

TIETÊ AGRÍCOLA LTDA.
FOREST MANAGEMENT PLAN

2026

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REVISION TABLE

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Version 1	Preparation	December 2025
Version 2	Revision - Inclusion of Anti-Corruption Procedure, Gender Equality Procedure, and Anti-Hunting Procedure	March 2026

PROPERTY DATA

Name	Municipality	Total Area (ha)	Legal Reserve Area (ha)	Plantation Area (ha)
Fazenda São Luiz				
	Capitão Poço			
		2,399.68		
			1,435.76	
				930.40

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1. ORGANIZATION AND FMU IDENTIFICATION

Tietê Agrícola carries out forest management activities at the Fazenda São Luiz Forest Management Unit (FMU), located in the municipality of Capitão Poço, Pará. The operation comprises commercial forest plantation areas, Permanent Preservation Areas, Legal Reserve, operational infrastructure, and other land-use areas.

Forest management focuses on the sustainable production of timber from teak plantations, conducted in accordance with the technical, environmental, and social principles established by FSC certification and applicable Brazilian legislation.

Operational management is carried out by the company's own technical team, with defined responsibilities for planning, implementation, monitoring, and continuous improvement of activities.

2. SCOPE OF FOREST MANAGEMENT

This Forest Management Plan establishes the technical, environmental, and social guidelines for the sustainable management of the forest plantations at the Fazenda São Luiz FMU.

The scope includes:

- Silvicultural planning
- Establishment and management of forest stands
- Forest inventory
- Harvest planning and implementation
- Internal timber transportation
- Environmental protection
- Social management
- Identification and protection of High Conservation Values (HCVs)
- Operational monitoring
- Assessment of environmental and social impacts
- Review and continuous improvement

The plan applies to all areas under the organization's management within the FMU.

3. OBJECTIVES

3.1 General

To conduct the sustainable forest management of commercial plantations, ensuring economic viability, environmental protection, and social responsibility in accordance with FSC certification requirements.

3.2 Specific

- Produce timber sustainably
- Ensure the conservation of Permanent Preservation Areas (APPs) and the Legal Reserve
- Minimize the environmental impacts of operations
- Ensure safe working conditions
- Promote transparent relationships with stakeholders
- Monitor environmental, social, and production indicators
- Implement continuous improvement in forest management

4. LEGAL BASIS AND COMPLIANCE

Forest management is conducted in compliance with:

- Federal, state, and municipal environmental legislation
- Brazilian Forest Code
- Applicable labor regulations
- Occupational health and safety regulations
- FSC certification requirements
- Internal organizational procedures

The company keeps applicable legal documents up to date, including environmental licenses, land records, and other authorizations required to carry out its activities. The company also maintains established policies and values, as set out in its document entitled “Company Business Policy.”

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5. COMMITMENT TO FSC

The Forest Stewardship Council (FSC) is an independent, non-governmental, non-profit forest organization, internationally recognized, that identifies, assesses and certifies products originating from Sustainable Forest Management (SFM) through certification labels. Tietê Agrícola Ltda. seeks to comply with the principles required by the FSC standard, including:

- Comply with the laws in force in the country and with agreements and treaties to which the country is a signatory;
- Update and maintain control of all land tenure and land-use documents;
- Conserve and monitor High Conservation Value Areas (HCVAs);
- Implement measures to protect management areas against illegal extraction and trade of forest products;
- Safeguard the rights of surrounding communities and maintain open communication channels with these stakeholders, minimizing potential negative impacts from the management area and its forest operations;
- Not convert native forests into forest plantations;
- Promote improvements in working conditions for contractors, subcontractors and service-provider companies;

- Assess and monitor all operations carried out in the management area, including forest-product yields, chain of custody, and environmental and social impacts;
- Promote and encourage the efficient and optimized use of multiple forest products and services, ensuring economic viability and a broad range of environmental and social benefits.

6. CHARACTERISTICS OF THE FMU

6.1 Location and identification of the property

The company operates the Fazenda São Luiz Forest Management Unit (FMU), located at approximately 2°30'00" South latitude and 47°20'00" West longitude, in the municipality of Capitão Poço, Pará State.

6.2 Access roads

Access to the São Luiz FMU is via the Belém-Brasília Highway and the former km 81 access road, approximately 75 km from the municipal seat of Capitão Poço.

6.3 Native Vegetation

The vegetation of the municipality of Capitão Poço is characterized by the predominance of secondary forests originating from dense ombrophilous forests, with dense broadleaf plateau forest, terrace forest and alluvial vegetation. The municipality has experienced extensive deforestation, resulting in large areas of secondary growth at advanced successional stages, with a high incidence of small trees belonging to pioneer and early secondary species.

The vegetation cover within the FMU is represented mainly by Dbe - Submontane Dense Ombrophilous Forest and Vss - Secondary Vegetation. Based on a sample forest inventory conducted in the FMU's native forest remnants in 2021, 86 tree species were recorded. Legumes (Fabaceae), Sapotaceae and Lecythidaceae were among the most relevant families, highlighting their structural role in the company's native areas. Faveira (*Parkia paraenses*), Tiriba (*Eschweilera longipes*), Timborana (*Piptadenia gonoacantha*), Tachi (*Tachigali vulgaris*) and Guajará (*Chrysophyllum venezuelanense*) were the most relevant species in the inventoried areas.

Table 1. Twenty-five most relevant tree species recorded in the native forest inventory

No.	Vernacular name	Scientific name	Family	Successional group	Importance value (%)
1	Faveira	<i>Parkia paraenses</i> Ducke	Fabaceae	Early secondary	7.106
2	Tiriba	<i>Eschweilera longipes</i>	Lecythidaceae	Early secondary	7.091
3	Timborana	<i>Piptadenia gonoacantha</i> (Mart.) Macbr.	Fabaceae	Late secondary	6.835
4	Tachi	<i>Tachigali vulgaris</i> L.G. Silva & H.C. Lima	Fabaceae	Pioneer	5.049
5	Guajará	<i>Chrysophyllum venezuelanense</i> (Pierre) T.D. Penn	Sapotaceae	Late secondary	4.824

6	Louro Tamaquare	Stryphnodendron paniculatum Poepp	Fabaceae	Late secondary	3.829
7	Sapucaia	Lecythis pisonis Cambess.	Lecythidaceae	Late secondary	3.622
8	Breu Barrote	Tetragastris panamensis (Engl.) O. Ktze.	Burseraceae	Late secondary	2.983
9	Morototó	Schefflera morototoni (Aubl.) Maguire, Steyerl. & Frodin	Araliaceae	Pioneer	2.557
10	Envirão	Guatteria sp.	Annonaceae	Early secondary	2.338
11	Pará-Pará	Jacaranda copaia (Aubl.) D. Don	Bignoniaceae	Pioneer	2.282
12	Jarana	Holopyxidium jarana (Huber) Ducke	Lecythidaceae	Early secondary	2.034
13	Goiabão	Pouteria pachycarpa Pires	Sapotaceae	Climax	1.940
14	Maçaranduba	Manilkara huberi (Ducke) A. Chev.	Sapotaceae	Late secondary	1.936
15	Guajará Bolacha	Micropholis venulosa (Mart. & Eichler) Pierre	Sapotaceae	Late secondary	1.903
16	Louro Preto	Ocotea sp.	Lauraceae	Late secondary	1.868
17	Marupá	Simarouba amara Aubl.	Simaroubaceae	Early secondary	1.570
18	Mangaba	Hancornia speciosa Gomes	Apocynaceae	Early secondary	1.503
19	Embaubão	Pourouma minor Benoist	Urticaceae	Early secondary	1.427
20	Amesclão	Trattinnickia burserifolia Mart.	Burseraceae	Late secondary	1.361
21	Tauari Vermelho	Cariniana micrantha Ducke	Lecythidaceae	Late secondary	1.272
22	Cupiuba	Goupia glabra Aubl.	Goupiaceae	Late secondary	1.233
23	Ingá	Inga edulis L.	Fabaceae	Late secondary	1.219
24	Jatobá Curuba	Hymenaea	Fabaceae	Late	1.211

		intermedia Ducke		secondary	
25	Louro Amarelo	<i>Cordia alliodora</i> (Ruiz & Pav.) Cham.	Lauraceae	Late secondary	1.138

The native forest within the FMU also contains plant species considered threatened with extinction according to the following classification lists: the 2013 list of the Chico Mendes Institute for Biodiversity Conservation (ICMBio); Ministry of the Environment Ordinance No. 561 of 2021, concerning threatened Brazilian species for forest-restoration purposes; and the International Union for Conservation of Nature (IUCN) list.

