

Public Summary  
of the

# Forest Management Plan

**Forestry Business Unit São Paulo**

1<sup>st</sup> EDITION | MAY 2020

# Summary

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## Proceedings

Every year Suzano S.A. prepares its Forest Management Plan for the regions where it operates based on data from the previous year and according to results of monitoring and control or significant changes in forestry operations, responsibilities and socioeconomic or environmental conditions.

### Coordination

Sustainability

### Formatting and Design

Folks Comunicação  
Conteúdo  
folks.cc

### Cover

Floresta restaurada junto  
à plantação de eucalipto  
na Fazenda Itapanhaú  
(Biritiba Mirim – SP)

### Images

Suzano Archive  
Eco Futuro  
Casa da Floresta  
FUNATURA

Instituto Pró-Muriqui  
Save Brasil  
UNESP Rio Claro



1.  
About the  
*Summary*



## 1. About the *Summary*

*In this Public Summary of the Forest Management Plan Suzano S.A. presents information on the Forestry Operations in the region, including responsibilities, available resources and strategies for the adoption of responsible forest management practices aimed at sustainable development.*

It is a synthesis of the Forest Management Plan, based on the main forest certifications: **FSC® – Forest Stewardship Council®, FSC-STD-BRA-01-2014 V1-1 PT FSC and NBR 14.789:2012 CERFLOR** (Forest Certification). Each system has its own principles and criteria.

Within the scope of forest certifications, Suzano S.A.'s Forestry Business Units are licensed under the following codes: FSC-C009927, FSC-C100704, FSC-C110130, FSC-C155943 and FSC-C118283.

In addition to the printed version, the Public Forest Management Plan Summary is emailed to the company's main relations: society, public authorities, neighbors and communities in its areas of operation, as well as employees and vendors.

**Have a pleasant reading!**

Additional Information, questions, feedback and suggestions that may arise from this reading should be sent to:

**[suzanoresponde@suzano.com.br](mailto:suzanoresponde@suzano.com.br)**

or calling

**0800 022 1727**



## 2. About *Suzano S.A.*



## 2. About **Suzano S.A.**

***Suzano S.A.** is a Brazilian company resulting from the merger of Suzano Papel e Celulose and Fibria Celulose. We are committed to being a global reference in the sustainable use of renewable resources.*

World Leader in the manufacturing of Eucalyptus pulp and one of the main paper manufacturer in Latin America, the company exports to over 80 countries and its products is part of the lives of over 2 billion people. With ten operating plants and the joint operation Veracel, its installed capacity is 10.9 million tons of market pulp and 1.4 million tons of paper per year.

With Eucalyptus planting, the company provides 37 thousand direct and indirect jobs and invests in innovation for over 90 years, replacing fossil-derived materials with renewable materials. The company is granted the highest Corporate Governance levels of B3 in Brazil and New York Stock Exchange (NYSE) in the USA, Stock Markets where its shares are traded.

From supplies to a wide range of industries to everyday life products, we cultivate life with the notebook of the child learning how to read, with the diaper protecting the baby, with the eco-friendly coffee cup, with toilet papers and with the convenience of a sustainable packaging.



People who  
*inspire and  
transform*

We create  
and share  
*value*

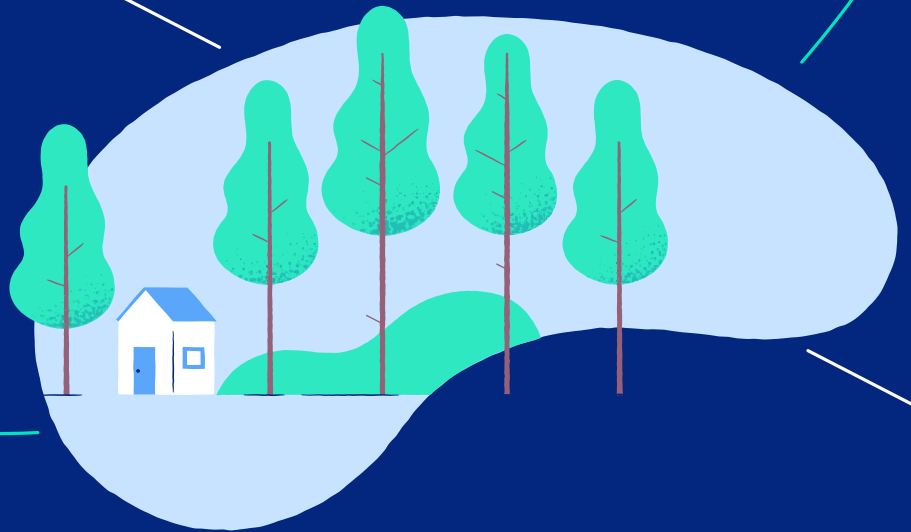
It's only good  
for us if  
*it's good for  
the world*

*We are a renewable basis company operating mainly in the segment of pulp and paper from Eucalyptus planting to supply companies all over the globe. Our portfolio is wide and diverse.*

We invest in innovation that arises from the protagonism of our collaborators, by using renewable raw materials and biotechnology. We use sustainable practices in everything we do, from fluff to lignin, from cellulose to tissue, from A4 sheets to cardboard for packaging.

We operate responsibly based on our expertise in Eucalyptus planting. This means that we always use the best global management practices in cropping - that is how we contribute for the maintenance of fertility and protection against erosion and degradation.



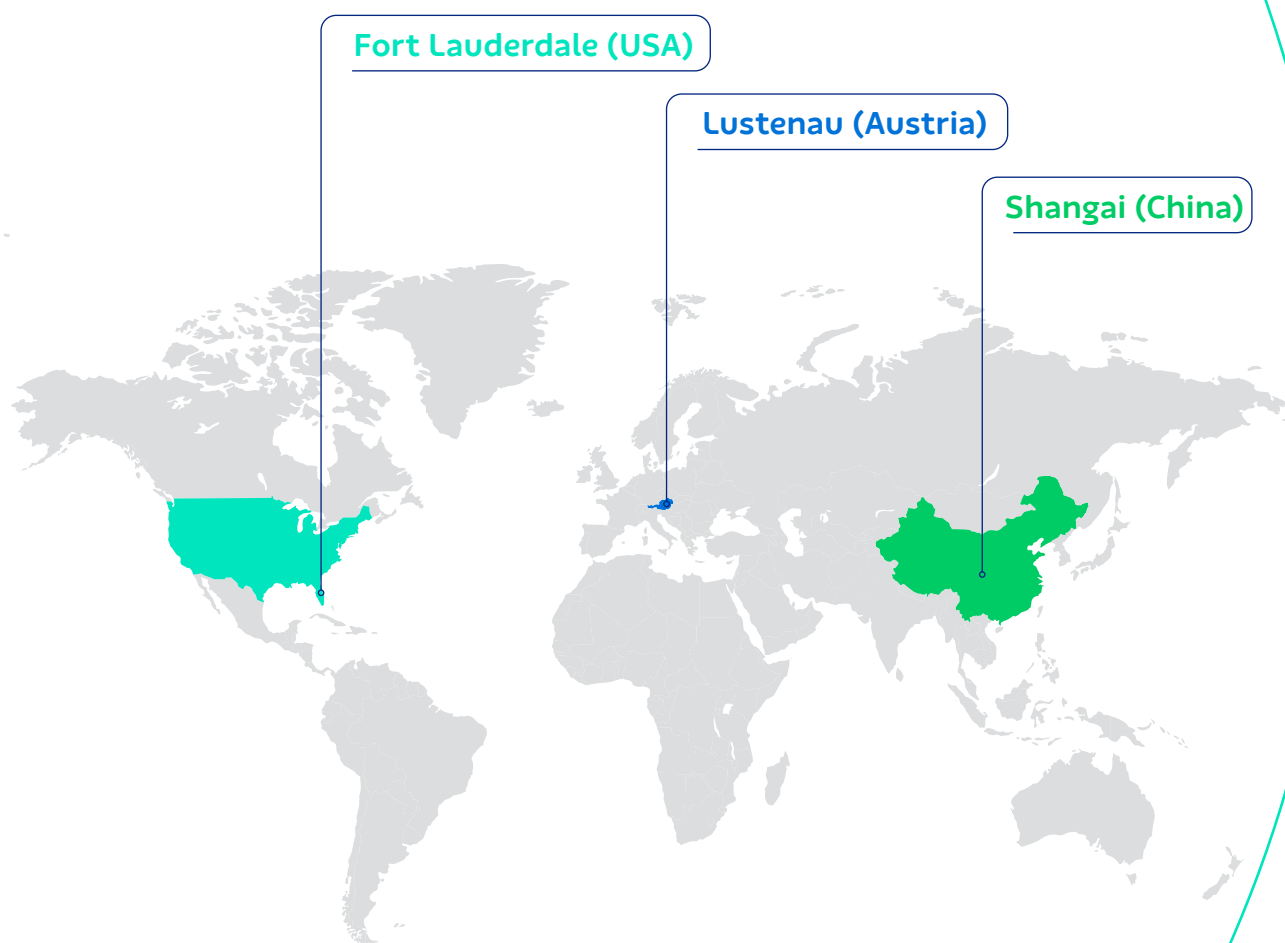


### 3. Where *We Are*

### 3. Where **We Are**

## Business offices

*We have business offices abroad in China, USA, Switzerland and Austria and subsidiaries in England and Argentina.*



## Distribution Centers

**United States (4)**

**Europe (6)**

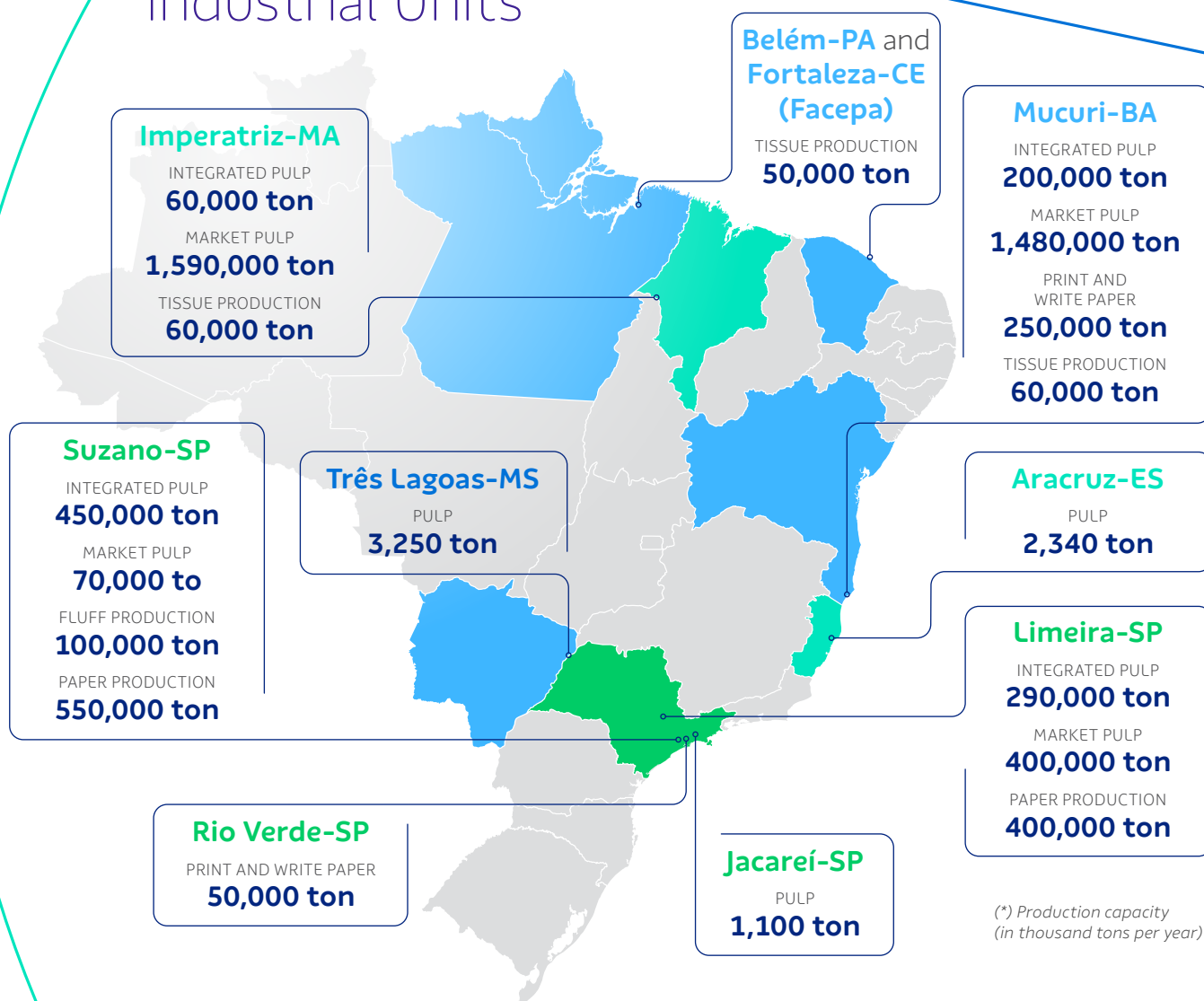
**Asia (2)**



Our organization includes administrative offices in Salvador (state of Bahia) and São Paulo (state of São Paulo), industrial plants and FuturaGene, responsible for the genetic development of forest crops and biofuels, with research laboratories in Israel and China.

*We provide products and services from 1.2 million hectares of planted forests and 900 thousand hectares of preserved forest, situated in the states of Bahia, Espírito Santo, Minas Gerais, São Paulo, Mato Grosso do Sul, Maranhão, Tocantins, Para and Piauí.*

## Industrial Units\*



(\*) Production capacity (in thousand tons per year)

## Terminals and Ports

Belmonte (BA)  
Caravelas (BA)  
Aracruz (ES)

Santos (SP)  
São Luís (MA)





4.

# Forest Operation

## Area

## 4. *Forest Operation* Area

### Forest assets with certification

*Suzano's forest competitiveness ensures its operation in different regions with adequate productivity.*

#### *Owned, Leased and Partnership Areas*

Business Units	Crop areas (ha)	Conservation (ha)	Infrastructure (ha)	Total (ha)
Aracruz / Mucuri	365,686	250,913	62,452	679,051
Imperatriz	220,460	289,415	14,182	524,057
Limeira / Suzano / Jacaré	234,826	130,736	18,437	383,999
Três Lagoas	314,253	135,728	16,385	466,366
<b>Total</b>	<b>1,135,225</b>	<b>806,792</b>	<b>111,456</b>	<b>2,053,473</b>

*Data Dec/2019, without the areas of Teresina, Urbano Santos, Market/Third parties and Sponsorships*

#### *Forest areas within the scope of FSC® and CERFLOR Certifications of each Forest Business Unit*

FBU	Certified areas FSC® and PEFC (ha)
Aracruz (ES)	215,699
Jacaré, Suzano and Limeira (SP)	349,750
Três Lagoas (MS)	310,623
Mucuri (BA)	355,877
Imperatriz (MA)	404,083
<b>Total Suzano S.A.</b>	<b>1,636,032</b>



# 5. Forest *Certification*



## 5. Forest *Certification*

**Suzano S.A.** states its commitment to conduct its Forest Management system according to the Principles and Criteria set by FSC® Certification and CERFLOR NBR 14.789 Forest Management, aiming to provide long-term business sustainability, continuous improvement of its activities and performance, as well as the adoption of environmentally correct and socially responsible practices.

To this end, the company has incorporated the environmental, social and economic dimensions into its forest management basic guidelines, as following:

- To seek technological innovations and to support research to apply the best forestry techniques in its forest production units.
- To contribute to the development of direct and indirect collaborators.
- To implement the Forest Production Plan based on environmental aspects, such as landscape and microbasins management, monitoring of fauna, maintenance of biodiversity corridors, and compliance with the applicable federal, state and city legislation, as well as international agreements of which Brazil is signatory.
- To contribute to maintenance or improvement of communities surrounding the forest management units through open dialog channels, participative follow-up of social indicators, sharing of relevant information and recreation areas or environmental education.

