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The Tree Plantations Sector AND Brazil's Biodiversity Targets











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Synergies between the Brazilian Tree Plantations Sector and the National Biodiversity Targets

Presentation

This publication, prepared by the Brazilian Tree Industry (Ibá), compiles the contributions of the tree plantations sector to the achievement of the 25 National Biodiversity Targets established by the National Biodiversity Strategy and Action Plan (NBSAP). The document also situates those contributions in the context of Brazil's international commitments under the Kunming-Montreal Global Biodiversity Framework (KMGBF), within the Convention on Biological Diversity (CBD), and their connections with other global agendas, especially climate, ecosystem restoration and sustainable development.

Ibá is the association that represents companies and organizations across the Brazilian tree plantation sector's value chain including pulp and paper, wood panels, wood products, biomass, forest management and ecological restoration initiatives. The association promotes the integration of the sector's production and industrial activities with climate action, biodiversity conservation, ecosystem restoration and territorial development, fostering dialogue and collaboration with governments, academia, civil society organizations and national and international forums.

Since 2016, Ibá has actively participated in the Conferences of the Parties to the Convention on Biological Diversity (COPs) and in their technical meetings, following international negotiations and contributing to connect the global biodiversity agenda to the initiatives of Brazil's tree plantations sector. Its activities aim to strengthen dialogue among the private sector, governments, academia and civil society and to contribute to the implementation of the KMGBF, particularly on issues related to conservation, ecosystem restoration, sustainable management and biodiversity monitoring.

Aimed at dialogue with governments, civil society, multilateral organizations and international forums, the document intends to provide technical input to COP discussions and to contribute to the identification of synergies, partnerships and opportunities for cooperation.

The 20 targets mapped and presented below highlight the various contributions of a sector whose productive activity is intrinsically connected to biodiversity conservation. The contributions presented, however, represent a sectoral cross-section. Companies affiliated with Ibá individually develop a broader and more diverse set of actions, with contributions that relate, to varying degrees, to all 25 National Biodiversity Targets. For this document, representative connections of the sector were prioritized, allowing the consolidation of a common view of its contribution to the implementation of the NBSAP and of its interfaces with other environmental agendas.



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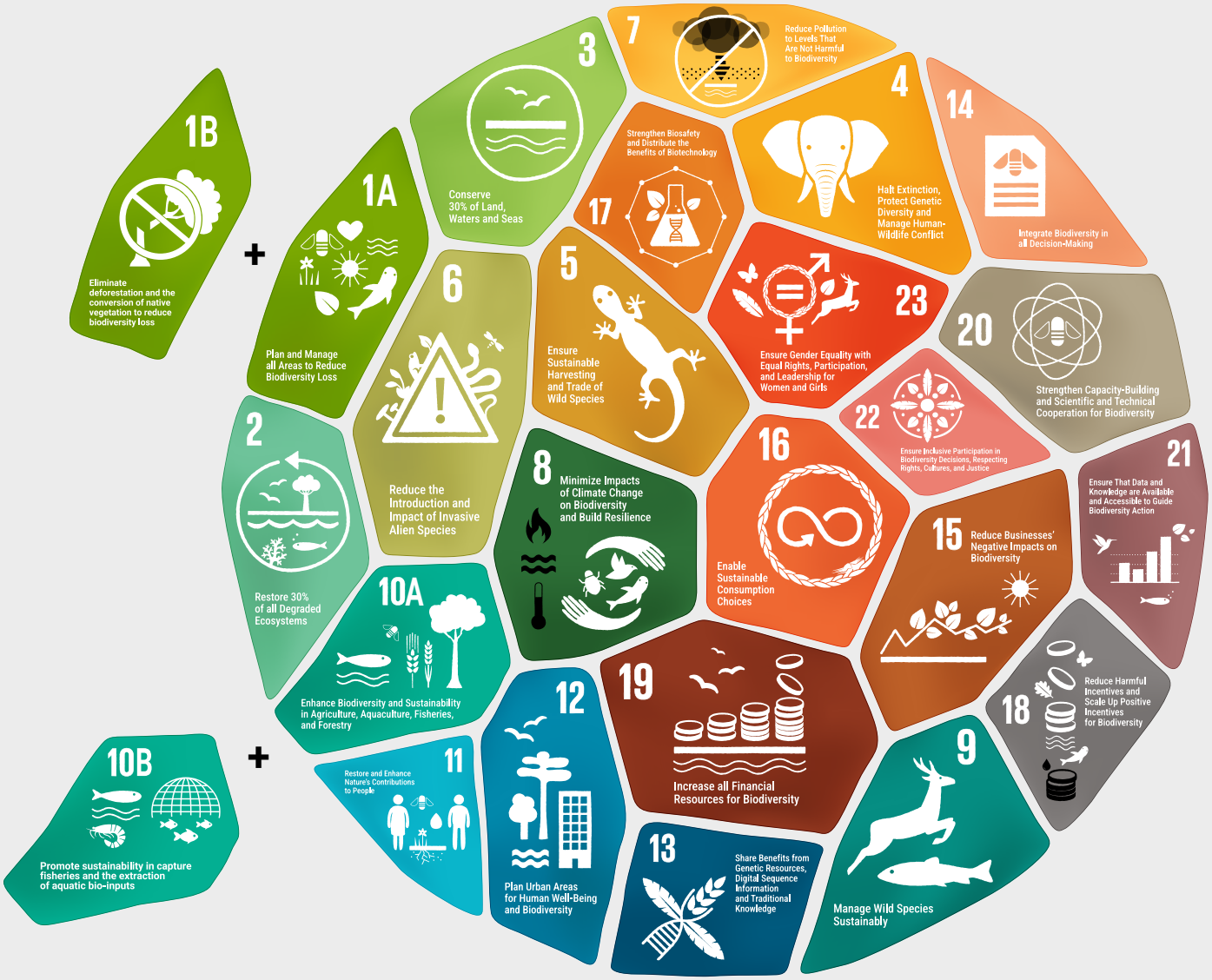
The Kunming-Montreal Global Biodiversity Framework (KMGBF) and the National Biodiversity Strategy and Action Plan (NBSAP) 2025-2030

In December 2022, at the 15th Conference of the Parties to the Convention on Biological Diversity (COP15), the signatory countries adopted the KMGBF, establishing a long-term vision for 2050 unfolded intofour goals and 23 global targets to halt and reverse biodiversity loss by 2030. Ibá was present at the Conference, following the negotiations and taking part in panels, events and dialogue forums on bioeconomy, conservation, restoration and the integration of biodiversity into corporate strategies, contributing to bring the experiences of Brazil's tree plantations sector closer to international biodiversity discussions.

Brazil is a megadiverse country that encompasses six biomes, an extensive and diverse coastal-marine environment, and houses approximately 20% of the species known on the planet. The country occupies a leading position in the implementation of the KMGBF, has participated actively in the work of the CBD since its establishment and has undertaken the commitment to translating the global targets into the national context through planning, implementation and monitoring instruments.

In Brazil, the NBSAP constitutes the principal instrument to guide that implementation of the KMGBF and was defined within the scope of the National Biodiversity Commission (CONABIO). CONABIO Resolution No. 9 of November 28, 2024 recommended the National Biodiversity Targets which, together with the Mission, the Vision and the Strategic Objectives for 2050, came to compose the strategic reference for biodiversity in the country.

