



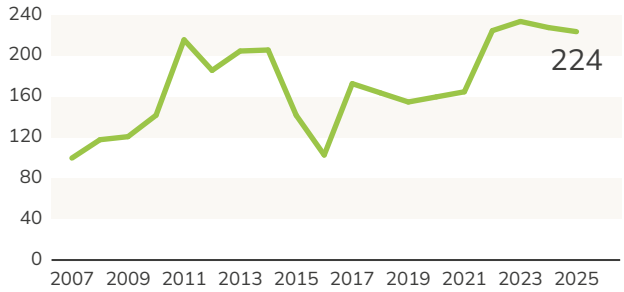
PAPER



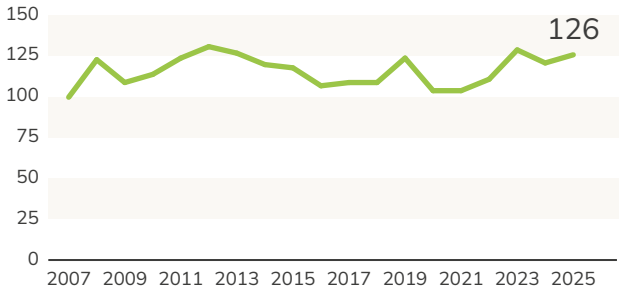
LAMINATES



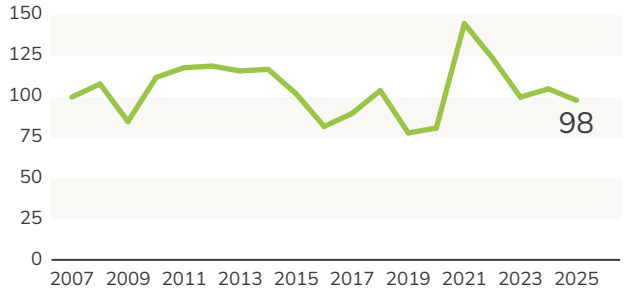
CHARCOAL



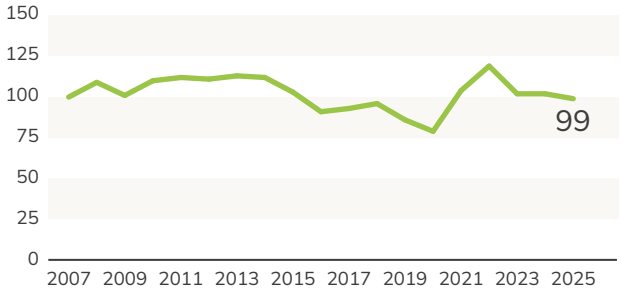
WOODCHIPS



PLYWOOD



LUMBER



7 Methodological notes



Sylvamo

Cost indicator

To develop a cost indicator for the forest-based sector, a structured methodological approach was adopted to capture the complex nature of operational costs in the sector. These costs were categorized into four key areas: silviculture, harvesting, transport and manufacturing costs, in which all the costs were analyzed in terms of the quantity needed to produce 1 m³ of product. Within each activity the following costs were considered, considering the relative impact of each component on total production costs, based on the proportional contributions of each variable:



SILVICULTURE

- labor
- fertilizing
- seedlings
- herbicides and defensives
- leasing
- administrative costs
- machine hours