Table 2. Threatened plant species recorded in the FMU

No.	Vernacular name	Scientific name	Family	Classification system
1	Cedro	<i>Cedrela fissilis</i> Vell.	Meliaceae	ICMBio, 2013; MMA, 2021
2	Tauari Branco	<i>Couratari</i> spp.	Lecythidaceae	ICMBio, 2013
3	Jutaí Café	<i>Hymenaea parvifolia</i> Huber	Fabaceae	ICMBio, 2013; MMA, 2021
4	Jatobá de Fava	<i>Hymenaea</i> sp.	Fabaceae	ICMBio, 2013
5	Itaúba	<i>Mezilaurus itauba</i> (Meissn.) Taub.	Lauraceae	ICMBio, 2013; MMA, 2021
6	Louro Preto	<i>Ocotea</i> sp.	Lauraceae	ICMBio, 2013; IUCN, 2021
7	Sapucaia	<i>Virola surinamensis</i> (Rol.)	Myristicaceae	ICMBio, 2013; IUCN, 2021; MMA, 2021
8	Envirão	<i>Guatteria</i> sp.	Annonaceae	IUCN, 2021
9	Faveira Vermelha	<i>Parkia</i> spp.	Fabaceae	IUCN, 2021

6.4 Fauna

To identify the fauna likely to occur within the FMU, a fauna survey was conducted by AlfaTec Engenharia Ambiental EIRELI. The study consisted of analyses based on secondary data from scientific studies, especially scientific articles, dissertations and theses carried out in the region surrounding the FMU.

According to AlfaTec's report, fauna potentially occurring in the FMU comprises 60 herpetofauna species, including 23 of the order Squamata and 27 of the class Amphibia, three of which are considered vulnerable by IUCN and SEMAS/PA; 32 mammal species, eight considered vulnerable by IUCN and MMA and two considered endangered; and 299 bird species, including three near threatened, 12 vulnerable and two endangered species according to IUCN and MMA.

Further details of the survey conducted by AlfaTec are contained in Tietê Agrícola's 2022 Fauna Inventory Report.

6.5 Socioeconomic characterization

The FMU's direct area of influence comprises the municipalities of Capitão Poço, Ipixuna do Pará and Aurora do Pará, associated with employment generation, economic activity and relationships with communities surrounding the FMU.

The indirect area of influence encompasses Brazil's Northern Region, particularly the southeastern, northeastern and northern portions of Pará State, due to the marketing and export of forest products, thereby contributing to the strengthening of the regional forestry sector.

Settlements - General Information

SR	Settlement code	Settlement project	IBGE code	Municipality	Settled families	Area	Creation date
SR 01 - Pará	PA0251000	PA Canaã	1502301	Capitão Poço	167	3925.262	14/12/2001
SR 01 - Pará	PA0254000	PA Timboranã	1502301	Capitão Poço	120	3280	15/12/2001
SR 01 - Pará	PA0256000	PA Nova Conquista	1502301	Capitão Poço	54	1399.462	12/11/2002

7. LAND USE PLAN

The forest stands currently present in the company's FMU were established in areas previously used for cattle ranching. Therefore, their establishment did not involve clearing native forest and did not result in land-tenure problems or conflicts with surrounding communities. Actions are taken to protect, maintain and preserve the soil and remaining forests within the property in accordance with applicable regulations.

At the federal level, the property is registered in the Rural Environmental Registry (CAR) of the Pará State Secretariat for the Environment and Sustainability (SEMAS-PA) under No. 52571 (São Luiz FMU).

Table 3. Land-use distribution at the São Luiz FMU

Land-use description	Planting year	Age in 2026 (years)	Area (ha)
Seed-origin teak	2010	16	43.05
Clonal teak	2010	16	103.65
Clonal teak	2012	14	255.52
Clonal teak	2013	13	122.71
Clonal teak	2014	12	205.96
Clonal teak	2015	11	124.78
Total teak monoculture plantations			833.03
Total forest plantations			833.03
Legal Reserve (LR)			1,455.56
Permanent Preservation Area (PPA)			96.07
Total protected areas			1,551.63
Remaining alternative land-use area			15.00
Total other uses			15.00
Total farm area			2,399.66

8. SOCIAL AND ENVIRONMENTAL RESPONSIBILITY POLICIES

8.1 Social

8.1.1 People management activities

The company provides adequate infrastructure for workers involved in operations, including rest areas, a dining facility, sanitary facilities and accommodation sized according to demand and maintained in clean, ventilated, safe and functional conditions.

Quality food and drinking water are provided. The kitchen is kept hygienic, food is stored in accordance with conservation requirements, and waste is properly disposed of. The facilities serve the company's own employees and third-party workers, as well as visitors, clients and interns associated with operational activities.

8.1.2 Management of direct employees

- Employees receive occupational health and safety training so that they perform their duties ergonomically and use the required Personal Protective Equipment (PPE);
- All employees undergo annual medical examinations;
- The company provides appropriate transportation for all employees;
- The company ensures fair compensation in accordance with legislation and workers' expectations;
- Training and professional-development opportunities are offered to employees.

8.1.3 Management of service-provider companies

Workers employed by service-provider companies receive training and instructions on the operating procedures applicable to activities performed within the FMU, with clear emphasis on the importance of using the PPE required at the worksite. The key points applied to management of direct employees are also considered for outsourced labor.

8.1.4 Occupational health and safety management

Tietê Agrícola Ltda. ensures adequate working conditions, focusing on operational safety, mandatory PPE use and activity-specific training. The company monitors occupational health through Occupational Health Certificates (ASOs), including pre-employment, periodic, return-to-work and termination examinations, with the aim of preventing occupational diseases.

Labor and collective-bargaining rights are recognized in accordance with national legislation, International Labour Organization conventions and the 1988 Federal Constitution.

Operations follow safety procedures aligned with applicable regulatory standards, including availability of first aid, safe transportation of people and equipment, teamwork in the field and logistical support for emergencies. Risks are identified and managed through the Rural Work Risk Management Program in accordance with NR-31.

The company maintains safety signage in operational and administrative areas of the management unit, including forest stands, yards, processing areas and protected areas, to inform workers about risks and reinforce accident prevention.

8.1.5 Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) is supplied by the company to all employees and is selected to be specific and appropriate for each activity and/or job function. Where bee colonies or other

hymenopteran insects may be present, field assistants, chainsaw operators and machinery operators are required to carry protective clothing suitable for possible attacks (beekeeper protective clothing).

8.1.6 Training program

Tietê Agrícola Ltda. maintains a periodic training program covering both training required by law and additional training that contributes to improving employee safety. The program is attached to the original management-plan documentation.

8.1.7 Community relations

The company seeks to maintain positive interaction with surrounding communities, contributing to improvements in both economic conditions and quality of life through job creation, improvements to access roads (periodic road maintenance and bridge construction), and community initiatives focused on environmental education.

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8.2 ENVIRONMENTAL

8.2.1 Environmental benefits of forests

Planted forests provide significant benefits. Their principal benefit is the sustainable production of timber, meeting market needs while reducing demand for illegally harvested wood. This also helps maintain the balance of the physical and chemical characteristics of soils and reduce deforestation rates both on properties and at the local level. At the company, forest management is carried out appropriately with the objective of maintaining soil structure and protection. In this way, the forest helps reduce the impacts of rainfall on soils, lowering erosion risks and helping prevent the siltation of river and stream channels.