To reflect the particularities and priorities of the Brazilian context, global targets 1 and 10 were disaggregated, resulting in a set of 25 National Biodiversity Targets, compared with the 23 global targets established by the Kunming-Montreal Global Biodiversity Framework (KMGBF).



The targets are organized into three categories:

I. Reduce threats to biodiversity;

II. Meet people's needs through sustainable use and benefit-sharing; and

III. Tools and solutions for implementation and integration.

Subsequently, Decree No. 12,485, of 3 June 2025, established the National Biodiversity Strategy and Action Plan (NBSAP), consolidating the national instrument for implementing the commitments assumed by Brazil under the Convention on Biological Diversity (CBD). The Strategy links the National Biodiversity Targets for 2030 to the Strategic Objectives for 2050 and seeks to integrate biodiversity into planning and decision-making processes, guiding actions on conservation, restoration, sustainable use and benefit-sharing.

Thereafter, Ordinance GM/MMA No. 1,519, of 25 November 2025, detailed the NBSAP Action Plan, bringing together more than 230 actions of the Federal Government aimed at achieving the National Targets. Thus, the National Biodiversity Targets and the Action Plan constitute the central axis for the Strategy's implementation, connecting the international commitments assumed by Brazil to national priorities, instruments and actions for biodiversity.

NBSAP, KMGBF AND THE BRAZILIAN TREE PLANTATIONS SECTOR CONTRIBUTION

The implementation of the NBSAP requires contributions of different sectors of society. For the Brazilian tree plantations sector, the National Targets provide a reference framework to identify, organize and communicate the contributions of actions developed in the territories to the national biodiversity objectives. It is from this perspective that this document presents the synergies between the National Targets and the sector's initiatives, evidencing their connections with biodiversity conservation, ecosystem restoration, sustainable management and other related environmental agendas.

These connections are presented below, demonstrating how the sector's initiatives relate to the different National Biodiversity Targets.

02 Restore ecosystems

Ensure, by 2030, that at least 30% (thirty percent) of degraded or altered areas in each biome and of the coastal-marine system, with attention to marine ecosystems, encompassing representativeness of terrestrial, aquatic and coastal and marine ecosystems, are in a process of effective restoration, with a view to guaranteeing ecological integrity; the recovery and increase of native biodiversity, ecosystem functions and services; the expansion of landscape connectivity and the combat against desertification, prioritizing the restoration of areas that provide critical ecosystem services and safeguarding the customs, traditions, beliefs and languages of indigenous peoples, traditional peoples and communities and family and peasant farmers.

How the tree plantations sector contributes

The tree plantations sector acts as a strategic partner in ecosystem restoration: by incorporating continuous biodiversity monitoring and adaptive management into its operations, the sector generates data that support efficient territorial decisions through improved monitoring of native vegetation. This planning uses the landscape scale to define priority areas for restoration, aiming at ecological connectivity and gene flow among productive mosaics. Compliance with the Forest Code is evidenced by the maintenance of 7.01 million hectares conserved on private properties, distributed as 4.99 million hectares of Legal Reserve (RL) and 1.98 million hectares of Permanent Preservation Area (APP). This set of actions ensures environmental regularization and water resilience, exemplified by the protection of 115 springs in conservation areas (such as in the Private Natural Heritage Reserve (RPPN) Estação Veracel), reinforcing actions aligned with the recovery of degraded areas.

In economic and productive terms, the sector acts as a recovery vector by being established predominantly in already anthropized areas, in addition to the consolidation of a segment dedicated to the silviculture of native species and restoration projects for carbon credits and sustainable timber, demonstrating efficiency through techniques such as the rescue of up to 80% of native seedlings from the productive understory, taking advantage of natural regeneration for the functional recomposition of the landscape.

Certifications adopted by the sector (such as FSC® and PEFC) cover 74% of commercial areas and impose strict restrictions on the suppression of native vegetation after 1994.

Integration with public policies, forest certifications and ecological restoration initiatives strengthens spatial governance and compliance with legal instruments. In this way, the tree plantations sector not only occupies territory in an orderly manner but also positively influences the structuring of sustainable landscapes.

03 Conserve and manage ecosystems

Conserve and effectively manage, by 2030, at least 80% (eighty percent) of the Amazon biome and 30% (thirty percent) of each biome, including their inland waters, and 30% (thirty percent) of the coastal-marine system, with attention to maretorial areas, especially in the Priority Areas for the Conservation, Sustainable Use and Benefit-sharing of Brazilian Biodiversity, in areas of importance for sociobiodiversity and in areas important for maintaining ecosystem functions and services, through expansion, including territorial demarcation and regularization, management and monitoring of a system of protected areas that is ecologically representative, well connected, equitably governed and integrated into broader terrestrial and marine landscapes and the ocean, which encompasses the National System of Nature Conservation Units - SNUC, indigenous lands, quilombola territories, the territories of traditional peoples and communities, Permanent Preservation Areas, Legal Reserves and portions of Environmentally Differentiated Settlements with native vegetation, as well as other effective area-based conservation measures (OECMs), recognizing nature-based solutions for the conservation and management of ecosystems.

How the tree plantations sector contributes

The tree plantations sector plays a strategic role in the conservation and sustainable management of ecosystems at territorial scale, underpinned by efficient environmental governance. Currently, the sector maintains 7.01 million hectares of native vegetation, distributed among Legal Reserves (RL) (4.99 million ha), Permanent Preservation Areas (APPS) (1.98 million ha) and Private Natural Heritage Reserves (RPPN) (0.04 million ha). These areas, in addition to fostering conservation on private lands, are classified as potential candidates for OECMs (Other Effective Area-based Conservation Measures).

Between 2020 and 2024, the total certified area grew from 6.8 to 10.7 million hectares, expanding third-party assurances aimed at the functionality and protection of these areas. In 2024, 74% of the sector's commercial areas were certified under rigorous forest management standards.

Beyond legality, certified areas face additional restrictions on the clearing of native vegetation: in the case of FSC, clearings, even if legal, after 2020 cannot be certified under any circumstances; areas greater than 1,000 hectares cleared between 1994 and 2020 are only certifiable upon restoration; and the sum of cleared areas under the management of a certified company may not exceed 10,000 hectares. These mechanisms reinforce control over land use and biodiversity conservation.

Additionally, the tree plantations sector operates within an integrated productive landscape that combines approximately 10.5 million hectares of tree plantations with about 7 million hectares of conserved natural areas, forming productive mosaics that contribute to the maintenance of biodiversity at the landscape scale. Mosaic management, adopted at the landscape level, integrates plantations and native areas, avoids fragmentation and reinforces ecological connectivity, ensuring the function of biological corridors and the maintenance of ecosystems.

The combination of legal instruments (Forest Code), private protected areas and forest certification strengthens the environmental governance of the tree plantations sector, ensuring not only conservation but also active management and continuous monitoring of these areas.