### Timber traceability

Every timber harvested in the eucalyptus crops is traceable (chain of custody), i.e., has guarantee of origin from planting to transportation to the industry, with no risks of being mixed up with non-certified logs.

Suzano is  
**certified by**  
FSC® and CERFLOR  
(NBR 14.789)





6.

# Forestry Business Unit

# São Paulo

## 6. Forestry Business Unit *São Paulo*

*The areas in the **Forest Business Unit - São Paulo - FBU-SP** are distributed across more than 90 municipalities in the states of Minas Gerais, Rio de Janeiro and São Paulo, of which, over 97% of the managed areas are in the state of São Paulo.*

In these areas, FBU-SP is divided in regions called Forestry Production Centers. The following chart shows the list of these Centers and the areas they cover in terms of region and municipalities.

Forest Center	Micro-regions
<b>MN1</b>	Cruzília and Carrancas - South of Minas Gerais
<b>MN2</b>	Sapucaí Mirim - South of Minas Gerais
<b>RR1</b>	Resende - Vale do Paraíba Fluminense
<b>SP1</b>	Vale do Paraíba Paulista
<b>SP2</b>	North of Capão Bonito, South of Itapetininga and West of Piedade
<b>SP3</b>	East of Avaré, North of Itapetininga, Botucatu and South of Piracicaba
<b>SP4</b>	Itapeva and South of Capão Bonito
<b>SP5</b>	North of Avaré and Bauru
<b>SP6</b>	Rio Claro, North of Piracicaba, São Carlos, Araraquara, Limeira and Amparo
<b>SP7</b>	East of Piedade and Sorocaba

Plantings are carried out in owned lands, through leasing contracts, or through partnerships with rural producers.

With a forest basis of 383,999 hectares, interspersed with 130,736 hectares of biodiversity conservation areas, Suzano's forest management targets the combination of eucalyptus planting and the conservation of natural resources, technological innovations and respect to communities.

The production is based on renewable planting of eucalyptus, aiming to supply the industrial complex in Jacareí, Suzano and Limeira (SP).

Unit Jacareí

The FBU-SP encompasses a forest basis of

**383,999 ha,**

of which, about

**130,736 ha**

are destined to conservation







Unit  
Limeira

*The industrial plant operates according to environmental control standards, with technology aimed at monitoring emissions, air and water quality, and the proper disposal of waste.*

To ensure success in all phases of the process, the company constantly invests in research, technology, and professional training.

Suzano's practice is to recruit candidates from the regions where it operates, provided that they meet the requirements for the job and apply on equivalent terms with other candidates. It is also the company's practice to train the workforce involving communities, in partnership with universities and technical institutions



Unit  
Suzano



Unit  
Rio Verde



# 7. Environmental *Aspects*

## 7. Environmental Aspects

### Regions of the Forest Centers

The forest areas and other native phytophysiognomies in the FBU-SP areas offer possibilities for the conservation of the local biodiversity.

#### Soil, Climate and Hydrography

##### Characteristics of the Forest Centers

Forest Center	Micro-region	Environmental characteristics
MN1	Cruzília e Carrancas (South of Minas Gerais)	Cruzília, located in the South of Minas Gerais; it is part of the old route of Estrada Real and integrates the touristic circuit of the Magical Mountains of Mantiqueira. Climate: high-altitude tropical Cwb). Altitude: 1010 m. Biome: Atlantic forest.
		The source of the Capivari River is in Carrancas, located in the Carrancas Mountain, coupled to the Complex of Zilda, with waterfalls, a natural slide and a cave. This ecological complex is part of the priority areas for conservation of <i>Fundação Biodiversitas</i> and is located in the ecotone Atlantic Forest/Cerrado. Climate: high-altitude tropical (Cwb), with mild humid summers, annual maximal average of 26.20°C, and cold and dry winters, with minimal average of 13.90°C. Rainfall: 1,059 mm/year distributed in two seasons: rainfall concentrated between September and April, and the dry season between May and August. Altitude: 1052 m. Basement: composed by arquean units with crustal accretion from Lower Proterozoic, correlated to Mantiqueira Group, Barbacena Group, Minas Supergroup and several granitoids.
MN2	Sapucai-Mirim (South of Minas Gerais)	Sapucai-Mirim is located in the immediate region of Itajubá, in the Southermost region of Minas Gerais. Climate is hot and temperate. Rainfall is much scarcer during winter. According to Köppen and Geiger, climate is classified as Cwb. 18.3°C and average rainfall of 1720 mm/year. The municipality is almost an exclave of Minas Gerais in the state of São Paulo.
RR1	Resende (Vale do Paraíba Fluminense)	Resende is located on the margin of the river Paraíba do Sul. Terrain is typical of a valley, a plateau with flattened hills and, further away, the mountain range of Itatiaia, that encompasses one cliff at the Serra da Mantiqueira, with the peak of Agulhas Negras in the background. At the border with São Paulo, it initiates the formations of Serra do Mar, with elevations above 600 m of altitude. Hydrography: river Paraíba do Sul and its main affluents: Córrego Preto, and rivers Alambari, Sesmaria, Lavapés and Salto. Climate: high-altitude tropical, with annual average temperature of 21°C, minimums of 12°C in July and maximums of 31°C in February. Rainfall is concentrated in the months of October to March. The region is nationally and internationally known for its mountainous terrain, waterfalls, pristine rivers, fauna and flora.
SP1	Vale do Paraíba Paulista	The region is part of the Paraíba do Sul river basin, and extends across the states of São Paulo, Rio de Janeiro and Minas Gerais. The region has important natural reserves, such as Serra da Mantiqueira and Serra da Bocaina, refuge of the Atlantic forest that also includes small municipalities and farms with historical and architectural interest. Along the Paraíba do Sul river, main soil types are red and yellow latosol, derived from sedimentary rocks. On the mountain terrain, dominance of haplic cambisol and, in higher altitudes, humic cambisol, the latter conditioned by the low average annual temperature, which favors the accumulation of organic matter.

Forest Center	Micro-region	Environmental characteristics
SP2	<b>Capão Bonito (North)</b>	Capão Bonito is located at the physiographic zone of Paranapiacaba, on the Vale do Alto Paranapanema, in the state of São Paulo. Altitude: 730 meters. Climate: subtropical, with average maximum of 22°C and average minimum of 14°C. Rivers: Conchas, Almas and Paranapanema. Terrain: rugged, with a huge potential for ecotourism, being known as the "Atlantic Forest Portal", with several waterfalls and caverns. The area involves the following rocks: metavulcano-sedimentary of the Supergroup Açungui formed by the meta sediments of the Água Clara formation and group Votuverava of meso and neoproterozoic ages, and neoproterozoic granitoid rocks represented by lithologic types of the complex Tres Córregos, and Capão Bonito granite, sedimentary rocks of the group Itararé, basic intrusive associated to Serra Geral magmatism and recent quaternary sediments. Geological evolution is determined by the neoproterozoic tectonic-metamorphic arrangement, defined by three deformative phases.
	<b>Itapetininga (South)</b>	Itapetininga is located in the southern region of the state of São Paulo, on the Alto Paranapanema basin. Climate: humid subtropical prone to South and South-east winds, with mild frosts. Rainfall in the driest month is 35.1 mm, with average of 1217.2 mm/year and water deficiency varying from 0 to 25 mm/year. The driest period ranges from April to September and the wettest from October to March. Vegetation: grasslands and cerrado; no mountains. Topography: characterized by small ripples and extensive meadows. Hydrography: the main river is Itapetininga, an affluent of the right margin of Paranapanema river. Its source is close to Serra de Araçoiaba. Other rivers worth mentioning are Paranapanema, Turvo, Tatuí, Sarapuí, Capivari, Alambari, Agudo, Ribeirão dos Macacos, Ribeirão do Pinhal, Ribeirão Grande, Ribeirão da Estiva and several streams. Soils: main soil types are dark red dystrophic latosols, yellow latosols, hydromorphic soils and litholitic soils.
	<b>Piedade (West)</b>	Piedade is located between plateaus, on the inner side of Serra do Mar, in an area of nature preservation. Altitude varies from 750 to 1227m. Vegetation: Atlantic forest. Hydrography: rivers Pirapora, Sarapuí and Turvo. Climate: subtropical (Cfa).
SP3	<b>East Avaré (East)</b>	Avaré is officially considered a tourist resort. Climate: subtropical (Cfa). According to the National Institute of Meteorology (INMET), the lowest temperature ever recorded is -0.2°C and the largest, 36.4 °C. The record of precipitation is 135.4 mm. (East)
	<b>Botucatu</b>	Botucatu is located in the center south of the state of São Paulo. Climate: high-altitude tropical, with mild winter and warm summer. Vegetation: 14,673 hectares of native vegetation, a transition area between the atlantic forest and cerrado. The forest formations are stationary semideciduous forest and mixed ombrophilous forest. Cerrado is characterized as strictu-sensu. Hydrography: to the North, the Tietê river and, to the South, the Pardo river.
	<b>Piracicaba (South)</b>	Piracicaba's terrain is mainly rugged; the largest depression is found in the center of the territory, extending along the east-west axis of Piracicaba river, deepening into the interior of the urban zone, starting on the falls. This region divides the basins of the rivers Piracicaba and Tietê. There is great diversity of soils in this region, with areas of good fertility that favors agriculture. Main soil types are latosols with medium or clayey texture, dense and prone to water retention. Climate: high-altitude tropical (Cwa), with lower rainfall in the winter and average annual temperature of 23.9°C, mild and dry winters and rainy summers with moderately high temperatures.
SP4	<b>Itapeva</b>	Itapeva is located in a valley, with mountainous topography, which defines its highly irregular border. The main river is the Camanducaia. The terrain is rugged with large mountains in the urban zone. The most commonly found vegetation up to the 1970's was the araucaria forest, spreading from the North of Parana to the South of São Paulo. The biomes are the Atlantic forest and cerrado. The municipality is part of the São Paulo touristic circuit due to its number of canyons, such as the ones found in Itangua. Climate: high-altitude tropical; July is the coldest month (average of 14°C) and January is the hottest (average of 22°C). Rainfall is 1200 mm/year.
SP5	<b>Avaré (North)</b>	Avaré is an invitation to its dam. Climate: Subtropical (Cfa). According to the National Institute of Meteorology (INMET), the lowest temperature ever recorded is -0.2°C, while the highest is 36.4°C. Record of precipitation in 24 hours is 135.4 mm.
	<b>Bauru</b>	Bauru is located on the North-west region of the state of São Paulo. Terrain: predominantly wavy, with flat waves and areas. It is lowered and dissected on the borders, considered as residual of post-cretaceous denudational tropical conditions, with average altitude of 526 meters. Soil: sandy texture with low drainage density, which characterizes the Western Sao Paulo Plateau. Main types of soil are the red-yellow latosol. The main rivers are Bauru and Batalha. Climate: high-altitude tropical (Cwa), with lower rainfall in the winter and average annual temperature of 22.6°C, mild and dry winters and rainy summers with moderately high temperatures.



Forest Center	Micro-region	Environmental characteristics
SP6	Rio Claro	Rio Claro is located in the center east of the state of São Paulo. Vegetation: predominantly formed by semideciduous stationary forest, with fragments of cerrado, <i>cerradão</i> and paludous forest. Hydrography: main basin of the Corumbataí river, followed by its largest affluent: Passa-Cinco. In terms of geomorphology, the municipality is located at the Peripheral Depression of São Paulo, in the <i>Médio Tietê</i> zone. Terrain: predominantly low hills, smooth formations separated by young hills, without any important alluvial plateaus. Soil: presence of the classes: red-yellow argisols (67.9%), red latosols (21.3%) and red-yellow latosols (6.9%) and litholic neosols (3.9%). Climate: high-altitude tropical (Cwa). Average temperature is 20.3°C and average rainfall 1294 mm/year.
	Piracicaba (North)	Terrain: predominantly rugged, with the largest depression located in the center of the territory, extending along the east-west axis of the Piracicaba river, deepening into the interior of the urban zone, starting on the falls. Piracicaba The region divides the Piracicaba and Tietê river basins. Climate: high-altitude tropical, with lower rainfall in the winter and average annual temperature of 23.9°C, mild and dry winters and rainy summers with moderately high temperatures.
	São Carlos	Located near the geometric center of the state of São Paulo. With mild climate, average annual temperature of 19.6°C and average altitudes between 800 and 1000 meters. Cerrado was the dominant vegetation, occurring in the sandy areas of the plateau. Nowadays, there are fragments of cerrado and preserved forest, including several specimens of large-sized <i>araucarias</i> , symbol of the municipality. Climate: high-altitude tropical with dry winter (Köppen: Aw), with average minimum temperature of 15.3°C and maximum of 27°C. It is included in the geomorphological province of basaltic <i>cuestas</i> and sandstone, between the provinces of the Western Plateau (to the North) and the Peripheral Depression of São Paulo (to the South). Vegetation: remaining areas of cerrado of forest, savanna and grass fields phytophysiognomies, inner Atlantic forest, Araucaria forest and <i>capoeira</i> . Hydrography: inserted between the Hydrographic units of Mogi-Guaçu and Tietê-Jacaré.
	Araraquara	Located on the high part of the plateau and highlands of the Paraná river basin, in altitudes above 750 meters that result in flatter terrains (sedimentary rocks are present) or wavier, forming elongated spigots (basaltic rocks and red soil). Favorable to the development of a very numerous hydrographic basin. Climate: humid subtropical (Cwa), with dry and mild winters and hot and rainy summers. Geomorphology: slightly wavy. Topography with tabular characteristics, slightly wavy. Hydrography: water courses are part of two hydrographic basins - Jacaré-Açu and Mogi-Guaçu. Among the sandstones, Bauru sandstone stands out.
	Limeira	Limeira is located in the administrative region of Campinas. Hydrography: contains the hydrographic basin of Piracicaba - two rivers cross the municipality: the Piracicaba and the Jaguari rivers. Climate: high-altitude tropical, with dry winter (Cwa) and average annual temperature of 22°C. Maximum absolute temperature ever recorded is 38.6°C. Average annual rainfall between 1100 and 1400 mm.
	Amparo	The municipality is formed by the main town and the districts of Arcadas and Três Pontes. It is one of the six Hydrothermal resorts of the water circuit of São Paulo. Its main touristic appeal comes from its geological features (Hydrothermal resort), mainly its water and mineral water sources. The main water source crossing the municipality is the Camanducaia river, Climate: high-altitude tropical (Cwa), with mild temperatures of 21°C, rainy summers and dry winters. Hydrography: Camanducaia and Jaguari rivers.



Forest Center	Micro-region	Environmental characteristics
SP7	<b>Piedade (East)</b>	Piedade is located between plateaus, on the inner side of Serra do Mar, in an area of nature preservation. Altitude varies from 750 to 1227m. Vegetation: Atlantic forest. Main rivers: Pirapora, Sarapuí and Turvo. Climate: subtropical (Cfa).
	<b>Sorocaba (East)</b>	Terrain: wavy, characterized by slopes and peaks, with average altitude of 632 meters above sea level. It is located between the Atlantic plateau, encompassing crystalline rocks domain, with higher terrains and rocks from the Sedimentary Basin of Paraná, with wavier terrain and lower altitudes. The Sorocaba river and its basin are responsible for the dissection of the terrain. Vegetation: Atlantic forest, with mountain and cerrado dense ombrophilous forest. Climate: subtropical. During summer, the days are very hot and the temperature drops at night; winters are mild. Rainfall is around 1300 mm/year. Hydrography: hydrographic basin of Sorocaba river. Geology: soil is characterized as red-yellow podzolic with gravelly clayey texture, very clayey, dark-red latosol with clayey texture, red-yellow latosol with medium clayey texture and litholic soils. The municipality is located exactly on the border between paleozoic sedimentary rocks of the Parana Sedimentary Basin and the crystalline basement rocks (neoproterozoic), such as metasediments and granites.