8.2.2 Environmental safeguards

The company adopts the following measures:

a) Protection of High Conservation Value Areas: These areas contain special biological, ecological, social or cultural values, according to the criteria established by the certification system. The company has High Conservation Value Areas within its FMU, represented by preserved native forests and water bodies crossing the property. Protection and conservation measures are established for these areas, including forest-fire prevention and suppression, prohibition of hunting and fishing, reduced and more strictly controlled road traffic, and monitoring related to the identified attributes.

b) Road conservation: Road conservation is intended to ensure normal vehicle traffic and satisfactory transport of forest production. Mitigation measures are adopted against potential damage to access roads. Machinery may not exceed established speeds or travel with excessively heavy loads on these roads. Periodic road maintenance is also performed to keep roads in good condition even during unfavorable periods.

c) Protection of springs and watercourses: Tietê Agrícola Ltda. has approximately 12.37 ha of water bodies, mainly rivers, springs and reservoirs within the FMU area, which are periodically assessed and

monitored. Measures taken to protect these water bodies include controlling the siltation of rivers and streams through improved control of operations carried out in the management area; construction of an appropriate refueling area; cleaning and maintenance of machinery and equipment with separate containment for oil and liquid waste to prevent contamination of rivers, streams and groundwater; and installation of drainage devices, culverts and bridges on access roads to stands and other routes in order to facilitate runoff and prevent water impoundment and soil erosion.

d) Solid Waste Management: The company maintains a Solid Waste Management Plan (PGRS) for the FMU. It provides for planning of the stages of solid-waste management and adoption of preventive and corrective actions in cases of improper waste management or incidents. The plan identifies and quantifies all waste generated by the company and defines collection, transportation, storage and final-disposal processes. Teak forest residues from the sawmill, thinning, pruning and harvesting operations are reused where possible. These residues may include cross-cut offcuts, bark, slabs, defective pieces, small and defective logs and sawdust. Part of this material is collected and used by Floraplaç MDF.

e) Soil protection: All operations are properly planned to avoid damage to the soil. Machinery traffic is controlled to prevent compaction, and transportation of tractors and implements during rainy periods is avoided as much as possible. In native forest areas, vegetated barriers (buffer zones) are maintained to reduce rainwater flow, and drainage structures are established along roads. These measures are important for preventing erosion, maintaining soil structure and reducing water and nutrient losses. Machinery is periodically maintained to prevent leaks and chemical contamination.

f) Wildlife protection: The FMU contains animal species from several groups, including mammals, reptiles, amphibians, fish, insects and birds. To protect wildlife, the company adopts measures based on environmental education and uses educational and prohibitory signs against hunting and fishing along roads.

g) Forest-fire prevention: Planning and monitoring are fundamental to ensuring that any fire within the FMU is controlled in the shortest possible time, safely and with the lowest possible cost, damage and affected area, thereby minimizing effects on the forest. Preventive techniques include the construction and maintenance of firebreaks, which interrupt vegetation to hinder fire spread and facilitate suppression. Maintenance consists of removing combustible plant material from these areas. During periods of higher fire risk, precautions are intensified and pruning, thinning and harvesting residues or wood piles are not left on firebreaks. Fire-control plans and training are provided to an employee fire brigade, together with environmental education for surrounding communities.

h) Protection against encroachment: To prevent encroachment, the company seeks to keep all occupied areas properly delimited and fenced, maintain effective monitoring, and keep FMU land-use and legal-possession documentation current and regular.

i) Protection of Permanent Preservation Areas (PPAs): Tietê Agrícola Ltda. has 96.07 hectares of Permanent Preservation Areas (APPs/PPAs) within the FMU, which are clearly delimited and preserved. Protection measures are applied to prevent damage arising from activities carried out in the management area. Operational waste is taken to appropriate locations and employees receive training so that they understand and apply the necessary safeguards.

j) Chemical Products Management Program: Tietê Agrícola Ltda. maintains a Chemical Products Management Program (PGPQ), which describes the correct handling of these products. The company uses a limited variety of chemical products in its production processes. Most have inherent risks and toxicity and, if handled improperly, may threaten employee health, cause environmental pollution, or

lead to accidents or incidents affecting communities surrounding the FMU. The program model, governed by the cited Occupational Safety Regulatory Standards (NRs) and ordinances, establishes minimum parameters and general guidelines for implementation of the PGPQ. These requirements may be expanded according to collective bargaining agreements or according to health or environmental risks identified in activities carried out within the FMU.

k) Native species suitable for restoration of degraded areas: Tietê Agrícola maintains plans for restoration of degraded areas within and around the FMU through re-establishment with forest species when necessary. The following list identifies species that may be used if degraded areas occur within the FMU, both on upland sites and in seasonally or permanently wet areas, particularly areas near water bodies.

Table 3. Species recommended for restoration of degraded areas in the Tietê Agrícola FMU

No.	Common name	Scientific name	Family	Successional group	Suggested planting site
1	Andiroba	Carapa guianensis Aublet	Meliaceae	Early secondary	Wet soil
2	Paricá	Schizolobium parahyba var. amazonicum (Huber x Ducke) Barneby	Fabaceae	Pioneer	Upland
3	Muiracatiara	Astronium lecontei Ducke	Fabaceae	Early secondary	Upland
4	Taxi-Branco	Sclerolobium paniculatum Vogel	Fabaceae	Pioneer	Upland
5	Castanheira	Bertholletia excelsa L.	Lecythidaceae	Climax	Upland
6	Seringueira	Hevea brasiliensis L.	Euphorbiaceae	Late secondary	Transition
7	Faveira	Parkia paraensis Ducke	Fabaceae	Early secondary	Upland
8	Buriti	Mauritia flexuosa L.	Arecaceae	Pioneer	Wet soil
9	Embaúba	Cecropia pachystachya Trécul.	Cecropiaceae	Pioneer	Wet soil
10	Jenipapo	Genipa americana L.	Rubiaceae	Pioneer	Wet soil
11	Ingá Branco	Inga laurina (Sw.) Willd.	Fabaceae	Pioneer	Wet soil
12	Ingá Feijão	Inga marginata Willd.	Fabaceae	Pioneer	Wet soil
13	Ipê do Brejo	Handroanthus umbellatus Mattos	Bignoniaceae	Pioneer	Wet soil
14	Ingá	Inga edulis	Fabaceae	Pioneer	Transition

		(Sw.) Willd.			
15	Abiu	Pouteria caimito (Ruiz & Pav.) Radlk.	Sapotaceae	Late secondary	Upland / transition
16	Jatobá	Hymenaea courbaril L.	Fabaceae	Climax	Upland / transition
17	Embaúba- vermelha	Cecropia glaziovii Snethl.	Cecropiaceae		

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8.2.3 High Conservation Value Attributes (HCVs)

High Conservation Value (HCV) attributes are classified into six types of High Conservation Value:

HCV 1 - Species diversity: Concentrations of biological diversity, including endemic species and rare, threatened or endangered species, that are significant at global, regional or national levels.

HCV 2 - Landscape-level ecosystems and mosaics: Intact Forest Landscapes and large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels and contain viable populations of the great majority of naturally occurring species in natural patterns of distribution and abundance.

HCV 3 - Ecosystems and habitats: Rare, threatened or endangered ecosystems, habitats or refugia.

HCV 4 - Critical ecosystem services: Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes.

HCV 5 - Community needs: Sites and resources fundamental for satisfying the basic necessities of local communities or Indigenous Peoples, in terms of livelihoods, health, nutrition, water and related needs, identified through engagement with these communities or Indigenous Peoples.

HCV 6 - Cultural values: Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance to the traditional cultures of local communities or Indigenous Peoples, identified through engagement with them.