04 Halt species extinctions and the loss of genetic diversity

Halt, by 2030, extinctions induced by human action; recover, conserve, and preserve wild species, in particular species that are threatened with extinction and endemic species, minimizing conflicts from negative human–wildlife interactions and enabling coexistence; as well as halt the loss of, and promote increases in, genetic diversity within and among populations of wild and domesticated species, including varieties and local breeds and wild relatives, to maintain and expand their adaptive potential and functional diversity, using in situ, on farm and ex situ conservation strategies and sustainable use, ensuring the participation of and respecting the traditional practices and ways of life of Indigenous peoples, traditional peoples and communities and Quilombola communities, and family and peasant farmers.

Ordinance Note: Wild species refer exclusively to populations of native species of fauna, flora, and microorganisms that occur in terrestrial forest, grassland, or mixed environments and in aquatic, continental, or marine environments, excluding domesticated populations.

How the tree plantations sector contributes

Companies in the tree plantations sector implement biodiversity monitoring actions that cover more than 8,310 recorded species of fauna and flora, including 335 threatened species recorded in forest mosaics that provide habitats relevant to their conservation. In the Cerrado and Atlantic Forest biomes, 26 species (including birds, mammals, and flora) were classified as bioindicators because they are considered highly sensitive to environmental changes. These actions take place at the landscape scale and are integrated with mosaic management, increasing the effectiveness of conservation strategies by ensuring ecological connectivity and long-term population viability.

The actions go beyond passive monitoring, including direct interventions for population restoration, such as the reintroduction program for the jacutinga (Aburria jacutinga), which released 30 individuals in 2022 to repopulate areas where the species was considered extinct. In the context of protecting critically endangered primates, the use of cutting-edge technology, such as thermal drones, stands out for monitoring 90 southern muriquis in conservation areas, as do actions to protect endemic amphibians, such as Bokermannohyla sazimai (with 25 calling adults recorded in certified areas), aligning with protection measures for known threatened species, especially those with restricted distributions. The initiatives contribute to maintaining genetic variability through connectivity among fragments, gene flow, and genetic conservation programs, strengthening the resilience of populations over time.

The data generated by the monitoring programs support adaptive management, enabling continuous adjustments to management and conservation practices based on scientific evidence, strengthening the effectiveness of the actions implemented.

05 Promote sustainable use and trade

Ensure that the use, collection, and trade of wild species is sustainable, safe, and legal, and strengthen national policies to combat, by 2030, environmental crimes and biopiracy, as well as to draft and implement public policies that promote animal protection, defense, and rights; the reduction of zoosanitary and phytosanitary, environmental, and climate risks; applying the One Health approach and the ecosystem approach; prohibiting practices that subject animals to cruelty; respecting animals as subjects of rights and animal welfare/animal dignity; and respecting and protecting customary sustainable use by Indigenous peoples and traditional peoples and communities and by family and peasant farmers, in accordance with their customs, worldviews, culture, and ways of life.

How the tree plantations sector contributes

The tree plantations sector promotes sustainable use and trade based on the production of renewable, recyclable and biodegradable raw materials. This model supports a diversified production chain, with more than 5,000 bioproducts (such as paper, packaging, textiles, biomaterials and bioenergy), present in the daily lives of billions of people. In 2024, Brazil consolidated itself as the world's second-largest producer of pulp and the largest global exporter of the product. The sustainability of production is is supported by forest certification schemes covering more than 10.7 million hectares, with independent audits that guarantee compliance with environmental, social and economic criteria, including biodiversity conservation, respect for human rights and responsible management of natural resources. The certifications ensure that wood and its derivative products have a traceable and sustainable origin.

06 Reduce the introduction and impacts of invasive alien species

Reduce, by 2030, by at least 50% (fifty percent), the rates of introduction and establishment of Invasive Alien Species - IAS known or potential, and eradicate or control IAS by eliminating, minimizing, reducing or mitigating the pathways of introduction and their impacts on biodiversity and ecosystem services, especially in sensitive or priority areas such as islands, traditional and ancestral territories, isolated communities and protected areas, through the implementation and monitoring of the National Strategy and Action Plan for Invasive Alien Species and the List of Present and Absent Quarantine Pests.

How the tree plantations sector contributes

The sector adopts systematic practices of prevention, monitoring and control of Invasive Alien Species (IAS), especially in conservation areas. Companies carry out control of invasive grasses and other exotic species, favoring natural regeneration. This process is supported by the monitoring of 26 bioindicator species, which allow early detection of ecological imbalances associated with the presence of invasive species.

This practice is aligned with the implementation of early detection programs. Forest certifications require the implementation of management plans to prevent the dispersal of cultivated species, ensuring that plantings do not become invasive and do not compromise adjacent ecosystems, thereby meeting the core purpose of the target. Additionally, the sector operates with technical protocols and continuous monitoring that indicate a low capacity for dispersal and establishment of cultivated species under Brazilian conditions, reinforcing the distinction between managed exotic species and invasive species.

07 Reduce pollution and its impacts on biodiversity

Reduce, by 2030, all sources of pollution, as well as their risks and negative impacts, to levels that are not harmful to biodiversity, sociobiodiversity and ecosystem functions and services, taking into account their cumulative effects, including: a 50% reduction of nutrient losses to the environment, including through more efficient methods of nutrient cycling and use; a 50% reduction of overall risk from the use of pesticides used contrary to good agricultural practices, including through integrated pest management and the use of bioinputs; a 50% reduction of risk arising from highly hazardous chemicals such as mercury; reductions in emissions of industrial pollutants, transport-related emissions and relevant environmental contaminants; and reduction, working toward elimination, of plastic pollution, including in the marine environment.

How the tree plantations sector contributes

Highlighted is Integrated Pest Management (IPM), allied with the work of research institutions such as IPEF, SIF and Embrapa focusing on biological control and reduction of the use of chemical inputs, including the development of laboratory protocols, preparation of four documents on the risks of exotic pests and actions in the control of pests such as leaf-cutting ants, in addition to contributions to the FSC Pesticide Policy and to Social-Environmental Risk Analyses (ESRA). ESRAs support risk-informed pesticide use, promoting greater transparency and helping to mitigate potential environmental and social impacts while supporting forest productivity. IPM is reinforced by partnerships with government, research institutes and universities, including the use of natural enemies in the biological control of pests and diseases. This integrated approach helps reduce dependence on chemical inputs and increase the ecological efficiency of management.

In productive management, about 95% of companies retain harvest residues in the field, promoting nutrient cycling and reducing the need for external inputs, complemented by the use of industrial residues processed into fertilizer for the forests, contributing to the adoption of more efficient methods of nutrient cycling and use. Waste management includes practices such as storing products and properly disposing of empty packaging, while the replacement of fossil-based materials is evidenced by substitution with materials produced from renewable sources. Finally, forest certification establishes criteria more restrictive than national legislation for the use of pesticides and ensures traceability and monitoring through independent audits, consolidating the application of practices that reduce chemical risks and environmental impacts, contributing to the objective of reducing all sources of pollution, as well as their risks and negative impacts to non-harmful levels.