# 8. Socioeconomic *Aspects*



## 8. Socioeconomic Aspects

Microrregiões	Aspectos Socioeconômicos
<b>Cruzília, Carrancas and Andreândia (South of Minas Gerais)</b>	<p>The average proportion of people living in poverty in the municipality is 17.1%.</p> <p>The municipality is characterized as small (less than 50,000 people), with high urbanization rate.</p> <p>The services sector dominates the economy in the municipality, and Public Administration is one the major segments of the economy, representing 32.6% of the GDP.</p> <p>Industry has little relevance in the economy, being responsible for 11.7% of the GDP, although it has a significant importance in the creation of jobs.</p> <p>Family agriculture properties represent 65.4% of the rural properties in the municipality, with average size of 21.7 ha and occupying an area of 4,019 ha, i.e., 21.7% of the total rural area.</p> <p>There are no indigenous lands or communities of slave descendants officially recognized in this municipality.</p>
<b>Sapucaí-Mirim (South of Minas Gerais)</b>	<p>The average proportion of people living in poverty in the municipality is 17.1%.</p> <p>The municipality is characterized as small (less than 50,000 people), with high urbanization rate.</p> <p>The services sector dominates the economy in the municipality, and Public Administration is one the major segments of the economy, representing 32.6% of the GDP.</p> <p>Industry has little relevance in the economy, being responsible for 11.7% of the GDP, although it has a significant importance in the creation of jobs.</p> <p>Family agriculture properties represent 65.4% of the rural properties in the municipality, with average size of 21.7 ha and occupying an area of 4,019 ha, i.e., 21.7% of the total rural area.</p> <p>There are no indigenous lands or communities of slave descendants officially recognized in this municipality.</p>
<b>Resende and Barra Mansa (Vale do Paraíba Fluminense)</b>	<p>The average proportion of people living in poverty is 13% in Barra Mansa and 9.4% in Resende. The municipalities are characterized as large-sized with high degree of urbanization.</p> <p>The economy in the municipalities is strongly centered in the segment of services and agriculture represents a negligible share.</p> <p>Industry is an important segment for the generation of income, with significant importance for the creation of jobs in the municipalities.</p> <p>Family agriculture properties represent 53.2% of the rural properties in the municipality, with average size of 23.4 ha and occupying an area of 15,913 ha, i.e., 23.4% of the total rural area.</p> <p>There are no indigenous lands or communities of slave descendants officially recognized in this municipality.</p>

Microrregiões	Aspectos Socioeconômicos
Vale do Paraíba Paulista	<p>The municipalities in this Center are highly uneven, with dynamic areas, with better quality of life (Aparecida, Guararema, Jacareí, São José dos Campos), and municipalities with more pronounced social deficits (Areias, Cachoeira Paulista, Canas, Cruzeiro, Cunha, Lorena, São José do Barreiro) that belong to the group of the most disadvantaged municipalities in the State, both in terms of wealth and social indicators.</p> <p>The average proportion of people living in poverty is 11.8%, varying from 6.6% in Taubaté to 32.8% in São José do Barreiro. The highest incidence of poverty are registered in the municipalities of São José do Barreiro, Canas (32.3%), Areias (31.5), Redenção da Serra (31.2%), Cunha (25.5%), Silveiras (25.1%), Guararema (23.5%), Lavrinhas (22.6%), Igaratá (21.9%), Roseira (21.8%), Biritiba-Mirim (21.1%) and Cachoeira Paulista (20.9%). On the other hand, besides Taubaté, Aparecida (9.0%) and Guaratinguetá (10.1%) have the lowest incidence.</p> <p>Most municipalities are classified as small-sized, while São José dos Campos, Santo André, Taubaté, Jacareí, Pindamonhangaba and Guaratinguetá are classified as large-sized. The municipalities Redenção da Serra, Areias, São José do Barreiro and Monteiro Lobato are among the ten smaller municipalities of the state. Most municipalities present high degrees of urbanization; however, Paraibuna, Natividade da Serra, Monteiro Lobato and Jambeiro present urbanization degrees below 50%, being among the municipalities with the largest proportions of people living in rural areas in the state.</p> <p>The segment of services dominates the economy in almost all municipalities. Only Jambeiro and Caçapava rely on the industry as the main economic segment, while public administration is the main economic segment in the municipalities Areias, São José do Barreiro, Natividade da Serra and Silveiras.</p> <p>Besides Jambeiro and Caçapava, industry is important for the generation of jobs and income in the municipalities of São José dos Campos, Taubaté, Suzano, Jacareí, Guaratinguetá, Pindamonhangaba, Roseira, Cruzeiro, Lavrinhas, Santa Branca, Guararema, Lorena and Mogi das Cruzes.</p> <p>Agriculture has little relevance for the economy of the remaining municipalities. However, it is important for the generation of jobs in the municipalities of Areias, São José do Barreiro, Cunha, Natividade da Serra and Silveiras.</p> <p>In Cunha, rural and family agriculture properties are predominant, representing, respectively, 88.9% and 54.1% of the total rural area. Family agriculture also occupies a significant area in the municipalities São Luiz do Paraitinga, Silveiras, Natividade da Serra, Piquete, Canas, São José do Barreiro, Jambeiro, Piracaia and Redenção da Serra.</p> <p>There is an indigenous land of the Guarani ethnicity, Ribeira Silveira, located in the municipality of Bertioga. There are no communities of slave descendants officially recognized in the municipalities of this Center.</p>
Capão Bonito (North) Itapetininga (South)	<p>Most municipalities have intermediate levels of social indicators (Capão Bonito, Itapetininga, Pilar do Sul, and São Miguel Arcanjo). The municipalities of Paranapanema and Angatuba have good social indicators, while Buri and Campina do Monte Alegre are among the most disadvantaged municipalities of the State, both in terms of wealth and social indicators.</p> <p>The average proportion of people living in poverty is 15.8%, varying from 10.6% in Pilar do Sul to 32.8% in Buri. The highest incidences of poverty are attributed to Buri, Itapeva (29.6%) and Campina do Monte Alegre (20.9%). On the other hand, besides Pilar do Sul, Itapetininga (11.5%) and Angatuba (12.4%) have the lowest incidence.</p> <p>All municipalities are classified as small-sized, except for Itapetininga, which is classified as large-sized. All municipalities show high degree of urbanization.</p> <p>The segment of services dominates the economy, while the industry is relevant in the economy of Angatuba and Itapetininga.</p> <p>Agriculture is important in the generation of wealth in the municipalities of São Miguel Arcanjo, Buri, Paranapanema and Campina do Monte Alegre, with emphasis to grape production (in 2018, production in São Miguel Arcanjo (27.2%) and Pilar do Sul (10.6%) totalled 37.7% of the state production), peach, orange, honey, beans, corn, wheat, soy, and beef and commercial reforestation. Agriculture is the main generator of jobs in Buri, Paranapanema and Angatuba, responsible for more than a third (37.3%), on average, of all jobs posts in 2018. It is also important in São Miguel Arcanjo, Campina do Monte Alegre and Capão Bonito.</p> <p>There are no indigenous lands or communities of slave descendants officially recognized in this Center.</p>

Microrregiões	Aspectos Socioeconômicos
<p><b>Leste Avaré (East)</b></p> <p><b>Botucatu</b></p> <p><b>Piracicaba (South)</b></p>	<p>Most municipalities have good social indicators (Piracicaba, Angatuba, Avaré, Guareí and Itatinga). The municipalities of Anhembi, Bofete, Botucatu and Pardinho have intermediate levels of social indicators.</p> <p>The average proportion of people living in poverty is 9.6%, varying from 8.4% in Guareí to 32.8% in Anhembi. Besides Guareí, the municipalities of Botucatu (8.6%) and Piracicaba (8.9%) show the least incidences of poverty.</p> <p>The municipalities are classified as small-sized, except for Piracicaba and Botucatu, that are classified as large-sized, and Avaré, classified as medium-sized. Most municipalities show high degree of urbanization.</p> <p>The segment of services dominates the economy in almost all municipalities, except for Anhembi, where agriculture is the main segment.</p> <p>Besides Anhembi, agriculture is important for the generation of wealth in the municipalities of Guareí, Bofete and Itatinga, with emphasis to the production of sugar cane, orange and honey (the municipalities of Botucatu and Itatinga were responsible for 30.9% of the total state production of honey in 2018), besides beef and commercial reforestation. Agriculture is also important for the generation of jobs in the municipalities of Anhembi, Bofete, Angatuba, Guareí and Pardinho, being responsible for 30.1%, in average, of all job posts in 2018.</p> <p>There are no indigenous lands or communities of slave descendants officially recognized in this Center.</p>
<p><b>Itapeva</b></p> <p><b>Capão Bonito (South)</b></p>	<p>None of the municipalities show good social indicators. The municipalities of Capão Bonito, Itapeva, Itararé, Ribeirão Branco and Taquarivaí show intermediate levels of social indicators, while Guapiara is in the group of the most disadvantaged municipalities in the state, both in terms of wealth and social indicators.</p> <p>The average proportion of people living in poverty is 20.3%, varying from 11.3% in Itaí to 32.8% in Taquarivaí. The highest incidences of poverty are attributed to Taquarivaí, Ribeirão Branco (36.8%), Capão Bonito (29.6%) and Guapiara (23.3%).</p> <p>The municipalities are characterized as small and medium-sized. Most municipalities show high degree of urbanization, with an average of 72.4%, varying from 42.2% in Guapiara (9th in the rank of municipalities with the largest rates of population living in rural areas in the state) to 92.7% in Itararé. The municipalities of Ribeirão Branco (59.3%) and Taquarivaí (58.1%) show intermediate level of urbanization.</p> <p>The segment of services dominates the economy in almost all municipalities, except for Ribeirão Branco and Guapiara, where agriculture is the main segment. Industry has little relevance in the economy of these municipalities, being responsible for 9.2% of the GDP.</p> <p>Besides Ribeirão Branco and Guapiara, agriculture is important for the generation of wealth in the municipalities of Taquarivaí, Itaí and Itapeva, with emphasis to the production of soy, wheat, beans, corn, potato and peach, in addition to commercial reforestation. Except for Itararé, agriculture is also relevant for the generation of job posts, particularly in Ribeirão Branco, Taquarivaí and Itaí.</p> <p>There are no indigenous lands officially recognized in the municipalities of this Center. There are two communities of slave descendants officially recognized: the quilombola communities Jaó, in Itapeva, and Fazenda Silvério, in Itararé.</p>
<p><b>Avaré (North)</b></p> <p><b>Bauru</b></p>	<p>Most municipalities have good social indicators (Agudos, Lençóis Paulista, Pederneiras, Arealva, Avaré, Borebi and Paulistânia). The municipalities of Avaí, Cerqueira César and Duarte show intermediate levels of social indicators, while Iaras is in the group of the most disadvantaged municipalities in the state, both in terms of wealth and social indicators.</p> <p>The average proportion of people living in poverty is 10.5%, varying from 6.7% in Lençóis Paulista to 32.8% in Paulistânia. The highest incidences of poverty are attributed to Paulistânia, Borebi (19.9%) and Avaí (19.7%). On the other hand, besides Lençóis Paulista, Duarte (9.5%) and Agudos (8.7%) have the lowest incidence.</p> <p>All municipalities are classified as small-sized, except for Itapeva, Avaré, Lençóis Paulista and Itararé, which are classified as medium-sized. It is worth mentioning that Paulistânia and Borebi are the smallest towns in the state. Most municipalities show high degree of urbanization.</p> <p>The segment of services dominates the economy in almost all municipalities. Industry is the main sector of the economy in Agudos, while agriculture is the main sector in Avaí. Public Administration is the main segment of the economy in Paulistânia.</p> <p>Besides Avaí, agriculture is an important segment for the generation of wealth in Borebi, Iaras, Arealva and Paulistânia, with emphasis to the production of orange, sugar cane, and eucalyptus. Agriculture is also relevant in the generation of job posts in the municipalities of Borebi, Avaí and Iaras.</p> <p>Avaí concentrates most of the indigenous peoples (79.3%), most of which are in the indigenous land Araribá (ethnicities Terena and Guarani Kaiowá). There is one community of slave descendants officially recognized: the quilombola community Espírito Santo da Fortaleza de Porcino, in Agudos.</p>



Microrregiões	Aspectos Socioeconômicos
<p><b>Rio Claro</b></p> <p><b>Piracicaba (North)</b></p> <p><b>São Carlos</b></p> <p><b>Araraquara</b></p> <p><b>Limeira</b></p> <p><b>Amparo</b></p>	<p>Most municipalities have good social indicators. The remaining municipalities show intermediate levels.</p> <p>The average proportion of people living in poverty is 10.5%, varying from 4.8% in Amparo to 32.8% in Monte Mor. The highest incidences of poverty are attributed to Monte Mor and Boa Esperança do Sul (22.7%). On the other hand, besides Amparo, Brotas (5.5%), Espírito Santo do Pinhal (6.5%), Araraquara (7.2%), Leme (7.6%), Piracicaba (8.9%), São Simão (9.6%), Santa Cruz da Conceição (10.0%), Torrinha (10.3%) and Bocaina (10.6%) show the least incidences.</p> <p>Most municipalities are classified as small-sized, while Piracicaba, Limeira, Araraquara and Leme are classified as large-sized. All municipalities show high degree of urbanization.</p> <p>The segment of services dominates the economy in almost all municipalities, except for Ipeúna, Monte Mor and Amparo, whose main economic sector is the industry.</p> <p>Agriculture is important for the generation of wealth in Boa Esperança do Sul, Santa Maria da Serra, Analândia and Santa Cruz da Conceição, with emphasis in the production of sugar cane, orange and poultry. The segment is also relevant for the generation of job posts in the municipalities of Boa Esperança do Sul, Analândia, Itirapina, Santa Cruz da Conceição, Corumbataí and Brotas.</p> <p>There are no indigenous lands or communities of slave descendants officially recognized in this Center.</p>
<p><b>Piedade (East)</b></p> <p><b>Sorocaba (East)</b></p>	<p>The municipalities in this Center are largely uneven, with dynamic areas, with better quality of life (Alumínio, Itu, Porto Feliz and Sorocaba) and municipalities relatively poorer and with deeper deficits (Sarapuí, Alambari, Itapetininga, Mombuca, Pilar do Sul e Salto de Pirapora). The municipalities of Mairinque and Votorantim, although wealthy, lack good social indicators.</p> <p>The average proportion of people living in poverty is 10.0%, varying from 7.6% in Porto Feliz to 32.8% in Mombuca. Sorocaba, Votorantim and Sarapuí have the smallest incidence of poverty (9.0%, 9.3% and 9.6%, respectively).</p> <p>The municipalities' sizes vary: Sorocaba (only municipality larger than 500 thousand people), Itapetininga, Itu and Votorantim have more than 100 thousand people (large-sized). All municipalities show high degree of urbanization.</p> <p>The segment of services dominates the economy in almost all municipalities, except for Alumínio, Salto de Pirapora and Mairinque, where the industry is the main economic segment.</p> <p>The industry is an important segment for the generation of job posts in most municipalities; the industrial profile is strongly influenced by the industrial structure of Sorocaba and neighboring municipalities (Alumínio, Salto de Pirapora, Mairinque, Itu, Porto Feliz and Votorantim), where companies in the sector of food, machinery and equipment, electronics, telecommunications, metalworking, and several metallurgical are installed, being one of the most important centers of the state in the manufacturing of implements for telecommunications.</p> <p>Agriculture is an important source of wealth for the municipalities of Alambari, Mombuca and Sarapuí, with poultry, beef and dairy, pork, sugar cane, citrics, fruits, beans, corn, among others.</p> <p>There are no indigenous lands officially recognized.</p> <p>There are four communities of slave descendants officially recognized: the quilombola community Cafundó, in Salto de Pirapora; community José Joaquim de Camargo, located in the municipalities of Salto de Pirapora and Votorantim; community Fazenda Pilar in Pilar do Sul; and community Terras de Caxambu, in Sarapuí.</p> <p>The average proportion of people living in poverty in the municipality is 17.1%.</p> <p>The municipality is characterized as small-sized (less than 50,000 people), with high urbanization rate.</p> <p>The services sector dominates the economy in the municipality, and Public Administration is one the major segments of the economy, representing 32.6% of the GDP.</p> <p>Industry has little relevance in the economy, being responsible for 11.7% of the GDP, although it has a significant importance in the creation of jobs.</p> <p>Family agriculture properties represent 65.4% of the rural properties in the municipalities, with average size of 21.7 ha and occupying an area of 4,019 ha, i.e., 21.7% of the total rural area.</p> <p>There are no indigenous lands or communities of slave descendants officially recognized in this municipality.</p>