HARVESTING

- machinery
- fuel
- maintenance
- labor

TRANSPORT

- machinery
- fuel
- maintenance
- labor

MANUFACTURING COSTS

- inputs/materials
- labor
- fuel

Fotos: Irani Papel e Embalage e Veracel

Energy

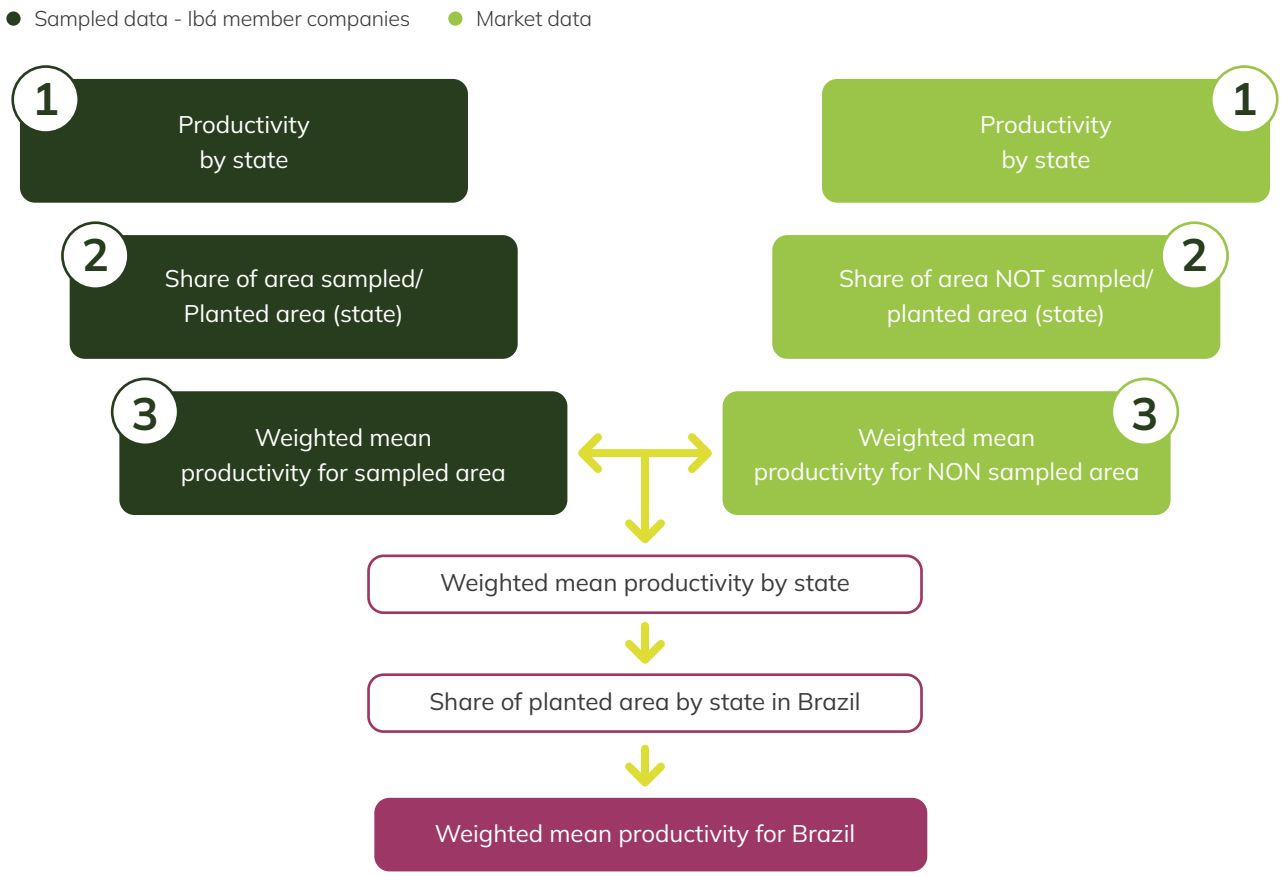
The energy balance depicted in this report was developed based on data provided by the companies that participated in the survey. In the pulp and paper companies that operate cogeneration units, the data refer to the energy balance for the industrial unit, considering the energy produced and consumed during the production process (thermal and electrical energy, expressed as GJ). For the other segments, the data predominantly refer to electricity generation and consumption. As a result, the aggregated results are strongly influenced by the operational profiles of pulp and paper companies, which concentrate the greatest capacity for cogeneration in this sector.

Productivity indicator

This indicator was calculated according to the contribution of the planted area in each state. Weighting was used within each state for sampled data obtained from member companies, and market data for non-sampled planted area. Including all states with planted areas in estimating productivity made this average national indicator more representative (Figure 59).

Figure 59

Methodology for calculating forest productivity in Brazil by species.



Developed by: ESG Tech

Municipalities selected for sector performance analysis

The municipalities where Ibá member companies work were classified by relevance of planted area and production units. Municipalities where the forest sector is present but which are strongly influenced by the sectors were not considered.

The selected municipalities were:

- Mucuri (BA),
- Eunápolis (BA),
- Aracruz (ES),
- Imperatriz (MA),
- Belo Oriente (MG),
- Três Lagoas (MS),
- Ribas do Rio Pardo (MS),
- Água Clara (MS),
- Telêmaco Borba (PR),
- Ortigueira (PR),
- Rio Negro (PR),
- Jaguariaíva (PR),
- Arapoti (PR),
- Guaíba (RS),
- Otacílio Costa (SC),
- Correia Pinto (SC),
- Três Barras (SC),
- Cáceres (MT),
- João Pinheiro (MG),
- Caieiras (SP),
- Turvo (PR),
- Coronel Vivida (PR),
- Agudos (SP),
- Salto (SP),
- Botucatu (SP),
- Angatuba (SP),
- Luís Antônio (SP).

For a list of the CNAE codes and Mercosul Common Nomenclature (NCMs), please visit iba.org/publicacoes/relatorios.