08 Minimise the Impacts of Climate Change on Biodiversity and Build Resilience

Minimize the impact of climate change and ocean acidification on biodiversity and sociobiodiversity and increase their resilience, including the use of an ecosystem approach or nature-based solutions, taking into account adaptation and mitigation strategies that contribute to the adaptation of biodiversity, sociobiodiversity and to combating desertification, with attention to events and situations of climate emergency, prioritizing the establishment and implementation of a National Connectivity Network that covers at least 30% (thirty percent) of the national territory, terrestrial and continental aquatic areas and the coastal-marine system, encompassing conservation, restoration and recovery actions for biodiversity, with priority for the system of conservation units, ecological corridors and mosaics of conservation units, as well as the demarcation of traditional territories and the identification and protection of climate refugia and other areas important for biodiversity adaptation to climate change (with emphasis on ecosystems that contribute to mitigation and adaptation to climate change), promoting the transition to an inclusive low-carbon economy, following the principles of climate justice, combating environmental racism, and expanding and strengthening the participation of local communities of Indigenous peoples, peoples and traditional communities, family farmers and peasant farmers, including through free, prior and informed consultation, and in accordance with Decree No. 6.040, of 7 February 2007, Decree No. 8.750, of 9 May 2016, and ILO Convention No. 169.

How the tree plantations sector contributes

The tree plantations sector makes a significant contribution to climate mitigation actions through Nature-based Solutions (NbS). It is estimated that conservation areas and tree plantations maintained by the sector store around 4.92 billion tonnes of CO2eq, serving as a carbon sink (one of Brazil's main land-use tools for its climate targets - NDCs).

The sector materializes the central premise of Target 8 to promote the transition to an inclusive low-carbon economy by replacing fossil materials and carbon-intensive products with forest-based solutions across the production chain, using wood in civil construction and innovative bioproducts, such as lignin and nanocellulose, that avoid emissions and store carbon. Complementarily, decarbonization is ensured by an energy matrix that is predominantly clean, in which 90% of consumption comes from renewable sources such as biomass and black liquor.

In the context of environmental adaptation, the adoption of mosaic management and the maintenance of extensive areas of native vegetation contribute to the establishment of ecological corridors, promoting landscape connectivity. This territorial structure not only increases the resilience of ecosystems but also assists in the regulation of the microclimate and the protection of water resources, reducing the vulnerability of biodiversity to extreme events.

09 Promote the sustainable use of biodiversity and the bioeconomy

Ensure, by 2030, that the management and use of biodiversity are sustainable, avoiding over-exploitation and guaranteeing, in the long term, the maintenance of local populations and species, through research, innovation, the strengthening of community or traditional management and value addition in each region, which provide social, economic and environmental benefits to people, especially those in situations of vulnerability and those most dependent on biodiversity, by means of the elaboration, by 2025, and the implementation and monitoring, by 2030, of the first cycle of the National Bioeconomy Development Plan, within the scope of the National Bioeconomy Strategy, and of other related instruments and initiatives, including payment for ecosystem services; the National Policy to Combat Desertification and Mitigation of the Effects of Drought; the Popular Pharmacopoeia of Brazil; as well as by prioritizing the solidarity economy, valuing and strengthening sociobiodiversity, associated traditional knowledge and customary use, based on the cosmovision, languages, cultures and ways of life of indigenous peoples, traditional peoples and communities, family farmers and peasants and beneficiaries of agrarian reform.

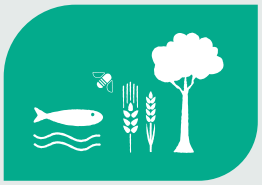
How the tree plantations sector contributes

The tree plantations sector is one of the main drivers of the large-scale bioeconomy in Brazil, promoting the sustainable use of biodiversity through the production of renewable, recyclable and biodegradable raw materials. From approximately 10.5 million hectares of tree plantation and more than 7 million hectares conserved, the sector enables the production of more than 5,000 bioproducts, including paper, packaging, textiles, bioenergy and new materials such as lignin and nanocellulose, replacing fossil inputs and reducing pressure on natural ecosystems. By generating innovation and creating new markets, the sector drives the sustainable value addition required by the target, integrating production and conservation so as to ensure that the economic use of natural resources occurs in a manner compatible with the maintenance of biodiversity.

The forest bioeconomy also stimulates local production chains and territorial development, generating about 2.8 million direct and indirect jobs and demonstrating strong insertion in regions of lower economic dynamism. Additionally, initiatives associated with ecological restoration and the silviculture of native species have expanded the scope of the bioeconomy, strengthening the integration among biodiversity, climate and economic development. This set of activities promotes income diversification, the valorization of forest products and the inclusion of local communities in sustainable value chains, providing social, economic and environmental benefits to people, especially those in situations of vulnerability, through the use of biodiversity. The sustainability of the use of biodiversity is ensured by instruments such as the Forest Code and forest certifications, which establish criteria for responsible management, habitat conservation and respect for social aspects.

The sector also advances in the incorporation of nature-based solutions and in the development of new markets, such as carbon and bioproducts markets, consolidating the bioeconomy as a central strategy for the transition to a low-carbon economy, with the maintenance of standing forest coupled with revenue generation.

10A



Promote sustainable productive activities

Ensure, by 2030, that areas of agriculture, livestock, aquaculture and forestry are managed sustainably and integrated into the landscape, considering sustainable intensification, agroforestry systems, agroecological systems, regenerative agriculture, among others, in accordance with commitments assumed by the country for the sustainability of agriculture, aquaculture and food systems in the G20 Working Group Ministerial Declaration of 2024, held in Mato Grosso, contributing to long-term resilience and efficiency, improving the productivity of these production systems, food and nutritional security, energy security and environmental and climatic balance, avoiding the conversion of natural ecosystems to new production areas, conserving, restoring and managing biodiversity and maintaining nature's contributions to people and the fulfilment of the social function of rural property provided for in the Constitution.

How the tree plantations sector contributes

The sector consolidates a model of highly efficient sustainable intensification, being responsible for 33% of the world's wood with only 7% of global forest cover. This phenomenon, known as the "land-sparing effect", is supported by an average productivity of 34.4 m³/ha/year and annual investments of R$ 969 million in PD&I, which allow production to expand without converting natural ecosystems. By focusing on the development of technologies that promote climate resilience and by concentrating production in already anthropized areas, the sector reduces pressure on native forests and contributes directly to landscape-scale preservation.

Complementing this strategy, the implementation of integrated crop-livestock-forestry systems (ICLF) has been fundamental to optimize land use and increase the resilience of rural producers. With 65.7 thousand hectares registered in 2024, an increase of 80% in just two years, these systems promote productive diversification, improvement of soil quality and greater adaptation to climate change. Because of these benefits, ILPF has consolidated as one of the central practices of the Plano ABC+, being essential for the advancement of technological solutions in addressing environmental challenges in rural areas.

In the area of compliance, the total certified area rose from 6.8 to 10.7 million hectares between 2020 and 2024, ensuring supply chain traceability and encouraging the adoption of good practices. This rigor is reflected in mosaic management, which integrates plantations and native vegetation to form functional ecological corridors, whose effectiveness is demonstrated by the presence of 26 bioindicator species. In this way, the integration between production and conservation ensures the ecological functionality of landscapes, reconciling the generation of economic value with the maintenance of ecosystem services and the protection of biodiversity.