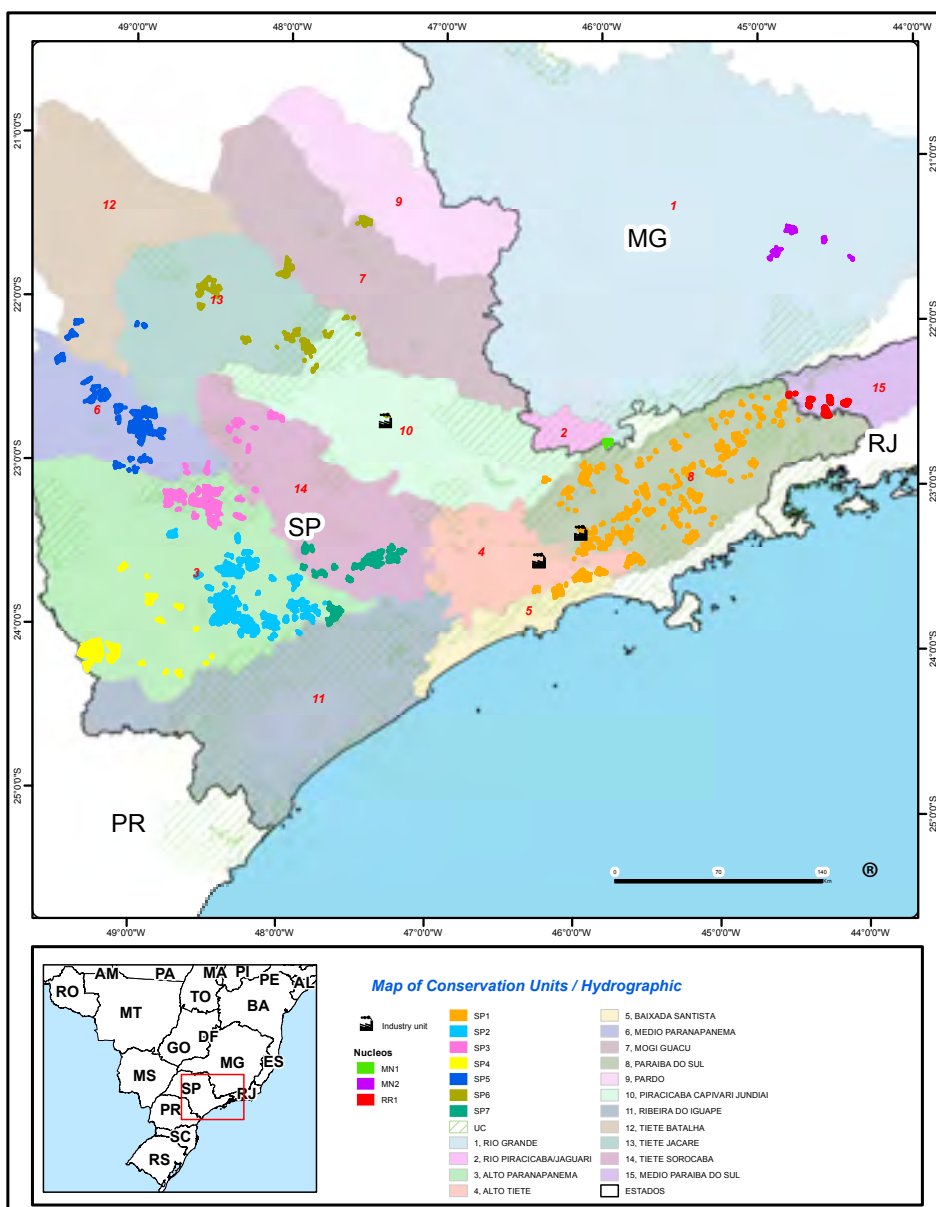
## Distribution of suzano's farms, conservation units and Water Resources Management Units

The company owns several areas surrounding Conservation Units (CU) and some areas are inside Environmental Protection Areas. The remaining native vegetation and the plantings have an important role in the set of actions to promote biodiversity conservation locally, regionally or state-wide.

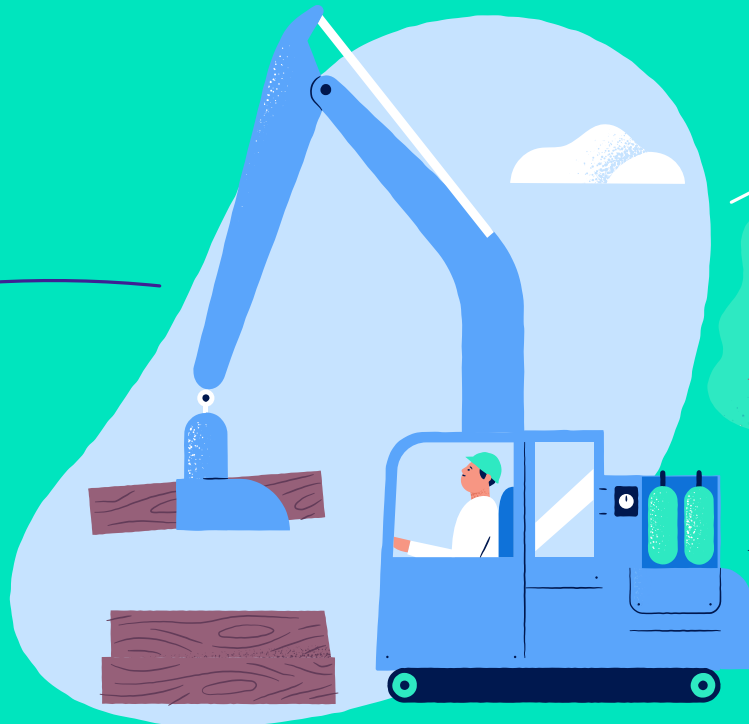
The techniques provided by the company to protect fragments and manage commercial crops have relevant positive effects on the close conservation units because they provide shelter for the biodiversity and maintain the functionality of key biological and ecological processes.

Furthermore, understanding where the company's areas are inserted relative to the river basins helps us to plan new implementation areas, and to maintain existing plantings.

The use of water by operational activities is regulated by state and federal bodies, that defines the availability of each resource and the volume needed by other users, and establishes the maximum volume of water to be used by the company, thus granting the supply of other users of the basin.



There are 19  
**Conservation Units**  
surrounding Suzano's  
forest areas in  
FBU-SP, of which  
2 are Federal Areas,  
16 are State areas  
and 1 is a Municipal area.



## 9. The Importance of *Planted Forests*

## 9. The Importance of *Planted Forests*

### What is **Forest Management**?

*Forest Management is the administration of forest resources with the aim of achieving economic and social benefits aligned with the mechanisms for ecosystem support by employing the best practices of Eucalyptus farming. The goal is to reach high productivity in balance with the environment conservation.*

#### **Objective**

The goal of Suzano's forest management is to supply the industrial Units with Eucalyptus timber, according to the parameters described in the following, either in short or long terms.

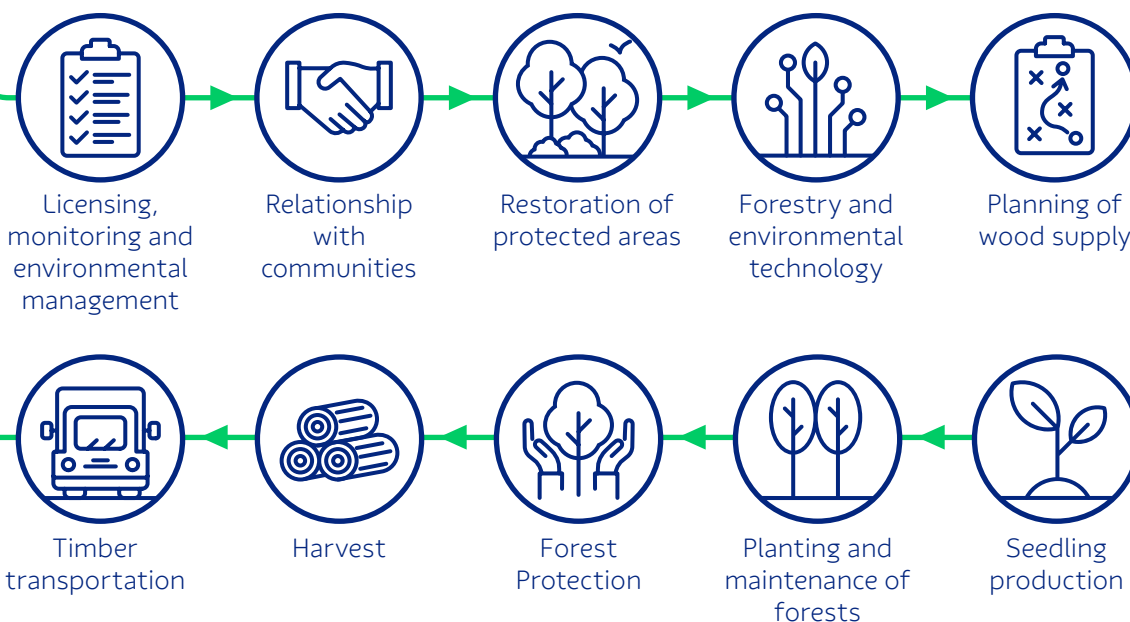
- Availability and rational use of areas for the cultivation of Eucalyptus through directives and procedures for the purchase and lease of land.
- Development of new genetic material and monitoring of soil nutritional levels, pests and others, defined in operational routines and specific research projects.
- Standardization, reporting and continuous improvement of procedures related to seedling production, implementation, restoration, forestry practices, construction and conservation of roads, harvesting, and forestry products transportation.
- Outlining of programs concerning the environment, healthcare and safety at work, as well as socioenvironmental aspects, always in compliance with the applicable law.

### *Eucalyptus*

- Is an exotic species (not native from Brazil), like coffee, corn, soy, sugar cane and several other crops widely cultivated in the country.
- With proper management, water consumption is similar to that of native forests and its roots are kept away from the water table.
- It is harvested in approximately seven years and can be cultivated in low fertility land.
- With proper management, it provides protection for biodiversity as shown by the biodiversity surveillance results in Suzano's areas.
- Of rapid growth, Eucalyptus helps to absorb carbon dioxide from the atmosphere, giving back pure oxygen. The role of Eucalyptus forests is key to humankind efforts to neutralize greenhouse gases, responsible for the Earth's warming.



## Forest management activities



### Compliance with the law

Suzano is always up-to-date with the applicable environmental, labor and tax laws with preliminary surveys carried out by an environmental law consulting firm.

### Managed forest resources

To supply the demands of the industry for eucalyptus timber, we rely on crops of the genus *Eucalyptus*, which encompasses more than 600 species that are adapted to many different soil and weather conditions.

Eucalyptus originates from Australia and Indonesia. It was chosen due to its higher potential for timber production for pulp when compared to other forestry species and due to its adaptability to the environmental conditions in Brazil, including soil and weather.

Timber reception docks – Jacareí (SP)



## Technology and Innovation

*Suzano has an advanced Technology Center responsible for the development of research on forestry and industry. These activities focus on the continuous improvement of the current operations and the development of technological innovations aiming at the company's sustainability.*

Regarding forestry, the Technology Center works mainly on Classical Genetic Improvement, Forest Protection, Forest Management, Ecophysiology and Biotechnology, defining models of planted forest management that support an increase in forest biomass productivity.

Suzano's plantings are mostly formed by hybrids obtained from the crossbreeding of *Eucalyptus grandis* and *Eucalyptus urophylla*.

Those species were selected because they are better adapted to the local soil and weather conditions following several cycles of improvement and research. Currently, the tree is harvested in six years in average, varying from five to seven years. After the first harvest, the area is managed for a new planting or for regrowth.



## Partnerships

Suzano conducts studies and surveys conducted in partnership with relevant public and private institutions in Brazil and abroad. All projects and activities seek to meet operational and market demands, legal requirements, new tendencies, technologies and products defined by internal research strategies.

As a result, Suzano has stood out in the development and referrals of new genetic materials, monitoring and recommendation of fertilization and practices of forest management, use of new technologies for forest protection and more sustainable practices of production.





10.  
Forest  
*Management*

## 10. Forest Management

### Forest Protection

*The company continuously monitor for pests, diseases and weed with regular field visits.*

The objective is the early detection of pests and weeds, and the assessment of competition level of Eucalyptus with weed. All information gathered are used to help decisions on control and to define the method to be adopted, seeking for the rational use of pesticides.

Suzano also prioritizes the use of biological control agents in occasional pest management, and selection and planting of clones resistant to the main crop diseases, complementing the integrated management.

### Forest Inventory

In its first 120 days, the forest is monitored through a Qualitative Inventory that allows inferences to be drawn on the quality and homogeneity of the crops. From the second year on, monitoring of the standing timber stock, and the growth of the planted forest is carried out through a continuous forest inventory that uses sampling techniques to gather data that allow an estimate of the planting volume per hectare and per tree for a given age. This information is used in the decision making process on the best harvest time. It is also important for the proper planning of timber supply to the Industrial Unit.

### Planning

Planting and harvesting planning for timber supply comprises short, medium and long term achievements, aiming at the best utilization of natural resources and minimizing occasional socioenvironmental impacts.

Forest planning keeps track of ordering to ensure the industry supply. The proper management of planted forests favors planting productivity and contributes to disease and pest control, biodiversity conservation, and protection of springs and ecosystem services - creating a virtuous cycle.

### Development and Operational Excellence

*This area is responsible for the development and transfer of mechanization and digitalization technology to forest processes.*

Seeks the continuous improvement of forestry activities, harvest and logistics, with particular interest in routine management, quality and productivity of operations, as well as personnel qualification, thus promoting safety, product quality, high productivity, feasible costs for forestry activities and environmental conservation.



## Seedling Production

The nursery is a kind of “tree baby room”. It is the place where Eucalyptus seedlings, young and tender, are planted and nursed until reaching the adequate size to be planted in a forest.

The seedling development takes 90 to 120 days. To ensure excellent quality of the seedlings, the spacing between them is increased after 60 days, since they tend to grow healthier when planted apart from each other.

The licensed nurseries of FBU-SP produce approximately **30 million** seedlings per year

	Shipped saplings	Final efficiency
Alambari nursery	9,513,614	66.2%
Capão Bonito nursery	11,415,968	74.2 %
Fortaleza Nursery (Free-lease)	6,728,719	71.9 %

## Planting

The main activities related to trees planting are: pre-planting mechanized chemical cleaning, mechanized soil tillage, mechanized fertilization, planting, mechanized and semi-mechanized irrigation, and replanting.

Planting can be carried out in reform areas (where an Eucalyptus planting already exists), or in implantation areas (where there is no Eucalyptus planting). Suzano only implants forest in areas not covered by native forests.

Soil is prepared using minimum tillage, which consists in preparing strips of soil in the planting line. About 70% of the land remains undisturbed, which favors the maintenance of soil characteristics, avoiding erosion and loss of organic matter.