Tietê's FMU contains HCVs 1 and 2, consisting essentially of forest remnants and watercourses. The Legal Reserve area totals 1,435.76 ha. These areas contain 86 tree species, in addition to several other plant species, nine of which are considered threatened or at risk of extinction based on surveys of the Ministry of the Environment (MMA), the International Union for Conservation of Nature (IUCN), and the Chico Mendes Institute for Biodiversity Conservation (ICMBio).

These areas also have the probable occurrence of 391 animal species, 30 of which are considered threatened or at risk of extinction. In addition, the 12.37 ha of watercourses present in the FMU comprise one main river with four tributaries and their respective springs. These are fundamental to

maintaining the region's micro-watershed and provide ecosystem services such as hydrological cycling and maintenance of local and regional fish fauna.

Tietê continuously monitors the HCVs present in the FMU in order to ensure preservation of fauna and flora species and conservation of soil and water resources. Further information on HCV characterization and conservation is provided in the company's HCV Identification Report.

8.2.4 Protection and conservation of HCVs

Tietê Agrícola Ltda. monitors environmental impacts caused by all its operational activities. Assessments and diagnoses are conducted regarding the results of natural or anthropogenic phenomena and changes occurring within the FMU and its respective area of influence.

Based on this monitoring and other information related to potential environmental impacts caused by FMU activities, Tietê establishes prevention and environmental-protection measures and mitigation actions intended to minimize harmful effects as far as possible. These measures are essential both to mitigate impacts and to ensure greater efficiency in sustainable forest-management activities.

The main objectives of these protection and conservation measures are:

- Ensure preservation of fauna and flora biodiversity in forest remnants, particularly High Conservation Value Areas;
- Reduce and, where possible, eliminate problems related to pollution and contamination of soil and groundwater;
- Ensure preservation of watercourses and all water resources present on the property and in the micro-watershed as a whole;
- Ensure rational use of natural resources;
- Ensure efficient and responsible forest management.

The main environmental protection and conservation measures adopted for potentially impacting activities include:

Heavy vehicle and machinery traffic: Reduction of load and machinery traffic intensity, together with control of load weight. Wider wheels are preferred on tractors and trucks in order to reduce pressure concentrated on the soil surface.

Machinery management: Periodic maintenance is performed on vehicles, machinery and equipment. Refueling and cleaning of machinery and vehicles take place in appropriate locations.

Application of inputs: Pesticides, soil-acidity amendments and fertilizers are applied locally and rationally, following technical application-safety measures.

Stand management and conservation: Soil erosion processes are controlled through containment measures, with drainage channels directed away from native vegetation and watercourses, as well as embankments intended to reduce particle transport by water.

Area clearing and preparation for planting and road construction: Planning and training are carried out to avoid unnecessary clearing of native vegetation. Where necessary, native vegetation is restored.

Forest-fire prevention and suppression: Firebreaks are constructed and pruning, thinning and harvesting residues or timber piles are removed from stands as a preventive measure. A responsible fire-control and monitoring team is prepared and receives continuous training.

Preservation of native forest areas: Isolation and buffer zones are implemented to ensure preservation of native areas. These zones also help maintain connectivity among areas, including ecological corridors. Precautions are additionally taken regarding the use of inputs and movement of machinery and vehicles.

9. CHARACTERIZATION AND JUSTIFICATION FOR USE OF THE SPECIES

Belonging to the Lamiaceae family, teak (*Tectona grandis* Linn. f.) is known worldwide for its high-quality timber, used mainly in civil construction, shipbuilding and furniture manufacture. Its wood has a basic density of approximately 0.65 g cm^{-3} . It has good durability and stability, is easy to pre-treat, and has natural resistance to attack by pests and diseases. The species is native to Asia, is widely cultivated in several regions of Africa and the Americas, and develops a large, straight and cylindrical stem.

Teak is cross-pollinated and has a high degree of self-incompatibility. The species has a thick, relatively shallow taproot, approximately 40 cm deep, is highly intolerant of shade and is fire resistant. Although it grows best under tropical, moderately humid and warm conditions, teak tolerates a broad range of edaphoclimatic conditions. It withstands annual rainfall of approximately 2,500 mm and adapts very well to the local climate occurring in the FMU.

Its development is best in deep, well-developed, well-drained and fertile soils with good availability of calcium, magnesium and other cationic nutrients. The optimum soil pH for good development of the species is between 6 and 7.

Although native to Asia, the species, probably because of its tropical origin, has adapted very well to the edaphoclimatic conditions of the region in which the FMU is located. Several studies carried out in the northeastern mesoregion of Pará State, many of them within the FMU itself, have found that teak stands in these areas show highly satisfactory establishment, growth and productivity rates.

Studies conducted with the species in northeastern Pará have addressed the spatial relationship between soil fertility and productivity (MACEDO NETO, 2019), spatial variability of growth and productive capacity (SANTOS, 2018), determination of thinning regimes in planted stands (SOUSA et al., 2022), and wood characterization (DINIZ & REIS, 2021). These studies further support teak's potential for cultivation in the region where the company's FMU is located.

As previously noted, the species has strong appeal in the world market because of its high productivity and the high economic value of its timber. Based on the company's 2021 Annual Forest Inventory Report, teak stands in the FMU have an average total wood volume of $90.58 \text{ m}^3 \text{ ha}^{-1}$, of which commercial volume (heartwood volume) is $63.39 \text{ m}^3 \text{ ha}^{-1}$. Clonal teak stands have a mean annual volume increment of $13.94 \text{ m}^3 \text{ ha}^{-1} \text{ year}^{-1}$, compared with $6.95 \text{ m}^3 \text{ ha}^{-1} \text{ year}^{-1}$ for seed-origin stands. These data highlight the productive potential of the species for reforestation and timber production.

10. PRODUCTS AND MARKETS

Tietê Agrícola Ltda.'s markets for forest products originating from its stands are structured as follows:

Logs: Logs originating directly from the harvesting area are marketed, especially to export markets. For sale, logs must meet dimensions according to specific buyer requirements. These logs must generally have larger diameters; consequently, timber from final harvest is directed to this market.

Blocks: Blocks are produced after breakdown of logs by removing the slabs. Dimensions produced by the company are 10 x 10 cm, 10 x 13 cm, 10 x 8 cm, 13 x 8 cm, 15 x 10 cm, 8 x 6 cm and 8 x 8 cm, all with an average length of 2.25 m.

Boards: Boards are produced after log breakdown, with predefined dimensions and smaller thicknesses. The dimensions stated in the source document are 10 x 10 cm, 10 x 13 cm, 10 x 8 cm, 13 x 8 cm, 15 x 10 cm, 8 x 6 cm and 8 x 8 cm, all with an average length of 2.25 m.

11. FOREST INVENTORY

The forest inventory carried out in the area is tactical in nature and uses multiple-occasion sampling, comprising 80 sample plots to quantify and qualify existing forest attributes. Forest monitoring has been conducted since 2013 using a fixed-area sampling method, with circular plots of 500 m² (radius = 12.6 m) for unthinned stands and 700 m² (radius = 15.0 m) for stands subjected to the second thinning. Systematic sampling is used, with plots arranged at 320 m x 320 m spacing.

11.1 Variables/attributes assessed in the plantations

11.1.1 Quantitative data for inventoried trees

The quantitative data are: tree number; DBH - diameter at breast height, measured at 1.3 m above ground level; Ht - total height, measured in metres; Hc - commercial height, measured in metres to one decimal place, from the base of the tree to the point where the crown begins; and Hcf - future commercial height, measured in metres to one decimal place, from the base of the tree to the point at which the stem remains commercially viable.

11.1.2 Qualitative data for inventoried trees

The qualitative attributes are: stem fork (Bif) and crown fork (Bic); tree marked for thinning (MD); stem quality (Qf): 1 - straight, cylindrical stem with no apparent defect; 2 - slightly crooked but cylindrical stem without significant branching; 3 - strongly crooked stem; health status: healthy, with no apparent defects (S1); initial stage of deterioration caused by pests or diseases (S2); advanced stage of deterioration caused by pests or diseases (S3); standing dead tree (S4); presence of termites (Cu) and/or ants (Fo); crookedness in the crown (Tc), stem (Tf) and/or base (Tb); damaged (broken) and leaning tree; tree mortality (M); and thinned tree (D).