11 Protect and restore ecosystem services

Restore and maintain, by 2030, ecosystem services of provisioning, supporting, regulating and cultural types; map, value and monitor, by 2030, the supply, demand, provision and deficits by biome and coastal-marine system of priority ecosystem services, such as air, water and climate regulation, soil health, pollination, biological pest control, reduction of the risk of pest and disease outbreaks and protection against natural hazards and disasters; establish, by 2026, a national policy for the protection of pollinators and regulate, by 2025, the National Policy on Payment for Environmental Services (Law No. 14,119, January 13, 2021) to expand and enhance nature's contributions to people, favouring in particular those in situations of social vulnerability and indigenous peoples, traditional peoples and communities, and family and peasant farmers.

How the tree plantations sector contributes

The sector's beekeeping and meliponiculture programs structure the use of the "apicultural pasture" in mosaic management areas, involving 87% of companies in partnerships with approximately 2,120 beekeepers and 70 cooperatives. By making available 1.36 million hectares of native and tree plantation, these initiatives generate an annual production of 1.6 thousand tons of honey, which not only strengthens local income but also contributes the conservation of pollinators and associated ecosystem services. This integrated management extends to the conservation of protected areas, supporting water-related ecosystem services through the protection of 115 springs and the recovery of degraded areas in Permanent Preservation Areas (APPs) and recharge zones. Such efforts align with Action 11.9 of Target 11, promoting the revitalization of watersheds and the conservation of soil water contribute to water provision and climate regulation. In the climate axis, the sector consolidates itself as a relevant carbon sink, maintaining stocks estimated between 4.92 and 5.1 billion tons of CO2eq through carbon removals by forests and storage. This set of actions demonstrates the simultaneous delivery of multiple ecosystem services at the landscape scale, linking climate regulation to soil protection and support for biodiversity. Additionally, the sector values cultural services and traditional knowledge through community training and the sustainable use of native species. These initiatives, directly aligned with the guideline to "restore and maintain provisioning, supporting and regulating services until 2030," also strengthen the bond between communities and ecosystems, increasing the perceived value of nature and encouraging sustainable practices that directly benefit local populations.

13 Promote the access and sharing of benefits

Implement, monitor and operationalize, by 2030, Law No. 13.123, of 20 May 2015, through the adoption, implementation and improvement of effective legal, policy, normative, administrative, systemic and training measures, at all levels, to ensure the fair and equitable sharing of benefits arising from the use of genetic resources and digital sequence information, facilitating access to genetic heritage and ensuring adequate access to associated traditional knowledge, through the free, prior and informed consent of the indigenous population, traditional community or traditional farmer, and progressively and significantly increase, by 2030, by at least 30% (thirty percent), the benefits shared arising from the economic exploitation of finished products and reproductive material, including digital sequence information, with traceability and disclosure of aggregated data on access and benefit-sharing practiced.

How the tree plantations sector contributes

The tree plantations sector contributes strategically to Target 13 by integrating the sustainable use of biodiversity with the generation of socioeconomic benefits in the territories where it operates. Through programs focused on ecological restoration and the valorisation of native species, including those with medicinal and productive potential, the sector strengthens local value chains and expands access to benefits associated with biodiversity. By structuring these productive chains and generating income, the activity contributes to the implementation of guidelines aimed at ensuring that the economic exploitation of genetic heritage must result in concrete returns for the regions of origin.

Additionally, structured community engagement initiatives promote training, entrepreneurship and the productive inclusion of vulnerable groups and traditional peoples. These actions align with continuing training plans for the "Biodiversity Guardians" (PIPCTAFs) on Genetic Heritage and Associated Traditional Knowledge, broadening the participation of these actors in discussions on the subject.

Thus, projects to produce native seedlings, recovery of degraded areas and use of genetic resources consolidate benefit-sharing in a practical and territorial manner. By integrating local knowledge into value generation, the sector not only promotes community autonomy but also recognizes and values their fundamental role in maintaining biodiversity.

15 Promote sustainable business activities

Adopt, by 2030, clear, objective and Brazil-adapted public policies and legal and administrative measures to regulate, incentivize and enable companies, in particular large and transnational companies, and financial institutions to: a) assess, disclose and periodically monitor, with transparency, their risks, dependencies, impacts on biological diversity and associated opportunities across their operations, value chains and project portfolios; b) provide consumers with the necessary information in order to promote sustainable consumption patterns; and c) report on compliance with access and benefit-sharing regulations, where applicable; with the objective of gradually reducing negative impacts and increasing positive impacts on biodiversity and sociobiodiversity; promote the bioeconomy; ensure that companies, in particular large and transnational companies, and financial institutions foster and develop actions that guarantee sustainable production standards for the implementation of the National Biodiversity Targets, so as to contribute to the ecological transformation of the economy, as provided for in the pact of the three powers, and, when pertinent, taking into account free, prior and informed consultation with Indigenous peoples and traditional peoples and communities and their relevant protocols.

How the tree plantations sector contributes

The tree plantations sector consolidates biodiversity as a strategic asset by incorporating structured mechanisms of monitoring, evaluation and audit throughout its value chain. Currently, 78% of companies publish sustainability reports, supporting the regular disclosure of sustainability-related risks, dependencies and impacts, which increases transparency for investors and stakeholders. This process is strengthened by the adoption of metrics and targets by 72% of companies, enabling data-driven management and alignment with global reporting agendas, such as the GRI (Global Reporting Initiative) and the TNFD (Taskforce on Nature-related Financial Disclosures). Additionally, 55% of the sector's initiatives already have specific biodiversity targets, demonstrating the definitive internalization of the subject in investment strategies and long-term planning. To systematize this flow, instruments such as the "Biodiversity Notebooks" transform raw data into governance tools, supporting both corporate management and the formulation of public policies and environmental accounts.

This culture of compliance extends to the supply chain, with 54% of companies incorporating ESG practices into supplier management to promote sustainable production cycles. In the field of auditing, the sector stands out for 10.7 million hectares certified (2024), a practice that contributes to Action 15.2 of Target 15 by strengthening seal and certification mechanisms. Forest certification ensures, through independent audits, the traceability and sustainability of production, adding technical credibility and market value to bioproducts.

By integrating rigor in habitat conservation with robust decision-making processes, the sector not only anticipates adjustments to future financial and regulatory requirements but also establishes itself as a practical model for integrating nature into corporate governance. Together, this evidence demonstrates that data-based structuring and transparency are the engines of the ecological transformation of the economy in the forestry sector.

16 Foster sustainable consumption and reduce waste generation

Raise awareness, encourage and empower, by 2030, individuals and companies to choose sustainable production and consumption, in order to reduce food waste, overconsumption and waste generation, in an equitable and inclusive manner, prioritizing the sectors with the greatest impact on biodiversity, so that all people live well in harmony with nature.

How the tree plantations sector contributes

Promotion of circularity through reverse logistics, with paper recycling and the reuse of industrial co-products. In 2024, the paper recycling rate was 59.1%, with less than 1% of co-products destined for landfills. This circular economy model reduces waste generation, optimizes the use of natural resources and decreases pressure on landfills and final disposal systems.