In 2019, FBU-ES acquired **2.030 ha (implantation)**, **14.659 ha (renovation)** and **8.667 ha (regrowth)**, totaling **25.356 ha**

In 2019, the annual  
harvest volume was

**6.705.398 m<sup>3</sup>**

## Forest Maintenance

This stage consists in a set of activities carried out between planting and harvest (5 to 7 years) to ensure growth and productivity.

The main activities are: manual or mechanical mowing, chemical or mechanical weeding, fertilizing, sprouting reduction, control of ants, and prevention of forest fire.

## Harvest

As soon as the forest reaches its ideal point, timbers are harvested to supply the industrial plant. Harvest encompasses all the processes from tree harvest to the disposition of logs (cutting, forwarding, stacking and fueling), up to the point where they can be transported by trucks or any other transportation mode.

During harvest, eucalyptus trees are cut toward the center of the plot, avoiding any possible damage to the native forest.

## Trucks equipped with telemetry

BFU-SP uses precision technology to manage operations. Our fleet is equipped with telemetry to monitor operations, distribution and positioning of the trucks on roads and farms, control of loading and unloading, and support our partners in the management of operation safety, such as monitoring the drivers working hours and detecting occasional violations of speed limits.

With this system in place, Suzano strengthens the culture of daily routine management with partner companies in logistics operations, thus maximizing personnel safety standards, and operational efficiency based on reliable data.

## Timber Transportation

Forest Logistics main responsibility is to transport timbers from the forest areas to the Industrial Units. The harvested timbers are transported according to the Annual Transportation Planning. From this planning, loading, routes and trucks distribution are defined considering the requirements defined on the area's operational procedures.

The routes for timber transportation are defined in agreement with Suzano's Sustainability sector in order to minimize the possible impacts of forestry activities on the neighboring communities.

The annual volume of  
timber transported to  
the industry in 2019 was

**7.253.346 m<sup>3</sup>**



Suzano is  
committed to

**Health  
and Safety**



## Road Networks - Roads

The road network in the forest area comprises municipal and state roads, arterial, collectors and firebreaks, whose maintenance is defined according to the company's internal criteria to secure forestry operations and avoid erosive processes in the conservation areas.

- "Works of art" are built to store rain water, such as containment boxes, and to avoid erosion on the roads.
- Existing roads are repaired and new roads can be opened to improve operation quality and safety.
- Firebreaks are kept to secure the access of fire brigade teams.

## Moistening of Roads

To keep the road wet during certain earthworks, the company uses a tank truck. The goal is to reduce dust around houses and settlements caused by the traffic of trucks transporting timber to the company.

Water collection for the road moistening is granted by the competent bodies.

## Road Safety

*Suzano respects and values  
its professionals.*

Therefore, health and safety are the company's permanent commitment. Suzano maintains a set of rules that guides its employees and the carriers' employees into safer driving habits, protecting everyone's lives.



# Forest Integrity

*Suzano's professionals focus largely on prevention and control of wildfires.*

That is why the company provides continuous training to its brigade teams that are not only apt to monitor, but also act as support to fight fire in neighboring farms.

Suzano invests in awareness raising, sharing informative folders that address the dangers of wildfires.

We rely on trained fire brigade teams, trucks and surveillance towers available to respond to any possible fire outbreaks.

The program Live Forest aims to raise awareness among collaborators (employees and suppliers), partners and surrounding communities about the impacts and dangers of fire, how to avoid it and how to act when a fire outbreak is spotted.

Our planted forests and native forest areas are systemically surveyed and any event, whether fire, littering, trespassing, blocking of watercourses, among others, are monitored and documented.

FBU-SP has a Fire Detection System in place, consisting of monitoring towers that cover planting and conservation areas. As a way to improve the system, we are testing a Forest Fire Detection System that consists of 2 CCTV cameras placed in 2 monitoring towers, that will allow a more effective coverage.



## *Live Forest Program*

raises awareness among collaborators and community on the impacts and dangers of fire





11.

# Environmental Management

## 11. Environmental *Management*

We preserve over  
**4.000 ha**  
of native forests  
in High Preservation  
Value areas

### High Conservation Value Areas

*Every forest has values or environmental and social functions beyond its productive value, such as fauna and flora and their habitats, protection of water resources, among others.*

When the values are considered extraordinary, the forest can be classified as High Conservation Value (HCV Resource Network, 2007), and are targeted by Suzano's management to maintain or improve its attributes.

The company has used as a reference the General Guide for Identification of High Conservation Value, edited in 2018, to define the features criteria.

Value	Definition
HCV 1	Diversity of species
HCV 2	Ecosystems and mosaics on the landscape scale
HCV 3	Ecosystems and Habitats
HCV 4	Critical environmental services
HCV 5	Communities needs
HCV 6	Cultural values

FBU-SP has 19 areas with high conservation value:



**4** Diversity of species, ecosystems and mosaics at the landscape scale, and ecosystems and habitats



**3** Communities needs



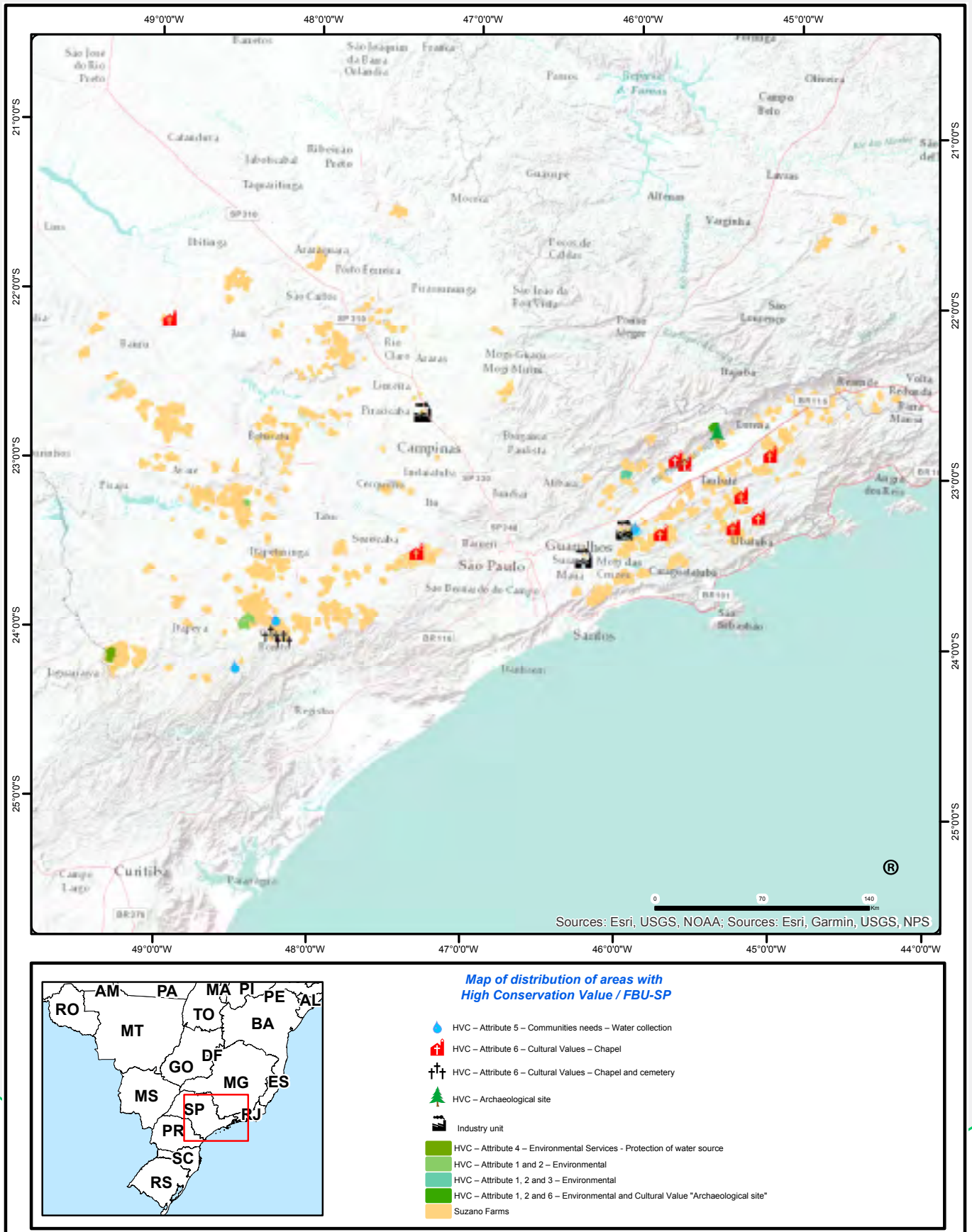
**1** Environmental Services



**11** Cultural values









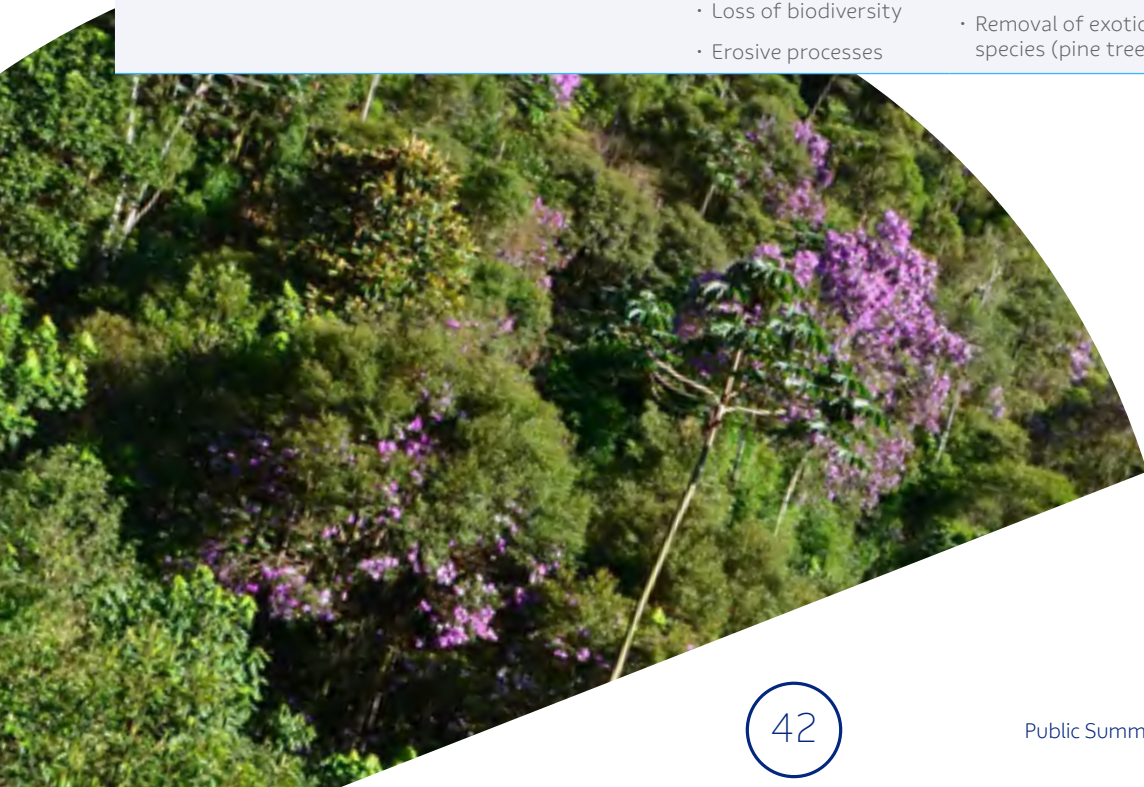
## Localization of High Conservation Value Areas





# Measures of protection and Monitoring in the HCVs

Areas of High Conservation Value	Municipality	HCVs Identified	Risks and Threatened	Measures of Protection	Monitoring
					
São Sebastião do Ribeirão Grande	Pindamonhangaba	1, 2 and 6	<ul style="list-style-type: none"> <li>• Illegal activities</li> <li>• Asset damage or pillage</li> <li>• Wildfire</li> <li>• Loss of biodiversity</li> <li>• Presence of domestic animals</li> </ul>	<ul style="list-style-type: none"> <li>• Intensification of Asset surveillance</li> <li>• Qualified team to fight fire</li> <li>• Maintenance of firebreaks</li> </ul>	<ul style="list-style-type: none"> <li>• Periodic patrolling</li> <li>• Monitoring with specialized team to identify environmental events</li> <li>• Monitoring of fauna</li> <li>• Project <i>Muriqui-Do-Sul</i></li> </ul>
Tijuco and Suinã	Capão Bonito	1 and 2	<ul style="list-style-type: none"> <li>• Illegal activities</li> </ul>	<ul style="list-style-type: none"> <li>• Intensification of Asset surveillance</li> <li>• Qualified team to fight fire</li> <li>• Maintenance of roads and firebreaks</li> <li>• Removal of exotic species (pine tree)</li> </ul>	<ul style="list-style-type: none"> <li>• Periodic patrolling</li> <li>• Monitoring with specialized team to identify environmental events</li> <li>• Monitoring of fauna</li> </ul>
Montes Claros	São José dos Campos		<ul style="list-style-type: none"> <li>• Operational damage</li> <li>• Wildfire</li> </ul>		
Entre Rios	Angatuba		<ul style="list-style-type: none"> <li>• Invasive species (pine tree)</li> <li>• Loss of biodiversity</li> <li>• Presence of domestic animals</li> <li>• Erosive processes</li> </ul>		
Ibiti	Itararé	4	<ul style="list-style-type: none"> <li>• Illegal activities</li> <li>• Operational damage</li> <li>• Wildfire</li> <li>• Invasive species (pine tree)</li> <li>• Loss of biodiversity</li> <li>• Erosive processes</li> </ul>	<ul style="list-style-type: none"> <li>• Intensification of Asset surveillance</li> <li>• Qualified team to fight fire</li> <li>• Maintenance of roads and firebreaks</li> <li>• Removal of exotic species (pine tree)</li> </ul>	<ul style="list-style-type: none"> <li>• Periodic patrolling</li> <li>• Monitoring with specialized team to identify environmental events</li> <li>• Hydrologic monitoring</li> </ul>





Areas of High Conservation Value	Municipality	HCVs Identified	Risks and Threatened	Measures of Protection	Monitoring
					
Água Fria	Guapiara	5	<ul style="list-style-type: none"><li>• Illegal activities</li><li>• Operational damage</li><li>• Wildfire</li><li>• Erosive processes</li></ul>	<ul style="list-style-type: none"><li>• Intensification of Asset surveillance</li><li>• Qualified team to fight fire</li><li>• Maintenance of roads and firebreaks</li></ul>	<ul style="list-style-type: none"><li>• Periodic patrolling</li><li>• Monitoring with specialized team to identify environmental events</li><li>• Hydrologic monitoring</li></ul>
Planalto	Capão Bonito		<ul style="list-style-type: none"><li>• Illegal activities</li><li>• Operational damage</li><li>• Wildfire</li><li>• Erosive processes</li></ul>	<ul style="list-style-type: none"><li>• Intensification of Asset surveillance</li><li>• Qualified team to fight fire</li><li>• Maintenance of roads and firebreaks</li></ul>	<ul style="list-style-type: none"><li>• Periodic patrolling</li><li>• Monitoring with specialized team to identify environmental events</li></ul>
Santa Terezinha VI	Jacareí		<ul style="list-style-type: none"><li>• Illegal activities</li><li>• Operational damage</li><li>• Wildfire</li><li>• Erosive processes</li></ul>	<ul style="list-style-type: none"><li>• Intensification of Asset surveillance</li><li>• Qualified team to fight fire</li><li>• Maintenance of roads and firebreaks</li></ul>	<ul style="list-style-type: none"><li>• Periodic patrolling</li><li>• Monitoring with specialized team to identify environmental events</li></ul>
Santa Maria II	Votorantim	6 - Chapel	<ul style="list-style-type: none"><li>• Asset damage</li><li>• Wildfire</li><li>• Pillage</li><li>• Loss of access to resource and cultural value l</li></ul>	<ul style="list-style-type: none"><li>• Intensification of Asset surveillance</li><li>• Qualified team to fight fire</li><li>• Maintenance of surroundings</li></ul>	<ul style="list-style-type: none"><li>• Dialog with the local community</li><li>• Interviews with the community on the use of cultural heritage</li></ul>
Barreiro Grande	Pederneiras				
Barra Limpa	Santa Branca				
Sertãozinho II	São Luiz do Paraitinga				
Cachoeirinha					
São José III					
Daniela	Guaratinguetá				
Campo Alegre	Tremembé				
Santana	Capão Bonito	6 – Chapel and cemetery			
Lavrinha	Capão Bonito				