11.1.3 Information generated from the variables/attributes obtained

From these data, the following information is generated: fitting of volume, hypsometric and dominant-height models; quantification and estimation of the proportion of heartwood relative to sapwood by age; fitting of taper and assortment models to obtain multiple products and maximize wood utilization; determination of site classes and productive capacity; projection of mean DBH by site class; determination of DBH increment by site class; estimation of average volume stocks by site and diameter class; calculation of total production by age; determination of increments in other dendrometric variables; and assessment of qualitative variables including stem quality, health, survival, forking, thinning systems, pests and diseases.

11.2 Data processing

11.2.1 Inventory database and processing

Annual inventory data are stored and organized in a central database combining all plots measured in all measurement years since 2013.

11.2.2 Volume calculation

Stem volume in the FMU is obtained by scaling trees felled during thinning and harvesting activities, measuring stem diameter at 5, 15, 25, 35, 45, 55, 65, 75, 85 and 95% of tree height. The cross-sectional area corresponding to each measured diameter is then determined. Using this information and tree height, total stem volume is calculated. Trees selected for scaling are representative and proportional to the diameter distribution of the stand at each age, with specific scaling selection for different stands.

11.2.3 Hypsometric and volumetric modeling

Tietê also determines teak tree volume and height through modeling, including fitting and analysis of height and volume equations. To estimate total height, hypsometric models are fitted with height as the dependent variable and DBH and/or mathematical transformations of DBH as independent variables. For volume estimation, volume obtained from scaling is used as the response variable, while DBH and, in some cases, height and their respective mathematical transformations are used as independent variables. Once fitted, both volume and hypsometric equations are subjected to several goodness-of-fit analyses using statistical criteria.

11.2.4 Stem analysis (ANATRO)

To assess internal stem quality, particularly the proportion of heartwood, which is the principal component of interest for sawmilling, the company conducts Stem Analysis (ANATRO). This analysis consists of collecting discs from felled sample trees at the same stem positions used for scaling. The following information is obtained and used for wood processing: diameter over bark (dcc), diameter under bark (dsc), and heartwood diameter (dc).

11.2.5 Taper function and assortment

The taper function is used by Tietê to estimate the rate of diameter reduction along the stem, supporting the need to determine diameters at different heights in order to maximize stem utilization and production of multiple wood products.

11.2.6 Site classification

The company determines thinning regimes and projects stand volume production on the basis of productive-capacity classes using the site-index system. Classification is based on fitting sigmoid dominant-height models as a function of stand age to form anamorphic growth curves (guide curves). Depending on the characteristics of a given stand, a reference age close to rotation age is defined, generally establishing three site classes with 3 m intervals between classes.

11.2.7 Diameter projection and increment

Diameter projection and diameter increment are estimated to support decision-making regarding stand growth dynamics. Diameter is projected using DBH models as a function of stand age and site index. Diameter increment is obtained by calculating current annual increment (CAI) and mean annual increment (MAI) in diameter.

11.2.8 Representative sampling

Sampling is considered representative according to calculation of sampling intensity, which determines whether the number of samples used will accurately estimate field data for a given confidence interval, at a 95% probability level and a maximum allowable error of 10%.

12. PRODUCTION PLANNING

To determine wood volume production, Tietê Agrícola uses planning at three levels: strategic, tactical and operational. Strategic planning concerns the management process across the company's different sectors, with emphasis on market strategies, and therefore operates at management level with a 20- to 25-year horizon. Tactical planning focuses specifically on wood production from the management units while also addressing minimization of environmental impacts caused by forest-management activities. It covers the set of teak stands in the company's management units with a planning horizon of up to five years. Operational planning consists of the silvicultural techniques used to establish, manage and harvest teak plantations and is directed to each stand individually, with annual adaptations.

12.1 Estimated productivity of thinning and final harvest

The key element of planning at all the levels described above is estimation of wood-volume production (production regulation). This estimate guides all activities contemplated in the company's planning and is organized into stages.

Stage 1 - The productive capacity of stands is determined through forest-site classification. The three classes obtained from the fitted site-classification curve are considered low, medium and high productivity and are used as a basis for determining the thinning regime, with different thinning times for each class.

Stage 2 - After productive-capacity classes have been determined, basal area and volume are projected by fitting the segmented Clutter model. For each stand, estimation is based on the principle that both the technical thinning age and the thinning rotation age occur when trees reach maximum volume increment. Simulations are performed using different thinning scenarios, resulting in different basal-area reductions by site class, in order to estimate how these thinning regimes contribute to growth of the remaining trees.

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PART 5

13. STAND MANAGEMENT

Management of teak stands at Tietê Agrícola comprises the set of silvicultural operations required to establish, maintain and conduct plantations through the production cycle, with the objective of obtaining timber of appropriate quality and dimensions while maintaining environmental and operational safeguards.

13.1 Silvicultural establishment and maintenance techniques

13.1.1 Area clearing and soil preparation

Areas used for teak establishment are prepared according to local conditions and operational requirements. Preparation seeks to provide adequate conditions for seedling establishment while minimizing soil disturbance and avoiding impacts on native vegetation, Permanent Preservation Areas and other protected areas.

Operations are planned to reduce soil compaction and erosion. Machinery traffic is controlled, particularly during periods of high soil moisture, and drainage structures are maintained where necessary.

13.1.2 Seedling production and procurement

Seedlings used for plantation establishment must have adequate genetic origin, vigor, health and morphological quality. Both seed-origin and clonal planting material have been used historically within the FMU. Seedling procurement and handling seek to ensure traceability and suitable conditions until planting.

13.1.3 Liming, soil fertilization and seedling planting

Liming and fertilization are carried out according to technical recommendations and soil conditions. Inputs are applied rationally, observing environmental safeguards and occupational-safety requirements. Planting is carried out after preparation of the site, with spacing and establishment procedures defined according to the silvicultural planning for each stand.

13.1.4 Pest and disease control

Plantations are periodically inspected for the occurrence of pests and diseases. Control measures are adopted when necessary, prioritizing prevention, monitoring and technically justified interventions. Chemical products, when required, are managed in accordance with the company's Chemical Products Management Program and applicable legal and certification requirements.

13.1.5 Weed competition control

Weed competition is controlled particularly during plantation establishment and early stand development, when competition for water, light and nutrients can adversely affect teak growth. Control methods are selected according to field conditions and may include manual, mechanical or technically authorized chemical methods.

13.2 Artificial pruning system

Artificial pruning is carried out to improve stem quality and increase the production of clear wood. The operation consists of removing selected branches while avoiding excessive reduction of the live crown and minimizing wounds that could impair tree health or wood quality. Pruning intensity and timing are defined according to stand development.

13.3 Thinning system

Thinning is a fundamental component of teak management because it reduces competition among trees and concentrates growth on selected stems. Thinning regimes are defined from forest-inventory information, stand age, site quality, basal area, diameter distribution, tree quality and production objectives.

13.3.1 Systematic thinning

Systematic thinning removes trees according to a predefined spatial pattern, independent of individual tree quality. It may be used where operational regularity and access are important, especially during early interventions.

13.3.2 Selective thinning

Selective thinning removes trees according to individual characteristics, prioritizing the retention of trees with better stem form, health, vigor and growth potential. Suppressed, defective, damaged or otherwise undesirable trees may be preferentially removed.

13.3.3 Mixed thinning

Mixed thinning combines systematic and selective criteria. It allows operational access while simultaneously favoring retention of the best trees for subsequent growth and final harvest.

13.4 Stump sprout control

After thinning or harvesting, stump sprouts may be controlled when necessary to avoid unwanted competition and interference with subsequent stand-management activities. The control method is selected according to operational and environmental conditions.