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8 About Ibá





Mission

Ibá strives to make the sector more competitive, bringing member companies into line with the highest standards of science, technology and social and environmental responsibility throughout the entire tree production chain, in the search for innovative solutions for the Brazilian and global markets.



Vision

Tree plantations are the future of renewable and recyclable raw materials that are friendly to the environment, biodiversity, and human life. The tree plantation industry is the industry of the future.



Values

COMPETITIVENESS
SUSTAINABILITY
INNOVATION
RESPONSIBILITY

About Ibá

The Brazilian Tree Industry (Ibá) is the association responsible for institutionally representing the tree plantation production chain, from the fields to the factory. In order to promote products derived from eucalyptus, pine, and other species that are directed toward industrial purposes, along with the entire system for restoring and planting native species, Ibá strives to defend the interests of the sector. This work takes place together with government officials and agencies, entities from the tree plantation chain, and significant sectors of the economy, social and environmental organizations, universities, schools, consumers and the press, both domestically and internationally.

Founded in April 2014, Ibá represents roughly 50 companies and nine state forest associations. This sector has taken a leading role in the large-scale bioeconomy, offering solutions for a world that needs to decarbonize, with ecosystem services like carbon removal and by providing renewable raw materials for recyclable and biodegradable products.

With innovation, research and an eye to the future, Brazil's tree plantation sector has positioned the country as a worldwide reference in the production of pulp, paper, laminates and charcoal for the steel industry, as well as a global supplier of food and renewable energy. It is the source of thousands of sustainable bioproducts that include timber items and a range of non-wood products, such as viscose for the textile industry, honey, disinfectants, flavorings, solvents, paints, fabrics, glues, waxes, packaging, diapers and much more. By making the concept of the bioeconomy a reality, this sector demonstrates that tree plantations are one of the friendliest options for the environment, biodiversity and human life.

Fotos: Irani Papel e Embalagem; Veracel; TTG Brasil

Ibá Member Companies

ADAMI S/A
arauco
BERNECK
biomas
BLENDPAPER
BO PAPER
Bracell
Neoenergia
Carbon2Nature
Grupo Iberdrola
CENIBRA
cmpc
DEXCO
Eldorado Brasil
eucatex
FLORA
GERDAU
O futuro se molda
GREEN PLAC
guararapes
ibema
IGUAÇU
celulose, papel s.a.
irani
Klabin
Lacan
Ativos Reais
LD Celulose
MD PAPÉIS
Melhoramentos
MOMBAK
Norflor
OJI PAPÉIS ESPECIAIS
Papirus
somosvita
PENHA
PLACAS DO BRASIL
PLANTAR
re.green
RMS
Resource Management Service, LLC
sama
Santher
Smurfit Westrock
SONOCO
storaenso
suzano
Sylvamo
symbiosis
TRC
Teak Resources Co.
tree+
ttg brasil
UNILIN
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State Associations

Associação Baiana das Empresas de Base Florestal (Bahia Association of Forest-Based Companies, ABAF)

Associação Mineira da Indústria Florestal (Minas Gerais Forest Industry Association, AMIF)

Associação Sul-Mato-Grossense de Produtores e Consumidores de Florestas Plantadas
(Mato Grosso do Sul Planted Forest Producers and Consumers Association, Reflore MS)

Associação Gaúcha de Empresas Florestais (Rio Grande do Sul Forest Companies Association, AGEFLOR)

Associação Paranaense de Empresas de Base Florestal
(Paraná Association of Forest-Based Companies, APRE)

Associação Catarinense de Empresas Florestais
(Santa Catarina Association of Forest Enterprises, ACR)

Associação Paulista de Produtores de Florestas Plantadas
(São Paulo State Forest Plantation Producers Association, Florestar São Paulo)

Associação de Reflorestadores de Mato Grosso
(Mato Grosso Foresters Association, AREFLORESTA)

Espirito Santo Centro de Desenvolvimento do Agronegócio
(Agribusiness Development Center, CEDAGRO)

Partners

Associação Brasileira dos Produtores de Ferroligas de Silício Metálico
(Brazilian Industry Association of Ferroalloys and Silicon Metal, ABRAFE)

Canopy Remote Sensing Solutions

Futuragene

Instituto de Pesquisas e Estudos Florestais
(Institute of Forestry Research and Studies, IPEF)

Sociedade de Investigações Florestais
(Society for Forest Research, SIF)

Sindicato da Indústria do Ferro no Estado de Minas Gerais
(Minas Gerais State Iron Industry Federation, Sindifer)

Collaborators

Albany International

Credits

The 2026 Ibá Annual Report is a publication of Ibá, the Brazilian Tree Industry. Reproduction of this information is permitted as long as the source is cited.

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