# Biodiversity monitoring

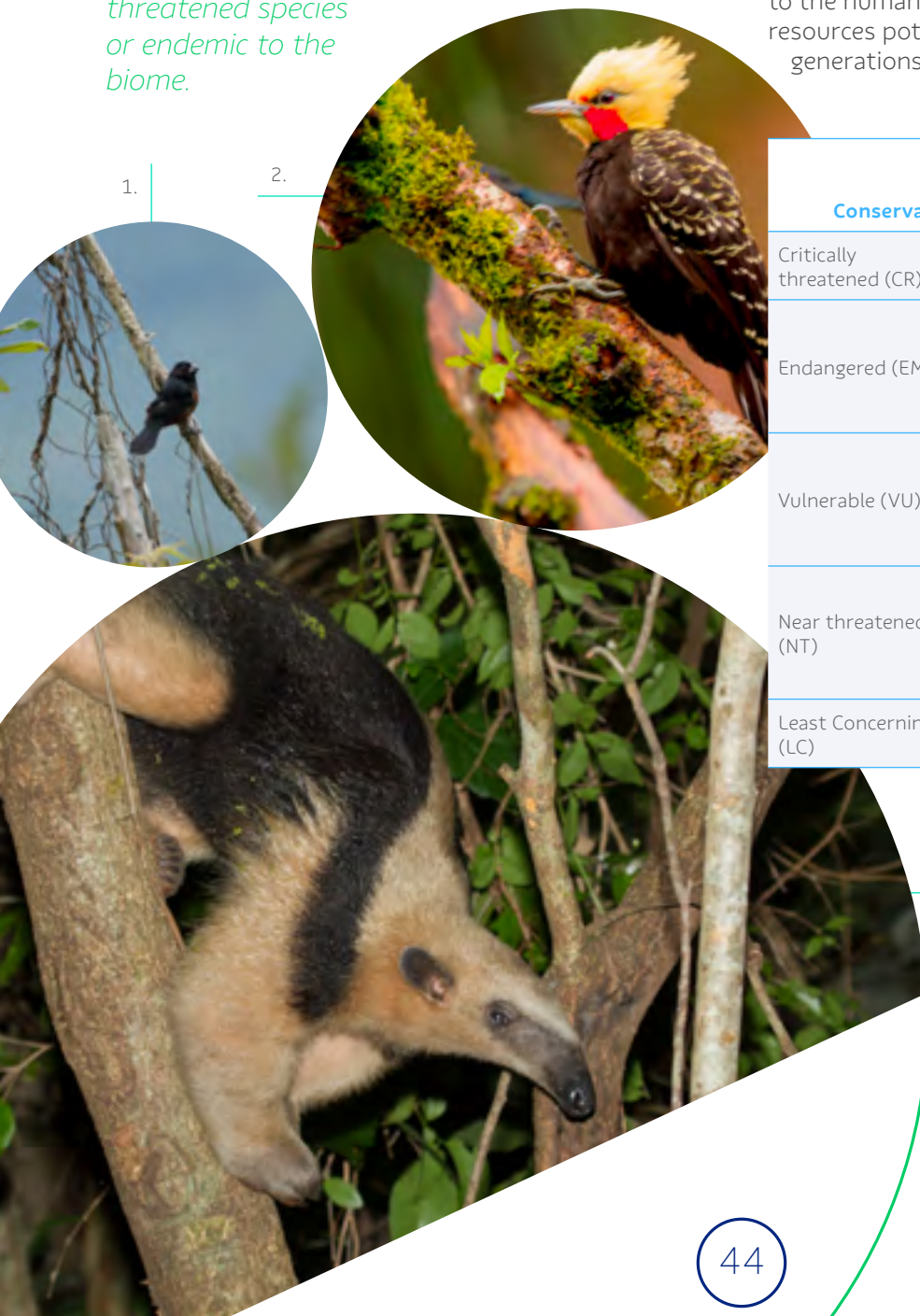
In 2019,  
**261 species** of birds and  
**40 species** of mammals were registered

## Fauna and flora

The areas of FBU-SP are inserted into different mosaics of forest coverage and house several phytophysiognomies of the biomes Cerrado and Atlantic Forest. Generally, our areas house forest fragments capable of contributing to the conservation of several species, especially threatened species or endemic to the biome.

Suzano understands Biodiversity Monitoring as the follow up of development and changes in the landscapes and fauna and flora communities components and parameters, aiming to assess the effects of forest management on the environment.

The objective is to promote the conservation and improvement of biodiversity, based on ecological indicators, scientific knowledge, and the sustainable management of the landscape, thus contributing to the human welfare and to maintain the natural resources potential to meet the needs of future generations.



Conservation status		Class		
		Birds	Mammals	Total
Critically threatened (CR)	State MG	1		1
	IUCN		1	1
Endangered (EM)	IBAMA		2	2
	State SP		1	1
Vulnerable (VU)	IUCN		4	4
	IBAMA		6	6
	State SP	1	3	4
Near threatened (NT)	IUCN	3	2	5
	IBAMA		1	1
	State SP	2		2
Least Concerning (LC)	IUCN		6	6

1. Chestnut-bellied seed finch (*Sporophila angolensis*), 2. Pica-Blond-crested woodpecker (*Celeus flavescens*), 3. Southern tamandua (*Tamandua tetradactyla*)

## Project Muriqui-do-Sul

*The Southern Muriqui (**Brachyteles arachnoides**) is the largest primate in the Americas.*

Living free only in the Atlantic forest of São Paulo, Rio de Janeiro and Paraná, they are classified by IUCN (International Union for Conservation of Nature) as critically endangered, which means that they can disappear from nature in 50 years.

The wild population is fairly reduced due mainly to the loss of natural habitat and cultural and sport hunting.

Since 2007, Suzano supports *Instituto Pró-Muriqui* in the development of Project Muriqui in São Sebastião do Ribeirão Grande Farm, in Pindamonhangaba (SP). The High Conservation Value area contains an important remaining of the native forest.

The main results of this study are: presence of a healthy and reproductive social group, with offspring, consisting of the last population of this species in the entire north of the Mantiqueira Mountains.

This area is so important that it was consolidated as global priority for IUCN. It is also one of the five national priority areas and one of the three state priority areas for the monitoring of the population and research applied to the conservation of this charismatic species.

**Since 2007,**

Suzano supports  
*Instituto Pró-Muriqui*





## Project *Bicudinho-do-Brejo-Paulista*

*Marsh antwren (**Formicivora paludicola**) is a critically threatened species, endemic to the state of São Paulo, discovered in 2004. Its incidence is restricted to the marshes of Guararema, Salesópolis, Mogi das Cruzes, São José dos Campos, Biritiba-Mirim and Santa Branca.*

In partnership with the municipal government of Guararema, Guanature and *Instituto Suinã*, *Save Brasil* is developing a project for the conservation of the species with the following objectives:

- Conduct a census and monitor the Marsh antwren population.
- Engage the local community in the conservation of the species.
- Create a Conservation Unit in October of 2019.

The census indicated that this species is found in two areas of Guararema; *Fazenda Putim*, owned by Suzano is among them. Considering the territories composed by couples or family groups, it is estimated that this farm houses 22 to 33 individuals.

Since 2017, *Save Brasil* team is conducting the census and monitoring campaigns in *Fazenda Putim* and rely on Suzano's support. The project is funded by the American Bird Conservancy, *Fundação Grupo Boticário de Proteção à Natureza*, Neotropical Bird Club and Mohamed Bin Zayed Species Conservation Fund.

The marsh antwren is found in two areas in

**Guararema,**  
one of which is owned  
by Suzano





# Monitoring of water resources

*Suzano S.A. assesses the effects of its plantings on the quality and quantity of water resources through a representative monitoring network according to the scale and intensity of plantings.*

One of the mechanisms applied for the maintenance of water resources is based on natural control developed along evolutionary processes of the landscape. One example is the well-known relationship between forest coverage and water resources.

In 2019, 10 microbasins were monitored in the state of São Paulo; four of these are part of the cooperative program for the monitoring and modeling of hydrographic basins (Promab), a research program of IPEF (Institute of Research and Study of Forests) coordinated by the Laboratory of Forest Hydrology of the Forest Sciences Department of ESALQ - University of São Paulo.

## Water monitoring at the FBU-SP

Monitoring	Municipality	Monitoring	Objective
Santa Marta	Igaratá	One experimental microbasin	PROMAB – cooperative program for the monitoring and modeling of hydrographic basins
Boa Esperança	Capão Bonito	One experimental microbasin	
Três Pinheiros	Anhembi	One experimental microbasin	
Horto Itatinga	Itatinga	Two experimental microbasins	
Fortaleza	Araraquara	One experimental microbasin	Monitoring and assessment of aquatic metabolism and retention of nutrients Master Thesis - USP - São Carlos
Entre Rios	Angatuba	Modeling of Water Resources	Assessment of the effects of forest management on the quantity and quality of water resources
GIR	Mairinque/Alumínio	Operational Microbasin	
Ribeirão Grande	Salesópolis	Operational Microbasin	
Ibiti	Itararé	Modeling of Water Resources	
Água Fria	Guapiara	CONAMA 357/2005	

# Environmental aspects and impacts of forest management

*Suzano is committed to adopting the best environmental practices to innovate in promoting a sustainable development.*





Focusing on process sustainability, the company uses managerial instruments and tools that provide better environmental quality in its forestry activities. Managing environmental aspects and impacts, the FBU defines methodologies for the identification, assessment and control of environmental aspects and impacts (of its services, activities and products), seeking to minimize all possible adverse impacts and strengthen the beneficial ones.

Environmental aspects and impacts of forestry processes are identified and assessed considering:

- The new laws that apply to the business.
- Compliance with the current law.
- Regulatory marks.
- Obligations resulting from agreements and voluntary certifications
- Change management for new products, services, activities and equipment.

Once identified the environmental aspects and impacts, mitigation, control and monitoring actions are established.

## Examples of environmental aspects and impacts of forest management

Type of impact	Adverse	Adverse	Beneficial	Beneficial
Environmental Aspect	 <p><b>Water consumption</b></p>	 <p><b>Fire</b></p>	 <p><b>CO<sub>2</sub> Capture</b> (GGE - Greenhouse gas emission)</p>	 <p><b>Improvement of ecological processes</b></p>
Environmental impact	Temporary variation of amount of water	Soil depletion and reduction in biodiversity	Minimization of climate changes	Conservation of Biodiversity
Control measure	<ul style="list-style-type: none"> <li>• Physical control: water meter and irrigation controller.</li> <li>• Limits of water use rights.</li> </ul>	Control systems (brigades with trained teams, tank trucks and equipment).	CO <sub>2</sub> sequestration by the forest production areas and conservation areas as informed in the Greenhouse Gas Inventory	<ul style="list-style-type: none"> <li>• Monitoring of restored areas.</li> <li>• Biodiversity management.</li> </ul>

# Ecological Restoration

*The Ecological Restoration Program aims to restore the ecological processes that are responsible for a sustainable functional forest.*

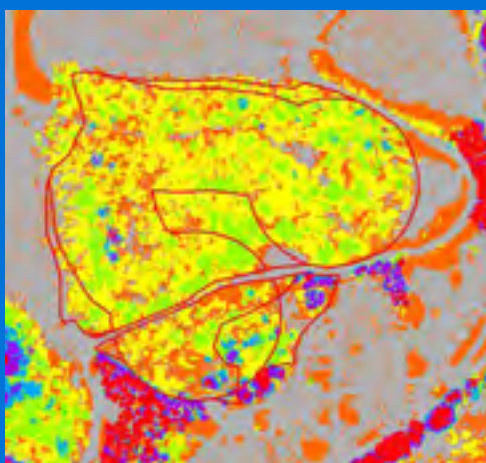
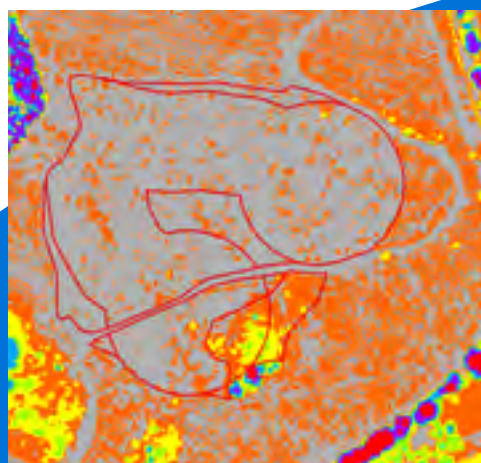
These actions are primarily taken in Permanent Preservation Areas aiming to meet the legislation and constraints posed by the forest operation permits.

The company is a signatory of the Atlantic Forest Restoration Pact, an initiative that aims to restore 15 million hectares in the country until 2050. In 2019, Suzano has initiated the restoration process of approximately 1300 ha of protected areas only at the FBU - SP.

To help managing this process, Suzano uses several technologies. One of these is *Lidar*, (Light Detection and Ranging) that, in practical terms, scans the surface of the Earth, creating tridimensional models of objects. Lidar data help us to characterize the structure of the vegetation, classifying the use/ occupation of the soil in a more precise way. Lidar can also help us to track the evolution of ecological restoration in our areas.

## Ecological Restoration in numbers

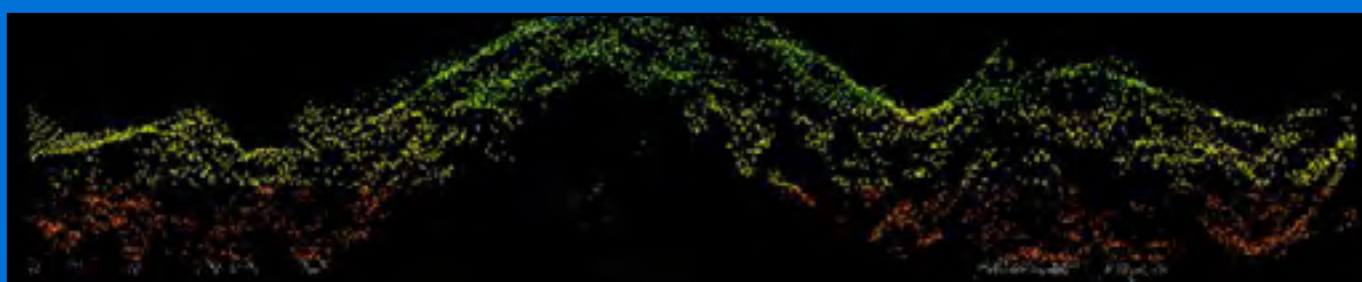
	Prediction (2019)	Accomplished (2019)
Implantation	1,179 ha	1,291 ha
Maintenance	1,493 ha	1,309 ha



Example of Santa Branca farm: the images show the evolution of the vegetation structure (forest profile - picture on the right) of a Permanent Preservation Area (PPA), comparing the same transect (black dashed line - picture on the left) in the same period, from 2012 to 2018.