13.5 Harvesting

Forest harvesting is planned according to production forecasts, market requirements, stand conditions, road access, soil conditions and environmental restrictions. Operations are organized to maximize wood recovery and quality while reducing damage to remaining trees, soil, water resources, native vegetation and infrastructure.

13.6 Forest harvesting activities

13.6.1 Felling

Tree felling is performed by trained personnel using appropriate equipment and safety procedures. Directional felling is adopted whenever applicable to improve operational safety, facilitate subsequent extraction and reduce damage to remaining vegetation and infrastructure.

13.6.2 Forwarding

After felling and processing, timber is moved from the stand to designated collection or log-yard areas. Forwarding routes are planned to reduce unnecessary traffic, soil disturbance and damage to residual trees.

13.6.3 Primary transport

Primary transport comprises movement of harvested wood from operational collection points toward log yards or other internal destinations. Loads, routes and equipment are managed to maintain safety and minimize impacts on roads and soil.

13.7 Forest harvesting equipment and machinery

13.7.1 Chainsaw

Chainsaws are used in tree felling and cross-cutting operations. Operators must be trained and use the PPE required for the activity. Equipment is maintained in appropriate operating condition.

13.7.2 Forwarder

The forwarder is used to transport logs from the harvesting area while reducing direct dragging of timber on the soil. Operation is planned according to terrain and soil conditions.

13.7.3 Forest loader (wheel loader)

The forest loader is used in log handling, stacking and loading operations. Its use follows operational-safety procedures and traffic controls within yards and loading areas.

13.7.4 Telescopic Handler/Forklift: Genie

Telescopic handling equipment is used where appropriate for movement and organization of timber and materials. Operators must be qualified for the equipment and comply with applicable safety procedures.

13.8 Forest harvesting systems

13.8.1 Cut-to-length system

Trees are felled, delimbed and cross-cut into assortments at or near the felling site before the resulting logs are transported.

13.8.2 Long-log system

Trees are felled and processed into longer stem sections, which are then transported for subsequent handling or processing.

13.8.3 Whole-tree system

The entire tree, or nearly the entire above-ground portion, is extracted after felling for subsequent processing at another location. The choice of harvesting system depends on stand conditions, equipment, product specifications and operational planning.

13.9 Actions to minimize impacts from thinning and forest harvesting

13.9.1 On soil

Operations are planned to minimize soil compaction, rutting and erosion. Machinery traffic is concentrated on planned routes where possible, and operations under excessively wet soil conditions are avoided. Drainage and road maintenance measures are adopted to control runoff and sediment transport.

13.9.2 On water resources

Permanent Preservation Areas and watercourses are protected from operational disturbance. Machinery refueling and maintenance are performed in appropriate locations, and drainage structures are maintained to reduce sediment input into streams, rivers and other water bodies.

13.9.3 In native forest areas and on wildlife and flora

Operational planning seeks to prevent encroachment into native vegetation and protected areas. Hunting and fishing are prohibited, traffic is controlled where necessary, and workers receive guidance on protection of wildlife, flora and High Conservation Value Areas.

14. POST-HARVEST

14.1 Log yard

Harvested logs are directed to log yards for organization, measurement, classification, storage and preparation for subsequent processing, sale or transport. Yard organization is intended to facilitate traceability, safe movement of equipment and efficient handling of forest products.

14.2 Log tallying and stacking

Logs are tallied and organized according to operational and commercial criteria. Stacks are arranged to facilitate identification, measurement, handling and inventory control. Records support control of production and chain of custody.

14.3 Wood processing

Wood may be processed according to market specifications, including conversion of logs into blocks, boards and other products. Processing seeks to optimize raw-material recovery and maintain product identification and traceability.

14.3.1 Wood-processing machinery

Machinery used in wood processing is operated by trained personnel and is subject to maintenance and occupational safety requirements. Operational controls are applied to reduce accidents, waste and environmental impacts.

15. CHAIN OF CUSTODY

The chain-of-custody control system is intended to maintain identification and traceability of forest products from their origin in the managed stands through harvesting, internal movement, storage, processing and dispatch. Production records, stock controls, transport documentation and other applicable records are maintained to support verification of product origin.

Certified and non-certified material, where applicable, must be controlled in accordance with the procedures adopted by the organization and applicable FSC requirements so that product claims are supported by documented evidence.

16. TRANSPORTATION

Transportation of forest products is planned according to load characteristics, road conditions, legal requirements and destination. Vehicles must comply with applicable requirements, loads must be properly secured, and documentation must accompany timber movements as required.

Internal and external transport operations are conducted with attention to road safety, load limits, prevention of environmental impacts and maintenance of product traceability.

17. ROAD CONSTRUCTION AND MAINTENANCE

Road construction and maintenance are planned to provide operational access while minimizing erosion, sedimentation and impacts on water resources and native vegetation. Drainage structures, culverts, bridges and other devices are installed or maintained where required.

Road use is controlled according to weather and soil conditions. Maintenance activities seek to preserve road trafficability and safety throughout forest operations and to avoid unnecessary opening of new access routes.

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18. ENVIRONMENTAL, SOCIAL AND ECONOMIC IMPACTS

Identification and description of the environmental, social and economic impacts caused by Tietê Agrícola activities in the FMU.

Type	No.	Impact Identification	Impact Description	Nature	Scope	Mitigation or Enhancement Actions
Environmental	1	Soil Erosion and Compaction	Increase in soil density and reduction in porosity due to heavy machinery traffic; formation of soil runoff furrows and surface runoff (sheet erosion).	Negative	Direct	Reduce traffic frequency and load weight; use wider machinery wheels to reduce pressure on the same soil point; control speed during forwarding and transport operations.
Environmental	2	Soil and Water Contamination	Fuel, oil and other fluid leaks from machinery; application of chemical inputs in plantation areas during management activities (lime, fertilizers, herbicides, among others).	Negative	Direct	Refuel and wash machinery in appropriate locations; perform periodic maintenance of machinery and equipment; apply inputs locally and rationally, following technical safety measures.
Environmental	3	Sedimentation of Water Bodies	Deposition of soil and filling of rivers, streams and springs within and around the FMUs as a result of thinning and harvesting activities.	Negative	Direct and Indirect	Control erosion processes through containment measures, with drainage channels directed away from native vegetation and watercourses.
Environmental	4	Air Pollution	Presence of suspended solid particles and toxic atmospheric gases due to the constant use of machinery, equipment and vehicles.	Negative	Direct and Indirect	Use alternative equipment where possible; periodically maintain equipment, vehicles and machinery.
Environmental	5	Suppression of Native	Removal of primary or	Negative	Direct	Plan forest restoration;

		Vegetation	secondary forest areas for road opening and other activities.			planning and training to prevent unnecessary clearing of native vegetation.
Environmental	6	Forest Fires	Fire outbreaks in stands due to plant residues during drier periods, which may damage soil and plantation areas and spread to native vegetation.	Negative	Direct	Construct firebreaks; maintain roads; prepare a team responsible for fire suppression and monitoring.
Environmental	7	Displacement of Local Fauna	Displacement of animal species occurring in native areas due to expansion of activities and wildlife roadkill.	Negative	Direct and Indirect	Establish isolation zones around native areas; take special care with chemical inputs and machinery and vehicle traffic.
Environmental	8	Fragmentation of Fauna and Flora	Loss of habitat connectivity for animal and plant species due to expansion of plantation areas and construction of roads and improvements.	Negative	Direct and Indirect	Establish buffer zones and adequately plan land use to ensure connectivity between Legal Reserve and Permanent Preservation Areas.
Environmental	9	Oil or Fuel Spills	Oil or fuel spills during operations involving machinery inside the stands.	Negative	Direct	Train employees to prevent oil spills and, when necessary, use damage-containment measures such as sawdust at the spill site.
Social	1	Generation of Direct Employment	Hiring employees to work in the various stages of Forest Management in the FMU, valuing local labor.	Positive	Direct	Prioritize local and regional labor for activities related to Forest Management at different levels.
Social	2	Generation of Indirect Employment	As the flow of people in the municipality and region increases due to Tietê activities, other services become necessary, increasing employment opportunities outside the Company.	Positive	Indirect	Prioritize local and regional labor for activities related to Forest Management at different levels.
Social	3	Increase in Local and Regional Basic Services	Increase in essential health, education and other services as a result of demographic growth in	Positive	Indirect	Encourage basic services to improve the quality of life of Tietê employees, together with public authorities