The tree plantations sector acts at the point of consumption by offering renewable bioproducts that replace materials with high environmental impact, such as plastics and petroleum derivatives, with the development of more than 5,000 sustainable products from tree plantation, including materials such as nanocellulose and lignin, which can be used in the development of biodegradable products. This substitution contributes to the reduction of persistent waste in the environment, especially plastics, and to the transition to more sustainable consumption patterns, providing viable biobased alternatives so that society and industry can in fact reduce their dependence on and use of plastic. In addition, the sector also encourages conscious consumption through forest certification applicable chain-of-custody mechanisms, helping consumers identify products from responsibly managed sources and make more informed decisions, thereby reinforcing the connection between responsible production and sustainable consumption.

17 Promote biosafety measures

Strengthen, by 2030, the capacity to implement biosafety measures in the development and use of biotechnologies, within the scope of the National Biosafety Policy, in accordance with article 8(g) of the Convention on Biological Diversity (CBD), and measures for the handling of biotechnology, including and recognizing the importance of traditional and ancestral knowledge for biotechnology, as well as the fair distribution of its benefits in accordance with article 19 of the Convention, through alignment with the National Technical Biosafety Commission - CTNBio, considering the new Kunming-Montreal Global Biodiversity Framework (KMGBF), maintaining public funding for scientific research on the impacts of biotechnologies and capacity-building on best practices in biosafety, promoting the maintenance of the genetic integrity of biodiversity, including that of wild relatives, and the physical integrity of the seeds of creole varieties and creole breeds.

How the tree plantations sector contributes

The tree plantations sector has biotechnology research initiatives focused on sustainability, productivity and adaptation to climate change, supported by a robust research and development infrastructure in Brazil and abroad, actively investing in biotechnological development for sustainable purposes and climate adaptation. The entire process of developing these technologies follows established technical and regulatory criteria, including evaluation by CTNBio where required, demonstrating adherence to national risk management mechanisms and biosafety regulations that govern the handling of modified organisms. Additionally, the adoption of these technologies occurs together with consolidated practices of environmental monitoring and risk management, including the monitoring of non-target organisms and the use of bioindicators, ensuring the maintenance of the ecological and genetic integrity of ecosystems and guaranteeing that biotechnological innovations do not cause unexpected adverse effects on biodiversity.

18 Eliminate harmful subsidies and increase positive incentives for biodiversity

Identify and prioritize, by 2026, and review, reduce or eliminate, by 2030, in a fair and effective manner, subsidies and economic and fiscal incentives directly harmful to biodiversity, starting with the incentives most harmful in proportion to national Gross Domestic Product, contributing to the achievement of the global target of at least US$ 500 (five hundred) billion per year by 2030, and proportionally increase positive incentives for the conservation, restoration and sustainable use of biodiversity and sociobiodiversity, across different ecosystems and in urban and peri-urban areas, with the active participation of civil society organizations and of Indigenous peoples, traditional peoples and communities, family farmers and peasants.

How the tree plantations sector contributes

The tree plantations sector has advanced in the incorporation of economic instruments that value biodiversity, contributing to the transition to production models based on positive incentives. Currently, 19% of sector initiatives use sustainable securities or debentures, with the distinguishing feature that 83% of the funds raised are allocated exclusively to environmental investments. This strategy allows capital to be channeled toward actions of conservation, restoration and sustainable management, strengthening an economic mechanism that rewards the protection of ecosystems over degrading activities.

At the same time, the maintenance of projects verified in the voluntary carbon market reinforces the tree plantations sector's integration into systems that value environmental assets. By monetizing ecosystem services and NBS, the sector transforms conservation into a viable financial asset, generating new revenue streams that sustain environmental recovery. This approach breaks with traditional economic logic — which often ignores natural capital — and establishes the enabling environment required by Target 18, replacing harmful subsidies with instruments that protect biological heritage.

In this way, the internalization of environmental criteria in investment and financing decisions demonstrates the tree plantations sector's role as a driver of a low-carbon economy. By integrating forest production, innovation and conservation, the sector not only redirects financial flows strategically but also enables the positive incentives necessary to ensure the sustainability and resilience of ecosystems at the sectoral level.

19 Increase funding for the implementation of the NBSAP

Develop and begin, by 2026, the implementation and monitoring of a national financing strategy for the NBSAP, with effects reflected in support for the State Strategies and Action Plans for Biodiversity (EPAEBs) and the Local Strategies and Action Plans for Biodiversity (EPALBs) that have been prepared, in order to substantially increase, and in proportion to national Gross Domestic Product, the volume of financial resources from national and international, public and private sources for the implementation of the NBSAP, contributing to the achievement of the global target of at least US$ 200 (two hundred) billion per year by 2030, particularly through the mobilization of the federal budget, complemented by state and municipal budgets, the raising of external funds, the creation of public and private incentives for biodiversity and sociobiodiversity, and the promotion of collective actions enabling direct access by indigenous peoples, traditional peoples and communities, family farmers and peasants to sources of financing, with respect for socio-environmental safeguards and the leadership of the peoples.

How the tree plantations sector contributes

In the tree plantations sector, this target is manifested through the mobilization of private capital for conservation, investments in restoration and the use of green financial instruments. These instruments channel resources to projects such as sustainable forest management, restoration of APPs and RLs, biodiversity conservation and industrial efficiency, scaling up investments with positive environmental impact.

In addition to green bonds, the sector is also advancing in structuring projects linked to environmental markets, such as carbon and ecosystem services, expanding sources of financing and contributing to the diversification of economic mechanisms aimed at biodiversity.

The sector uses the capital market to finance operations that combine production and conservation. The tree plantations sector accounts for a reported 35% of green bonds issued by Brazilian companies. These funds are directed specifically to projects of sustainable management, restoration of APPs and RLs, and increased industrial efficiency, supporting the mobilization of capital for projects with environmental objectives, including biodiversity conservation where applicable.. This practice fulfils the guideline of Target 19, which calls for increasing financial resources from national and international sources, and directly engages with Action 19.3, aimed at promoting partnerships between the private sector and financing institutions. In addition to green bonds, the sector is advancing in structuring projects linked to carbon markets and ecosystem services, diversifying the economic mechanisms that support the environmental agenda and transforming nature protection into a financially viable and attractive operation.

By integrating financing, production and conservation, the forest sector actively contributes to closing the biodiversity financing gap in the country. This effort is aligned with Strategic Objective D of the National Biodiversity Strategy and Action Plan (NBSAP) ("Invest and collaborate"), which seeks to align national financial flows with the National Biodiversity Strategy.

20 Promote capacity-building and collaboration for biodiversity

Strengthen, by 2030, training, capacity-building, development, access, exchange and technology transfer and promote the development of and access to innovation and national and international technical-scientific cooperation related to biodiversity, through the identification, promotion, implementation and monitoring of programs, projects and activities of scientific and technical cooperation and promotion of traditional and ancestral knowledge and know-how and of appropriate methodologies and strategies for the conservation, management and sustainable use of sociobiodiversity.

How the tree plantations sector contributes

The tree plantations sector contributes strategically to Target 20 through training and forestry support programs that reach more than 1,000 municipalities. By providing technical assistance and high-quality seedlings, the sector promotes knowledge transfer to smallholders, enabling them to comply with environmental legislation and to adopt sustainable practices. This reach strengthens productive inclusion and responsible territorial management, democratizing access to cutting-edge technologies.