Height

0 - 0,5	15 - 20
0,5 - 5	20 - 25
5 - 10	25 -
10 - 15	81,34400177



# Solid waste management

*Suzano's Solid Waste Management procedure adopts practices to classify, separate, store, collect, transport, and dispose of waste produced in forestry operations and activities, aiming to:*

- Reduce waste production;
- Reuse of residues, optimizing its use before disposal;
- Recycle residues;
- Adequately process waste;
- Ensure the proper disposal.

Waste management in the forest areas is performed according to the effective legislation. Waste is forwarded according to its classification to recipients that undergo a rigid process of evaluation and approval. Class I waste (Hazardous) might be sent for co-processing, recycling and licensed Class I landfills. Class II waste (non-Hazardous) are sent for recycling or licensed landfills, depending on its physical characteristics.

Packages of pesticides used in forestry operations are sent to licensed Empty Crop Protection Packages Receiving Units for reverse logistics.

## Waste management steps

Waste recipients go through evaluation and *approval*



Sorting



Temporary storage



Transportation



### Final Disposal

- Recycling
- Reuse
- Reverse logistics
- Co-processing
- Licensed landfill



## Environmental training

*Suzano provides environmental training to disseminate environmental information and practices among collaborators (employees and third parties) about sustainable attitudes and behavior, capable of transforming socioenvironmental reality*

With the objective of provoking the critical thinking among its collaborators, trainings aim to stimulate behavioral changes, by promoting sustainable practices and improving the environmental performance of the company. By disseminating technical recommendations to operational areas, the target audience understands that their actions can reduce the environmental impacts of forest operation.

## Environmental Education

### Project Trilhas do Cerrado

The project Trilhas do Cerrado is the result of a partnership that currently lasts more than 12 years between *Instituto Itapoty* and Suzano, with the objective of disseminating environmental concepts and practices to 6th grade students of the public schools in Itatinga and Avaré by promoting trekking and educational activities.

The initiative aims to raise curiosity among visitors and reveal the importance of environmental conservation, forming bonds through the direct, sensible and free contact with nature and contributing to increase knowledge on responsible forest management, biodiversity, biomes, the Guarani aquifer, among others.

*In 2019, the project attended about 314 students from the public schools Danúzia de Santi, Inah Lopes Oliveira Macedo and Aristeu Pedroso de Almeida in Itatinga - SP and the private school Rudolf Lanz in Avaré - SP.*





## Ecofuturo – Parque das Neblinas

*Parque das Neblinas (PN) is a natural reserve owned by Suzano and managed by Ecofuturo, located in the municipalities of Mogi das Cruzes and Bertioga, in the state of São Paulo.*

It comprises 7 thousand hectares of Atlantic Forest in several stages of regeneration, including the Private Reserve of the Natural Heritage (RPPN) Ecofuturo, with 518 hectares of more preserved vegetation.

The area is recognized, since 2006, by UNESCO's program *Homem e Biosfera*, as an advanced post of the Biosphere Reserve of Atlantic Forest, and is an important buffer zone for the *Parque Estadual da Serra do Mar* - the largest continuous area of Atlantic forest in the country.

Using management, protection, environmental conservation and social development strategies, the work conducted on Parque das Neblinas aims to contribute to the protection of important fragments of the biome, the biodiversity and the Itatinga river basin - 50% of the basin is inside the reserve, with 463 springs protected and more than 1,250 species already identified.

**1,250 species**  
have been identified  
in Parque das Neblinas





With this end, Ecofuturo consistently develops public-use programs focused on awareness-raising through environmental education, dissemination of knowledge, relationship with the community, sustainable logging and non-logging management, and research funding - more than 60 studies have been conducted in the area. Relying on a team of park rangers, the Institute also provides surveillance and protection, minimizing the impacts of pressure vectors.

Among the main initiatives are *Meu Ambiente* - an environmental education program developed since 2010 with teachers and students of the public schools network of Suzano, Bertioga and Mogi das Cruzes - and the Community management workshops, that has been happening for over 10 years, and seek to promote the exchange of knowledge with farmers in the vicinity, aiming to disseminate environmental conservation and sustainable development.

As part of the actions that seek to boost the regeneration of the *jussara*-palm, currently threatened, the species has been reintroduced in the area with the dispersion of over 8 million seeds and the fruit has been promoted in gastronomy.

## Highlights:

- 8 million seeds of *jussara* palm - considered key for the Atlantic forest balance.
- 35 workshops of community management of PN conducted, with the participation of 60 farms (since 2008).
- 28 Km of hiking trails made accessible for visitation.
- 6,000 hectares with ongoing restoration.
- 1,000 hectares of native vegetation.
- \* 1,500 km patrolled annually, thus protecting PN and its biodiversity.
- 1,250 species identified.





12.

# Acknowledgement Of and Respect for *Professionals*



## 12. Acknowledgement Of and Respect for *Professionals*

### Safety, Health and Quality of Life

*The valuation of, and respect for, professionals are Suzano's commitment. Safety and health management is one of Suzano's priorities. The company encourages all individuals to take responsibility for safety and spares no resources to further reduce the rate of accidents.*

The Occupational Health and Safety Management program provides guidance on the registration of events in and outside the company, providing the Safety Department with the elements required for the development of awareness campaigns that extrapolate the management boundaries and contributes significantly to the quality of life of employees, their families and the communities surrounding Suzano's areas of operation.

Checking and ensuring work safety and health conditions, as well as the use of safety devices, are also covered by the collective agreement signed with the employees' representative entities. All events related to the employees health and safety are registered and monitored based on a corporative standard for the communication of accidents, incidents and occupational disease.

#### *Safety performance of FBU-SP forestry operations*

Safety indicators	2019
Safety Management Indicator (IGS) Forestry Operation + Logistics	92%
Frequency rate (accidents with and without lost work days)	1.09
Frequency rate (accidents with lost work days) Operation + Forestry Logistics	0.12

Programs developed by Suzano to ensure safety at work involve the preparation of documents that seek to identify the risks associated with operations, such as the Environmental Risk Prevention Program (PPRA), Preliminary Risk Analysis (APR), Work Risk Observation (OPA), Safety in the Area, and work permits.

All activities are checked and monitored for below-standard conditions and practices (*Fique Alerta / GID*) and approached by programs as the Program for Medical Control of Occupational Health (PCMSO). The system is composed of different groups and committees that help monitoring and provide guidance on safety and health conditions. The initiatives aim to establish and maintain a responsible and transparent relationship with all employees in order to adopt the best existing practices in the industrial, forestry and administrative units. This process helps to build Suzano's reputation among its key relationship public and seeks to explore synergies and to better employ our professionals talents.



# Workforce Qualification

*The company contributes to the generation of local jobs by improving the economic activities in the region of operation.*

Our collaborators and vendors are offered personal and professional development opportunities. All collaborators take part in training activities that address not only technical aspects of the operation, but also subjects such as ethics and human rights. The welfare of every employee and level of satisfaction with the company are also closely monitored through organizational surveys.

The company conducts a structured process of integration of new employees and permanent vendors that aims to facilitate their adaptation into the work environment, the organizational culture, concepts and drivers, environmental conservation, code of conduct, the management system and stakeholders relationship.

Suzano has a benefits policy aligned to the good practices of the market and to its employees' expectancies. The benefits granted represent a significant value for the company and its employees, and are managed in order to ensure the best quality level and provide comfort and satisfaction.

## Job creation at FBU-SP

Own*	731
Vendors*	2,181
<b>Total</b>	<b>2,912</b>

Data from December - 2019





13.

# Social Management



## 13. *Social* Management

*Suzano prioritizes a clear and straightforward work toward social aspects directly or indirectly affected by its forest management activities.*

*With this end, the company considers a set of specific actions aimed at the different audiences influenced by its activities.*



Sustainable  
Practices Program -  
Capão Bonito (SP)



# Stakeholders Relationship Management

Suzano's relationship strategy is to ensure social and business legitimacy through the long-term strengthening of its interaction with neighboring communities and the integration of its interests into forestry business management.

Suzano's relationship with communities surrounding its operations follows the following approach:



## 1. Priorization Matrix

Process of characterization of the area where Suzano is present to guide the activities with social impact to be adopted in each case. This study provides an assertive guidance for social investment and other actions for local engagement.



## 2. Engagement

Structured, inclusive and continued relationship, where the company plays the role of a partner toward the local development.

Takes place on the communities most impacted by Suzano's operation. In rural communities, engagement is promoted by the Rural and Territorial Development Program (PDRT), Beehives Program, among others.



## 3. Operational Dialog

Channel for direct communication through which the company informs the residents of neighboring communities about the forestry operations scheduled in that region according to an annual planning of activities, and discusses impacts and mitigation actions.

This process also integrates annual visits to ensure a continuous relationship with the neighboring communities.



Association of  
*Quilombo do Jaó* -  
Itapeva (SP)

# Management of social impacts

*Suzano understands "social impacts in the communities" as any changes (harmful or beneficial) caused entirely or partially by its forestry operations within three kilometers radius of its properties or areas leased for eucalyptus production.*

The management of social impacts model seeks to eliminate, reduce or compensate the negative impacts through management practices, socioenvironmental investment, and continuous control and mitigation actions.

Despite all measures taken to prevent and mitigate adverse impacts, unpredictable losses and damages can still occur, directly affecting the communities resources or livelihood. In this case, these losses and damages are compensated and mitigated, in common agreement and according to the particularities of each case, in a fair and balanced way.

In the following, examples of adverse social impacts from forestry management and the corresponding mitigation and prevention measures are presented. For conflict resolution, disputes and compensations involving rights of use, possession and control of the land, the company has defined directives that prioritize a friendly and fair solution for the parts.

## Examples of adverse social impacts and controls

Activities	Social Impacts	Preventative and mitigating measures
Application of crop protection products	Inconvenience caused by drift* to neighboring areas	<ul style="list-style-type: none"> <li>• Use of products authorized by the environmental bodies</li> <li>• Signaling of the areas</li> <li>• Training of employees that apply the products</li> <li>• Maintenance of equipment use for application</li> </ul>
Forest harvest	Increase in the risk of accidents	<ul style="list-style-type: none"> <li>• Use of up-to-date equipment and trained and qualified teams</li> <li>• Signaling and guidance offered to the community to prevent people from approaching machinery during operation</li> </ul>
Timber transportation	Change of landscape (visual) and loss of reference	Placement of warning signs
	Increase in the risk of accidents	<ul style="list-style-type: none"> <li>• Reduced and controlled velocity</li> <li>• Compulsory stops to check and tighten the load</li> <li>• Safe driving voluntary campaigns</li> </ul>
	Dust	Reduction of dust with moistening of the roads (tank trucks)
	Damage of the road network	<ul style="list-style-type: none"> <li>• Road maintenance during operations</li> <li>• Monitoring and control of load weight of the timber trucks</li> </ul>
	Noise	Negotiation of time period for the operations

*\*Drift: phenomenon of spray drops carry-over by the wind (EMBRAPA)*

Project Quintais  
Produtivos -  
Jacareí (SP)



# Analysis and monitoring of stakeholders relationship processes

All the demands concerning forestry operations, identified in the engagement processes, operational dialogs and participative agenda are critically assessed and validated by the operational areas to review the social impact matrix and improve Suzano's forest management.

## *Effectiveness of the socioenvironmental impacts mitigation actions*

Area	Category	Name of Monitoring	Indicator	Results 2019
Social	Impacts on the Communities	Investment in the Community (GRI EC1)	Socioenvironmental investments (R\$)	13,775,700
			Share of donations to socioenvironmental investments (%)	0.6
			Number of rural communities in PDRT	9
		Operational dialog and Participative agenda	Rate of fulfillment of the annual dialog program (%)	100
			Rate of fulfillment of operational demands (%)	100
			Rate of effectiveness of mitigation actions	2.8 (good)
		Complaints about damage caused by management	Number of complaints received	166
			Average time to address a complaint	26
		Image Survey	Suzano's favorability in the communities (%)	NA



Suzano's education program



# Socioenvironmental investment

Socioenvironmental investment is the voluntary transference of private resources in a planned, monitored and systematic way to social, environmental and cultural projects of public interest that contributes to the development of the communities where Suzano operates. Such investments are segmented into four types of interventions:

## Partnership

Short-term one-off support, with social purpose, that require a counterpart from the applicant. Are related to operations, expertise and products from Suzano's business.

## Donation

Very short-term one-off support to meet stakeholders demands aiming to strengthen institutional relationships.

## Sponsorship

Granting of resources, whether financial, material and/or services provided by Suzano to enable certain activity or event. Is considered a communication tool.

## Project

Social investments planned and developed within the scope of a certain program, with well-defined purpose and duration (objectives, goals, deadlines, process indicators, results and impacts).

### Social Programs and Projects

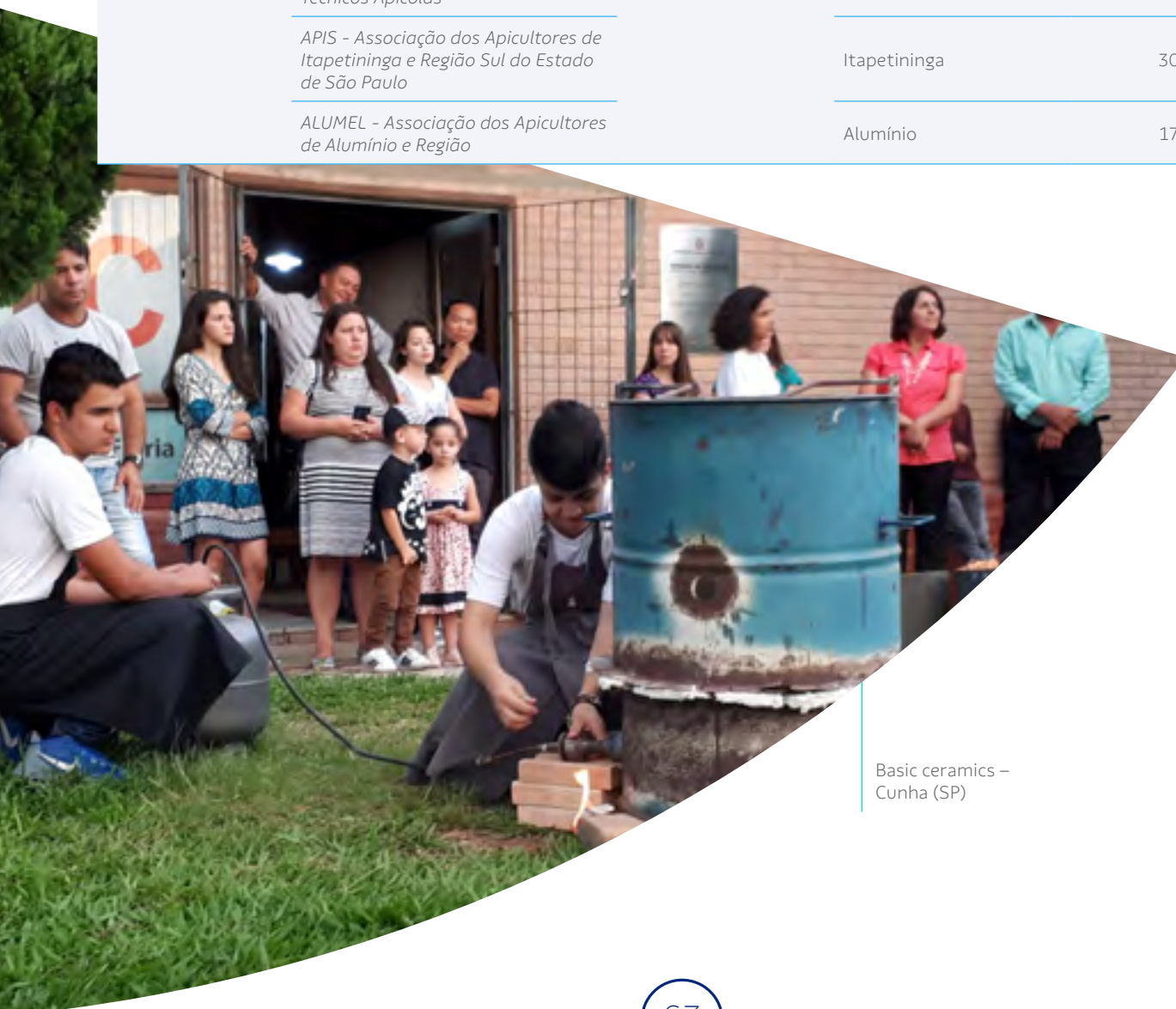
Line of action	Institution	Project	Municipalities	Beneficiaries
Ceramics	ICCC - Instituto Cultural da Cerâmica de Cunha	Basic Ceramics	Cunha	70
	Suinã	Sustainable practices	Jacareí, Guararema and Alumínio	200
Education	Instituto Votorantim	PVE - Parceria para a Valorização da Educação	Votorantim, Pilar do Sul, Taquarivaí, Buri, Jacareí, Paraibuna, Salesópolis, Santa Branca, Pindamonhangaba, Tremembé, Igaratá	995