			municipalities where the FMU is located.			and other private-sector institutions.
Social	4	Improved Quality of Life for Employees' Families	Improved quality of life for employees through increased employability generated by the company and improvement of some basic services in the region.	Positive	Direct and Indirect	Ensure adequate working conditions and incentives for employees and their families, as well as fair wages and all labor benefits required by law.
Social	5	Strengthening Nearby Rural Communities	Strengthening nearby rural communities through social projects developed in partnership with Tietê.	Positive	Indirect	Carry out social projects to help develop local communities near the FMUs.
Social	6	Development of Scientific Research in Forestry and Related Areas	Contribution to technical and scientific knowledge in forestry and related fields, as well as to the training of professionals in these areas.	Positive	Direct	Establish partnerships with universities and research institutions to strengthen scientific research in management and silviculture of planted forests and related areas.
Economic	1	Strengthening Local Commerce	The increased flow of people resulting from Company activities creates demand for other services and products, increasing opportunities for local commerce; commercialization of Tietê products also contributes to strengthening local commerce.	Positive	Direct and Indirect	Value local commerce and contribute to its strengthening through commercialization of Company products.
Economic	2	Strengthening the Regional Economy	Production and commercialization of Tietê products contribute to strengthening the economy by supplying the local furniture and civil-construction markets and related activities.	Positive	Indirect	Value the local market, allocating part of production to meet demand in the municipalities and region where the FMUs are located.
Economic	3	Increase in Public and Private Investment in the Region	Increase in public- and private-sector investment opportunities resulting from strengthening of	Positive	Indirect	Value the local market and regional economy and seek partnerships with public authorities

			the regional economy as an indirect consequence of Tietê activities.			and private enterprise.
Economic	4	Contribution to Strengthening the Forestry Sector Regionally and Nationally	Strengthening forestry-sector activities through increased supply to the local market and increased exports of forest products and by-products generated by Tietê.	Positive	Direct and Indirect	Focus on the quality of timber, wood chips and other by-products, together with production optimization, to ensure satisfactory supply and exports that meet regional, national and international market demand.

18.1 Summary of costs to be assessed in the new cycle related to social and environmental impacts

Activity	Potential Impact	Mitigation Measure	Associated Cost	Frequency	Responsible
Forest harvesting	Soil compaction	Planned trail maintenance and use of EIR	Operational training + technical planning	Annual	Forest Manager
Forest harvesting	Sedimentation of watercourses	Maintenance of PPAs and construction of culverts	Drainage materials and road maintenance	Continuous	Field Supervisor
Timber transport	Dust and noise emissions	Speed control	Signage and guidance	Seasonal	Forest Manager
Use of chemical inputs	Soil and water contamination	Adequate storage and controlled application	PPE, training and storage infrastructure	Annual	Safety and Environment
Forest operations	Fauna displacement	Demarcation of sensitive areas and signage	Environmental signs and training	Annual	Environment
Operational activities	Waste generation	Segregation and adequate disposal	Collection services and containers	Monthly	Administration
Mechanized operations	Risk of accidents	Safety training and PPE	Purchase of PPE and training	Continuous	OHS
Community relations	Social conflicts	Meetings and communication channels	Administrative and travel costs	Annual	Forest Manager
Road maintenance	Erosion	Drainage installation and reshaping	Machinery and fuel	Seasonal	Forest Manager
Environmental protection	Forest fires	Brigade and firefighting equipment	Equipment and training	Annual	Forest Manager

18.2 Matrix - Results to be entered and benefits of impact mitigation

Impact	Mitigation Measure	Expected Result	Environmental/Social Benefit	Monitoring Indicator
Soil compaction	Trail planning	Reduction of impacted area	Maintenance of productivity	% area affected
Sedimentation of watercourses	Protection of PPAs	Water quality preserved	Conservation of water resources	Turbidity / inspections
Dust on roads	Watering	Reduction in dust emissions	Improvement for communities	No. of complaints
Use of pesticides	Controlled application	Reduction of contamination	Protection of soil and water	Application records
Fauna displacement	Signage and control	Less interference with fauna	Biodiversity conservation	Sighting records

Waste generation	Adequate disposal	Reduction of waste in the field	Environmental improvement	Volume properly disposed
Risk of accidents	Training	Reduction in accidents	Worker safety	Accident rate
Social conflicts	Active communication	Transparent relationship	Social acceptance	No. of meetings
Road erosion	Drainage	Reduction of erosion processes	Soil protection	Monitored erosion points
Fires	Trained brigade	Rapid response	Environmental protection	Response time

19. MONITORING

Tietê Agrícola Ltda. periodically monitors all its operations and their respective externalities, both in the management units and in surrounding communities. These monitoring activities are important because they provide the basis for measures to prevent and minimize potential impacts, as well as for improvements in management practices and related activities.

Records and evaluations are maintained for the results of any phenomena and changes caused in nature and/or induced in the management area and buffer zone. These evaluations seek to improve protection of the FMU Legal Reserve and Permanent Preservation Areas and adjacent communities, and are used for critical analyses to determine whether planning, forest-management practices and other activities need to be redirected. Tietê has a monitoring plan with pre-established frequency and intensity based on specific parameters. The company conducts five main types of periodic monitoring under this plan: environmental, forest, social, economic and operational.

Environmental monitoring promotes studies and investigations to identify trends in the impacts of FMU management activities on fauna, flora, soil, water resources, waste generation and other factors. Forest monitoring covers practices aimed at maintaining the quality of FMU forest plantations and native forests through planned inspections that assess the risk of disease or pest attacks in plantations, as well as forest-fire risks in planted stands, native forests, Permanent Preservation Areas (PPAs) and Legal Reserve Areas (LRAs).

Social monitoring follows the level and quality of employment, occupational accidents, personnel development (training carried out), compliance with occupational-safety regulatory standards and relations with local communities adjacent to the enterprise through social programs promoted by the company. Economic monitoring covers investments in machinery and equipment, timber production, fuel and herbicide consumption, and plantation productivity through continuous forest inventories. Operational monitoring follows activities related to forest management in order to assess the efficiency with which they are performed. Further details on monitoring conducted by Tietê in the FMU and its area of influence are contained in the Company Monitoring Program.

20. MONITORING RESULTS

Table 15. Summary of indicators for monitoring environmental, forest, economic, operational and social resources in Tietê Agrícola FMUs.