The foundation of this evolution is supported by annual investments of approximately R$ 969 million in Research, Development & Innovation, directed toward productivity, pest resistance and the development of bioproducts. This effort is amplified by a cooperation network with universities and research institutes, which includes the allocation of areas for applied research. Such coordination directly addresses Action 20.3 (expansion of scientific cooperation) and reinforces Action 20.1 (strengthening of research centres), allowing biological knowledge to be generated under real field conditions and broadening the evidence base for sustainable management.

At the operational level, the sector promotes the qualification of workers and communities in areas such as restoration, seed collection and environmental education. Technological advancement, exemplified by the concept of Forest 4.0, includes the use of drones and data analytics to support biodiversity monitoring. Far from being confined to industry, this innovation is shared through technical exchanges to support public policies for monitoring and conservation.

Finally, participation in technical forums and multisectoral coalitions strengthens the sector as a vector of governance. The impacts of these initiatives are reflected in three fundamental dimensions:

(i) Acceleration of the bioeconomy, with the development of products based on renewable resources;

(ii) Democratization of knowledge, through technological transfer at scale;

(iii) Strengthening of environmental monitoring, integrating academia, companies and civil society for the effective implementation of Target 20.

21 Promote access to data, information and knowledge

Ensure, by 2030, the production, quality assurance, accessibility, interoperability and reusability capacity of data, information and knowledge on Brazilian biodiversity, considering different territorial scales and sources of data, including raw data repositories, in order to guide public policies, promote effective and equitable governance and the integrated and participatory management of biodiversity and sociobiodiversity data, and to strengthen communication, awareness, education, monitoring, research and knowledge management, guaranteeing their collective benefit and the participation of indigenous peoples, peoples and traditional communities, family farmers and peasants in their governance, in accordance with national legislation and relevant international obligations; ensure that the traditional knowledge, innovations, practices and technologies of indigenous peoples, peoples and traditional communities, family farmers and peasants are only accessed with their free, prior and informed consent and with the fair and equitable sharing of the resulting benefits.

How the tree plantations sector contributes

The tree plantations sector consolidates itself as one of the main platforms for generating information on Brazilian biodiversity, contributing directly to achieving Target 21. Through continuous monitoring carried out by its members, the sector ensures the production and qualification of data at a territorial scale. In 2022, records in 220 municipalities and 12 states identified 8,310 species (5,450 of flora and 2,860 of fauna) distributed across five biomes. This survey revealed the presence of 335 species threatened with extinction — encompassing 38% of the mammals and 48% of the birds listed in the official threat lists — and contributed to scientific research associated with the identification and description of species new to science, such as Ocotea mantiqueirae.

Beyond data collection, the sector promotes the accessibility and interoperability of this information by using and contributing to references such as the Flora do Brasil 2020 project, strengthening national taxonomic lists. The dissemination of data is enhanced through partnerships with universities, research institutes and civil society organizations, which include the provision of areas for applied research and joint monitoring. This integration between science and management meets the objective of the target to use knowledge to guide public policy, fill information gaps and promote effective and equitable governance.

Technological modernization is another fundamental pillar, with the use of remote sensing, drones and digital systems that increase precision and the capacity for large-scale analysis. This effort to digitize and organize high-precision data directly aligns with Actions 21.1 and 21.6, which seek to establish a National Data Policy and support publication on platforms such as SiBBr. By making information available in a transparent and accessible manner to researchers and managers, the tree plantations sector not only generates knowledge, but acts as a strategic partner in the democratization and practical application of data aimed at biodiversity conservation.

22 Ensure participation in decision-making and access to justice for all

Implement and monitor, by 2030, public policies to ensure for indigenous peoples, traditional peoples and communities, family farmers and peasants—taking into account free, prior and informed consent, where pertinent, and respecting their territorial rights—as well as for women and girls, elders, children and youth, persons with disabilities, and with consideration of race and ethnicity and intergenerational perspectives: (i) representation, leadership and full, equitable, inclusive and effective participation in negotiation spaces, in decision-making and in sectoral governance bodies in decisions related to biodiversity; and (ii) access to justice, training and information related to biodiversity; and to ensure, by 2025, the full protection of human rights and environmental defenders, through the creation and implementation of measures that make this protection effective.

How the tree plantations sector contributes

The tree plantations sector maintains a continuous and structured dialogue with communities in more than 1,000 municipalities, generating shared value and promoting institutional transparency. Through participatory processes, consultations and engagement mechanisms, social demands are incorporated into territorial management and operational decisions. This approach supports local populations and inclusive participation in decision-making processes concerning biodiversity, also ensuring their access to justice and strengthening the legitimacy of sectoral actions.

Productive inclusion is a central pillar of this model, driven by incentive programs and technical assistance that enable smallholders to adapt their practices to current environmental laws and to integrate into the production chain. This support is complemented by multiple use of the forest, notably apiculture and meliponiculture, which benefit 2,120 beekeepers and generate annually 1,600 tonnes of honey. Such initiatives not only strengthen the economic inclusion of communities in sustainable value chains, but also meet Action 22.5 of the NBSAP, contributing to the sustainable development of peoples and traditional communities at the territorial level.

In addition to its economic impact, the tree plantations sector promotes the safeguarding of Brazilian cultural heritage by valuing traditional knowledge, such as crafts based on the sustainable use of native species. This valorisation protects territories and knowledge that contribute directly to biological conservation. In the governance sphere, the adoption of international forest certifications ensures the existence of ombudsman offices, conflict resolution mechanisms and socio-environmental safeguards, guaranteeing active listening and fair reparation. By generating 2.8 million jobs (direct, indirect and induced), the sector reaffirms its structural role and its capacity to combine the protection of nature with human and social development.

23 Ensure gender equality in the implementation of the NBSAP

Ensure and promote, by 2030: (i) gender equity in the implementation of the National Biodiversity Strategy and Action Plan, through an intergenerational, intersectional and gender-responsive approach, so that all women and girls and the LGBTQIAPN+ population have the same opportunities and capacities to contribute to the three objectives of the Convention on Biological Diversity (CBD), including the recognition of their equal rights and access to land, territories, maretórios, natural and cultural goods and resources and to financial resources; (ii) full, equitable, meaningful, informed and qualified participation and leadership at all levels of action, engagement, policy and decision-making related to biodiversity and sociobiodiversity; and (iii) pay equity in bioeconomy value chains.

How the tree plantations sector contributes

The tree plantations sector demonstrates a solid commitment to gender equity and inclusion in corporate governance, with 97% of companies reporting the presence of diverse groups in leadership positions. In 82% of those companies, such groups occupy up to 30% of management positions, contributing to more representative leadership, representative and sensitive to decision-making related to sociobiodiversity. This progress reflects the internalization of Diversity and Inclusion issues in business strategies, with 62% of companies setting specific targets and 89% implementing internal initiatives, such as gender committees and inclusive selection processes.

These actions are fundamental to reducing structural inequalities and promoting equitable opportunities for women, girls and the LGBTQIAPN+ population. The adoption of an intersectional approach enables these groups to contribute meaningfully to the objectives of the Convention on Biological Diversity (CBD), strengthening more plural organizational environments. The positive impact of this stance extends to territories: municipalities with the sector's presence show a gender equality index of 15.3 points on the Sustainable Cities Development Index, a value significantly higher than the national average of 10.2.

In rural areas, female protagonism is driven by productive inclusion initiatives that promote the economic empowerment and autonomy of rural women. By generating income and improving local living conditions, the sector not only contributes to the Sustainable Development Goals but also strengthens the strategic role of women in the sustainable management of natural resources and in the conservation of Brazilian biodiversity.



Imagem: Berneck

Final Considerations

This document demonstrates that the tree plantations sector occupies a central position on the biodiversity agenda, since its productive activity is directly connected to landscape management, biodiversity conservation, ecosystem restoration and the sustainable management of natural resources. This relationship also fits within a broader context of transition to a low-carbon economy, in which renewable resources, forest-based solutions and resilient productive landscapes can simultaneously contribute to biodiversity conservation, the decarbonization of the economy and the addressing the challenges posed by climate change.

This perspective highlights that biodiversity and climate are interdependent agendas. The conservation and restoration of ecosystems contribute to the resilience of landscapes in the face of climate change, while sustainable management and the development of solutions from renewable resources expand the possibilities for transition to production models with lower carbon intensity.

By consolidating these results into a single technical reference, the tree plantations sector seeks to offer the government, multilateral organizations and international forums a evidence-based account of the sector's contributions to nature-based solution.

More than responding to the challenges of the present, this action points to the construction of a future in which production, conservation and development proceed in an integrated manner, contributing to a more resilient, biodiverse and sustainable planet for future generations.



Mission

Ibá seeks to enhance the sector's competitiveness and ensure that its member companies operate according to the highest standards of science, technology, and socio-environmental responsibility throughout the entire tree production chain, while pursuing innovative solutions for the Brazilian and global markets.



Vision

Trees grown for productive purposes represent the future of renewable, recyclable, and environmentally friendly raw materials, contributing to biodiversity conservation and human well-being. The tree plantations sector is the industry of the future.



Values

COMPETITIVENESS
LONGEVITY
INNOVATION
RESPONSIBILITY

About Ibá

The Brazilian Tree Industry (Ibá) is the association responsible for the institutional representation of the tree plantations sector, from forest production to industrial processing. Aiming to add value to products derived from eucalyptus, pine, and other species intended for industrial purposes, as well as activities related to the restoration and planting of native species, Ibá advocates for the sector's interests. This work is carried out in collaboration with authorities and government bodies, entities within the tree plantations sector, and other key stakeholders, including socio-environmental organizations, universities, schools, consumers, and the press, both nationally and internationally.

Founded in April 2014, the association represents 50 member companies, in addition to nine state forestry associations. The sector plays a leading role in the large-scale bioeconomy, offering solutions for a world that needs to decarbonize through ecosystem services, such as carbon removal, and the production of recyclable, biodegradable products from renewable sources.

Driven by innovation, research, and a forward-looking approach, the Brazilian tree plantations sector positions the country as a global benchmark in the production of pulp, paper, wood panels, and charcoal for the steel industry, while also contributing to the supply of food and renewable energy. The sector produces thousands of sustainable bioproducts, including timber products and a wide range of non-timber products, such as viscose for the textile industry, honey, disinfectants, flavorings, solvents, paints, fabrics, adhesives, waxes, packaging, diapers, and many others. By putting the concept of bioeconomy into practice, the sector demonstrates that tree plantations can contribute to environmental sustainability, biodiversity conservation, and human well-being.

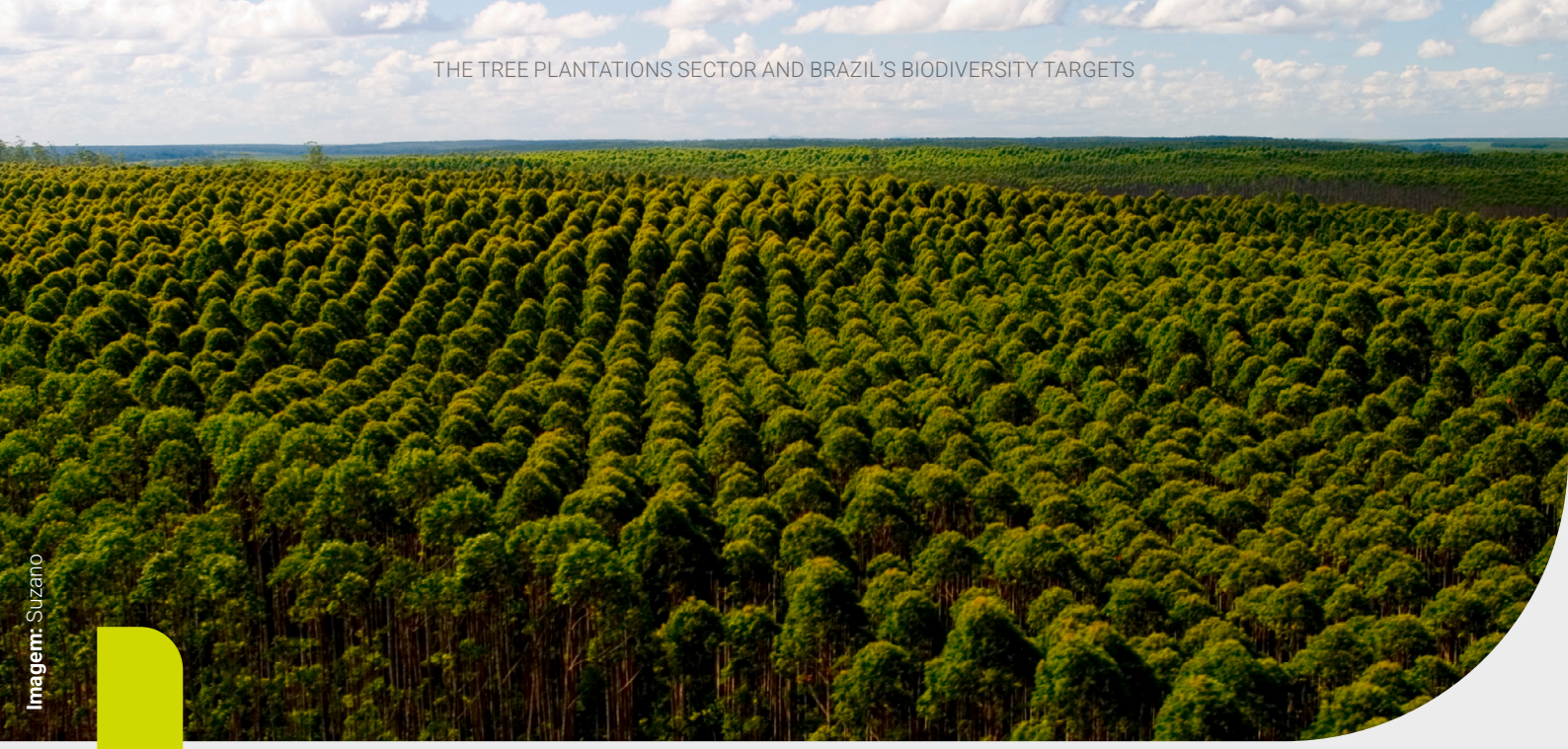


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