Category	Indicator	Unit	2022	2025	2026
Fauna	Number of species recorded	Count	391	391	-
Fauna	Number of threatened species recorded	Count	30	30	-
Flora	Number of forest species	No. of species	86	86	-
Flora	Number of	No. of species	9	9	-

	threatened forest species				
Conservation Areas	Permanent Preservation Area	Hectare	96.07	96.07	-
Conservation Areas	Legal Reserve Area	Hectare	1,455.56	1,455.56	-
Water resources	Water quality index at monitoring points	Data	Compliant	-	-
Planted Stands	Number of stands (different ages)	Count	5	5	-
Planted Stands	Number of compartments	Count	30	30	-
Planted Stands	Planted area	ha	833.03	833.03	-
Water-use monitoring	Water consumption and waste	l/hour	15 m³	15 m³	-
Drinking-water quality monitoring	Drinking Water Quality Index		Compliant	Compliant	-
Waste generation	Solid-waste generation	kg ha-1/ha	72	-	-
Agricultural pesticide consumption	Maxizato 720 wg	R\$	16,200.00	-	-
Forest Protection	Fire-brigade training	Hours	20	-	-
Forest Protection	Construction of firebreaks	Hours	24	-	-

Economic Resources	Indicator	Unit	2022	2025	2026
Timber production	Annual harvest volume	m³	7,761.91	629.35	-
Timber production	Sawn timber volume	m³	1,507.16	143.90	-
Plantation Productivity (Forest Inventory)	Mean Annual Increment (m³ ha-1) - Seed	Seed	6.76	-	-
Plantation Productivity (Forest Inventory)	Mean Annual Increment (m³ ha-1) - Clone	Clone	12.23	-	-
Service contracting	Local outsourced services	Count	6	0	-
Taxes and Fees	Federal/State/Municipal/Social-security and charges	R\$	414,695.05	-	-
Investments	Machinery and Equipment	R\$	36,265.54	-	-
Investments	Training	R\$	1,500.00	-	-
Fuel consumption	Forest-equipment fuel consumption	liters	132.0	9,152.0	-
Fuel consumption	FMU vehicle fuel consumption	liters	9,641.0	-	-
Fuel consumption	Sawmill-machine fuel consumption	liters	6,130.0	-	-

Social Resources	Indicator	Unit	2022	2025	2026
Direct employment	Company employees		49	22	-
Outsourced companies	Number of companies		6	0	-
Training	Training hours	Hours	57	32	-
Training	Investment in training	R\$		3,500.00	-
No. of accidents	With lost time	Count	0	0	-
No. of accidents	Without lost time	Count	0	0	-
No. of accidents	Total number of accidents	Count	0	0	-
Investment in Occupational Health and Safety	Medical examinations	R\$	2,618.00	-	
Investment in	PPE/CPE	R\$	4,380.64	-	-

Occupational Health and Safety					
Communities served	No. of communities	Count	1	0	
People served by projects	No. of people	Count		0	
Social projects developed	Project name	Description	Forests Forever	-	
Actions developed	Activities	Description	Seedling donation, planting, training.	-	

Operational Resources	Indicator	Unit	2022	2025	2026
Area clearing	Quantity of machinery	Count	2	3	-
Area clearing	Labor (workdays)	Count	4		-
Input application	Quantity of machinery	Count	2	1	-
Input application	Labor (workdays)	Count	x	3	-
Artificial pruning (manual saw)	Quantity of equipment (pole pruners and saws)	Count	33	0	-
Artificial pruning (manual saw)	Labor (workdays)	Count	1730	457	-
Harvesting	Quantity of machinery	Count	2	2	-
Harvesting	Quantity of equipment	Count	6	2 / 34	-
Harvesting	Labor (workdays)	Count	312	2 / 34	-
Wood processing	Quantity of machinery	Count	7	7	-
Wood processing	Labor (workdays)	Count	912	-	-

21. REVENUE, COSTS AND FINANCIAL PROVISION FOR FOREST MANAGEMENT

The operating costs inherent to the company's forest-management activity are stratified according to the nature, type and year of the cost, covering all resources required for the different stages of management activities in the field and at the sawmill. Financial inflows (revenue), especially through the sale and commercialization of Tietê forest products, are also controlled annually. This financial control is essential for managing the resources required for forest production and for assessing the financial sustainability of the enterprise over the medium and long term, allowing adjustments to planning when necessary.

21.1 Financial organization of the company

Tietê Agrícola Ltda. costs and revenues are controlled through monthly, quarterly, semiannual and annual surveys, supported by financial-control spreadsheets. The following spreadsheets are used for financial control:

- **Allocation of field and sawmill activities:** contains a description of each activity performed, as well as the number of workdays required for each activity;
- **Fueling, maintenance and implement-activity form:** contains information on activities performed by each agricultural implement and the exact quantities of fuel and refueling time during which the implement was used, calculated by the hour meter, as well as the quantity of fuel consumed;

- **Daily production form (sawmill):** contains information such as gauge, width, thickness, quantity and class of processed products, as well as the machines used and number of workdays, for analysis of sawmill performance (costs and profits);
- **Cafeteria purchasing form:** lists purchases for the cafeteria, including quantities and costs;
- **Chainsaw and pole-pruner materials control form:** records the quantity of chainsaws and pole pruners used in the field, as well as workdays, fuel and materials used for stand-maintenance activities;
- **PPE requirements form:** contains a survey of PPE items that are lacking, including name, type of PPE, technical specifications and costs;
- **Sales spreadsheets:** contain all information on products being sold, their quantity, size and classification, values and buyer information, whether for the domestic market or export;
- **General FMU expenses:** contain all FMU expenses based on data taken from the forms. More specifically, they describe all FMU costs, especially plantation-management costs, harvesting costs and other inherent activities.

This information is collected to provide for environmental, social and operational costs. Operating costs inherent to the company's forest-management activity are stratified according to the nature, type and year of the cost. Revenue from forest management basically consists of the sale and commercialization of products generated by the company from timber production in the teak stands. Revenue control is important for managing the resources required for forest production and cash flow. Financial provision takes into account projected production and market value according to the dimensions of the timber commercialized. Additional information is addressed in the company's Financial Report.

22. COMPLIANCE WITH INTERNATIONAL AGREEMENTS

In addition to complying with applicable municipal, state and federal legislation, Tietê also follows all provisions established by international agreements relevant to the Company's activities to which Brazil is a signatory. Some of the agreements followed by the Company in the FMU are listed below:

International Labour Organization (ILO): The International Labour Organization (ILO) was founded in 1919 and is an agency of the United Nations (UN), with a tripartite structure composed of governments (187 nations in total), employers' organizations and workers. The ILO's main objective is to support progress toward decent working conditions for men and women. In Brazil, the ILO has maintained a representation since 1950, with programs and actions guided by the Organization's directives, particularly through the creation of the National Decent Work Agenda (ANTD).

In Tietê's context, compliance with the provisions of the ILO and ANTD is achieved through constant monitoring of the quality of working conditions for Company employees. Monitoring and follow-up cover the quality of the work environment and the use of appropriate materials that provide comfort and safety to workers (such as suitable tools and PPE), monitoring and prevention of occupational accidents, and compliance with occupational health and safety regulatory standards through regular training and medical examinations. In addition, employees receive fair wages consistent with the respective wage floors for their occupations, as well as various additional and health benefits.

International Tropical Timber Agreement (ITTA): Ratified in Brazil through Federal Decree No. 2,707 of August 4, 1998, the ITTA generally seeks to contribute to sustainable development in the trade of timber from tropical species originating from both native and planted forests. Tietê seeks to produce

teak timber sustainably, both in the stands and in the processing yard. The chain of custody and teak timber traceability system in the FMU allow responsible commercialization in accordance with all requirements established by the International Tropical Timber Council.

Convention on Biological Diversity: The Convention on Biological Diversity was established during the United Nations Conference on Environment and Development (ECO-92), held in Rio de Janeiro in 1992, and was ratified by Federal Decree No. 2,519 of March 16, 1998. The Convention seeks to establish rules and standards to ensure biodiversity conservation as well as the fair sharing of genetic resources.

Tietê is continually concerned with ensuring, during activities in its FMU, the conservation of biodiversity at the three levels established by the Convention: natural ecosystems, by preserving native forest remnants, including riparian forests that protect watercourses crossing the FMU; native plant and animal species, by monitoring them and ensuring their continued preservation; and genetic resources, particularly by responsibly managing teak clones, acquiring genetic material from reliable sources and preventing the propagation of such material into natural ecosystems present in the FMU.

23. SCHEDULE FOR REVIEW AND UPDATE OF THE MANAGEMENT PLAN AND MONITORING

This Forest Management Plan, as well as FMU monitoring activities, will be subject to annual reviews and updates. Review of the Plan will take into consideration environmental, forest and socioeconomic monitoring, as well as budget allocations and other information acquired during the intervening period. This information will serve as the basis for determining whether the Management Plan and monitoring activities need to be updated.