Productive area of PDRT project (food production) - Redenção da Serra (SP)



Line of action	Institution	Project	Municipalities	Beneficiaries
Local development	Conexão Sustentabilidade	Qualification of organizations	Capão Bonito	02 organizations
	ARKHÉ	PDRT	Itapeva	124 families
			Capão Bonito	96 families
	São Luiz do Paraitinga and Redenção da Serra		16 families	
	AKARUI		Guararema	12 families
	Salesópolis and Guararema		22 families	
	Zapata Consultoria / Arkhé			
	AAMI - Associação de Apicultores do Município de Itapeva		Itapeva	33
	AAPICAB - Associação de Apicultores de Capão Bonito		Capão Bonito	55
	APTA - Associação Paulista dos Técnicos Apícolas	Beehives Program	Sorocaba	150
	APIS - Associação dos Apicultores de Itapetininga e Região Sul do Estado de São Paulo		Itapetininga	30
	ALUMEL - Associação dos Apicultores de Alumínio e Região		Alumínio	17



Basic ceramics –  
Cunha (SP)

Line of action	Institution	Project	Municipalities	Beneficiaries
Local development	AAB Associação de Apicultores de Botucatu	Beehives Program	Botucatu, Anhembi, Agudos, Borebi, Iaras, Piracicaba and Lençóis Paulista	53
	AAPC - Associação apicultores Pólo Cuesta		Itatinga, Angatuba and Pardinho	80
	AAMARE - Associação de Apicultores de Avaré		Avaré	10
	APISBOA - Associação Apicultores de Boa Esperança do Sul		Boa Esperança do Sul	30
	APISOL - Associação dos Apicultores Morada do Sol		Itirapina, Brotas, Analândia and Torrinha	10
	UPAMEL - União Paulista de Criadores de Abelhas Melíferas		Salto de Pirapora, São Miguel Arcanjo, Pilar do Sul, Alambari and Sarapuí	64
	Agriapsí		Guararema	13
	CAMAT		Salesópolis	10
	APISTINGA - Associação dos Apicultores de São Luiz do Paraitinga e Região		São Luiz do Paraitinga	13
	NUTRIR - Associação Sócio Educativa de Pequenos Produtores Rurais de Redenção da Serra		Redenção da Serra	11
	Agroapis - Associação dos Agropecuaristas e Apicultores de Santa Branca	Dairy farming	Santa Branca	11
	APAX - Associação dos Produtores do Agronegócios de São Francisco Xavier		São José dos Campos	13
	Pecuaristas do Vale do Paraíba		Jacareí, Jambeiro, Pindamonhangaba, Taubaté and Caçapava	9

Beehives program –  
S. Luiz do Paraitinga (SP)



# Performance and main indicators of forest management

Aspect	Resp. Process	Monitoring	Indicators	Unit	Goal 2019	Reality 2019	Critical analysis	Systems / database	Frequency
Environmental	Forestry	Forestry control	Weed control competition - Act. with herbicides	ha	210,029.64 <i>**Total area of herbicides</i>	178,536.97 <i>**Total area of herbicides</i>	This reduction was due to the strategy of unification of the forest bases.	SAP	Daily, except on rainy days
			Ant bait consumption	kg/ha	2.36	2.45	Due to an increase in the degree of infestation shown in the ant control monitoring.	SAP	Daily, except on rainy days
			Consumption of herbicide	kg/ha	1.55	1.56 <i>*Considering only glyphosate</i>	Within the interval of 5% of acceptance.	SAP	Daily, except on rainy days
			Consumption of herbicide	L/ha	3.10 <i>*Considering only glyphosate</i>	2.55 <i>*Considering only glyphosate</i>	The infestations in the areas were more susceptible to the product, thus allowing a dose reduction.	SAP	Daily, except on rainy days



# 14. Company's *Performance*



## 14. Company's Performance

Production Center	Municipality	Área of the Municipality (ha)	Planting (ha)	Area of conservation (ha) <sup>2</sup>	Other areas (ha) <sup>3</sup>	Total (ha) <sup>1</sup>	Total area of occupancy (%)
SP1	Aparecida	12,184	530	653	47	1,230	10%
	Areias	30,342	746	526	73	1,345	4%
	Bertioga	48,578	505	5,908	287	6,700	14%
	Biritiba-Mirim	31,672	1,550	2,629	290	4,469	14%
	Caçapava	37,018	2,369	1,724	280	4,374	12%
	Cachoeira Paulista	28,555	615	546	59	1,221	4%
	Canas	5,351	389	250	32	672	13%
	Cruzeiro	31,412	445	446	67	958	3%
	Cunha	140,229	990	645	78	1,713	1%
	Guararema	27,161	2,066	1,646	283	3,994	15%
	Guaratinguetá	75,873	2,437	2,452	293	5,181	7%
	Igaratá	29,286	1,006	803	96	1,906	7%
	Jacaréí	46,350	973	828	286	2,086	5%
	Jambeiro	18,278	1,653	1,230	290	3,173	17%
	Lavrinhas	16,921	538	393	43	974	6%
	Lorena	41,004	1,125	1,598	138	2,861	7%
	Mogi Das Cruzes	71,620	45	1,000	30	1,074	1%
	Monteiro Lobato	33,692	269	312	45	627	2%
	Natividade Da Serra	83,100	1,335	1,952	145	3,432	4%
	Paraibuna	81,029	4,100	2,432	404	6,936	9%
	Pindamonhangaba	73,564	1,879	3,175	216	5,270	7%
	Piquete	17,648	140	106	25	272	2%
	Piracaia	38,426	288	326	40	654	2%
	Queluz	25,285	587	263	106	956	4%
	Redenção Da Serra	30,996	2,039	1,193	192	3,425	11%
	Roseira	13,235	256	306	79	641	5%
	Salesópolis	42,269	995	814	149	1,957	5%
	Santa Branca	27,154	2,608	1,614	241	4,464	16%
	Santo André	17,319	440	428	172	1,040	6%
	São José do Barreiro	55,839	50	60	5	115	0.2%
	São José dos Campos	110,947	2,991	4,240	335	7,566	7%
	São Luís do Paraitinga	61,038	3,024	1,494	298	4,816	8%
	Silveiras	41,365	594	718	90	1,402	3%
	Suzano	20,462	0	55	0	55	0.3%
	Taubaté	61,531	1,693	1,359	168	3,220	5%
	Tremembé	19,416	550	447	64	1,062	5%
<b>Total Center SP1</b>			<b>41,821</b>	<b>44,571</b>	<b>5,448</b>	<b>91,839</b>	

<sup>1</sup> Total area includes: owned, and leased farms and partnerships.

<sup>2</sup> Area of conservation includes: Permanent Preservation Areas (PPA), Legal Reserves (LR), Rocky Outcrops.

<sup>3</sup> Other Areas include: roads, buildings, power networks, gas pipelines, firebreaks, and other betterments.

Production Center	Municipality	Área of the Municipality (ha)	Planting (ha)	Area of conservation (ha) <sup>2</sup>	Other areas (ha) <sup>3</sup>	Total (ha) <sup>1</sup>	Total area of occupancy (%)
SP2	Angatuba	102,098	1,010	572	123	1,705	2%
	Buri	119,768	4,505	2,343	349	7,198	6%
	Campina do Monte Alegre	18,576	1,304	394	92	1,789	10%
	Capão Bonito	165,777	21,572	9,557	1,641	32,770	20%
	Itapetininga	178,741	9,830	7,582	837	18,248	10%
	Paranapanema	100,579	1,475	17	46	1,539	2%
	Pilar do Sul	68,514	3,349	2,083	386	5,818	8%
	São Miguel Arcanjo	93,748	7,611	3,170	615	11,396	12%
<b>Total Center SP2</b>			<b>50,656</b>	<b>25,718</b>	<b>4,088</b>	<b>80,462</b>	
SP3	Angatuba	102,098	9,430	3,902	470	13,803	14%
	Anhembi	74,308	5,964	2,266	396	8,626	12%
	Avaré	120,552	4,022	936	174	5,132	4%
	Bofete	64,951	1,839	1,038	182	3,058	5%
	Botucatu	149,029	5,215	2,333	373	7,922	5%
	Guareí	56,395	1,222	661	69	1,952	3%
	Itatinga	98,608	11,955	4,013	557	16,524	17%
	Pardinho	20,693	268	42	24	334	2%
	Piracicaba	137,561	1,398	329	120	1,847	1%
<b>Total Center SP3</b>			<b>41,315</b>	<b>15,519</b>	<b>2,364</b>	<b>59,198</b>	
SP4	Capão Bonito	165,777	58	155	6	218	0.1%
	Guapiara	40,321	235	222	13	470	1%
	Itaí	110,789	837	164	32	1,033	1%
	Itapeva	183,183	6,344	2,869	517	9,729	5%
	Itararé	100,493	11,325	5,595	651	17,571	17%
	Ribeirão Branco	69,873	647	1,008	60	1,715	2%
	Taquarivaí	23,525	587	223	42	852	4%
<b>Total Center SP4</b>			<b>20,032</b>	<b>10,236</b>	<b>1,321</b>	<b>31,589</b>	
SP5	Agudos	97,896	4,272	1,439	151	5,862	6%
	Arealva	49,838	229	16	10	255	1%
	Avaí	54,101	1,902	902	83	2,887	5%
	Avaré	120,552	5,238	1,787	235	7,260	6%
	Borebi	34,458	12,206	2,781	516	15,503	45%
	Cerqueira César	49,878	828	343	156	1,327	3%
	Duartina	26,478	1,138	644	47	1,829	7%
	Iaras	40,911	1,694	411	317	2,422	6%
	Lençóis Paulista	81,513	5,091	701	221	6,013	7%
	Paulistânia	25,160	926	619	55	1,600	6%
	Pederneiras	72,520	419	40	13	471	1%
<b>Total Center SP5</b>			<b>33,943</b>	<b>9,683</b>	<b>1,803</b>	<b>45,429</b>	

<sup>1</sup> Total area includes: owned, and leased farms and partnerships.

<sup>2</sup> Area of conservation includes: Permanent Preservation Areas (PPA), Legal Reserves (LR), Rocky Outcrops.

<sup>3</sup> Other Areas include: roads, buildings, power networks, gas pipelines, firebreaks, and other betterments.

Production Center	Municipality	Área of the Municipality (ha)	Planting (ha)	Area of conservation (ha) <sup>2</sup>	Other areas (ha) <sup>3</sup>	Total (ha) <sup>1</sup>	Total area of occupancy (%)
SP6	Amparo	44,830	811	589	71	1,471	3%
	Analândia	32,573	1,207	477	91	1,775	5%
	Araraquara	102,073	4,275	1,136	194	5,606	5%
	Boa Esperança do Sul	68,965	5,847	1,255	288	7,390	11%
	Bocaina	36,215	813	148	20	980	3%
	Brotas	111,756	3,945	1,268	173	5,385	5%
	Charqueada	18,113	111	8	15	133	1%
	Corumbataí	27,757	489	758	58	1,306	5%
	Espírito Santo do Pinhal	39,260	458	155	31	644	2%
	Ipeúna	19,303	23	0	6	30	0.2%
	Itirapina	55,657	5,445	1,857	344	7,645	14%
	Leme	40,361	315	195	45	555	1%
	Limeira	57,960	113	82	23	217	0.4%
	Monte Mor	24,224	121	2	7	130	1%
	Piracicaba	137,561	105	34	16	155	0.1%
	Santa Cruz da Conceição	15,084	39	35	3	77	1%
	Santa Maria da Serra	25,701	128	21	8	156	1%
	São Pedro	61,834	407	377	42	826	1%
	São Simão	62,097	2,121	607	128	2,856	5%
	Torrinha	31,509	522	55	24	600	2%
<b>Total Center SP6</b>			<b>27,292</b>	<b>9,057</b>	<b>1,587</b>	<b>37,936</b>	
SP7	Alambari	15,615	1,827	507	121	2,454	16%
	Alumínio	8,632	1,864	2,005	367	4,237	49%
	Itapetininga	178,741	143	4	11	157	0.1%
	Itu	63,879	577	26	33	636	1%
	Mairinque	21,051	109	94	18	221	1%
	Mombuca	13,247	70	40	7	118	1%
	Pilar Do Sul	68,514	1,934	4,398	278	6,610	10%
	Porto Feliz	55,488	1,254	530	94	1,877	3%
	Salto de Pirapora	28,493	1,589	612	172	2,373	8%
	Sarapuí	34,962	1,674	736	161	2,572	7%
	Sorocaba	44,641	1,285	1,172	130	2,587	6%
	Votorantim	18,558	2,087	2,241	282	4,610	25%
<b>Total Center SP7</b>			<b>14,414</b>	<b>12,365</b>	<b>1,673</b>	<b>28,452</b>	
MN1	Sapucaí-Mirim	26,569	552	1,095	54	1,701	6%
<b>Total Center MN1</b>			<b>552</b>	<b>1,095</b>	<b>54</b>	<b>1,701</b>	
MN2	Andrelândia	100,007	174	112	7	293	0.3%
	Carrancas	72,392	1,828	940	74	2,842	4%
	Cruzília	51,861	1,114	961	52	2,127	4%
<b>Total Center MN2</b>			<b>3,117</b>	<b>2,012</b>	<b>133</b>	<b>5,263</b>	
RR1	Barra Mansa	54,318	217	88	15	320	1%
	Resende	110,994	1,415	1,464	177	3,056	3%
<b>Total Center RR1</b>			<b>1,631</b>	<b>1,552</b>	<b>192</b>	<b>3,376</b>	
<b>Total FBU - São Paulo</b>			<b>234,773</b>	<b>131,808</b>	<b>18,665</b>	<b>385,246</b>	

<sup>1</sup> Total area includes: owned, and leased farms and partnerships.

<sup>2</sup> Area of conservation includes: Permanent Preservation Areas (PPA), Legal Reserves (LR), Rocky Outcrops.

<sup>3</sup> Other Areas include: roads, buildings, power networks, gas pipelines, firebreaks, and other betterments.





# 15. Communication with *Stakeholders*

## 15. Communication with **Stakeholders**

*Suzano is constantly in contact with its employees and with the several segments of society, keeping them up to date on its activities, and always keeping things clear, transparent and straightforward.*

**Among the most commonly used communication media are:**

### **Internal audience**

SuzanoNet, Printed and Digital newsletters, walls, Forest Radio (including an app for mobile access), Corporate TV, Educational guides.

### **External audiences**

Relationship with the Press, Website, Social Media, Visitation programs, Annual reports, Management Plan Summary and printed media Jornaleco and Ecosciencia. In addition to these, the company has other communication channels.





## Communication with specific audiences

### **Suzano Answers**

0800 022 1727  
or [suzanoresponde@suzano.com.br](mailto:suzanoresponde@suzano.com.br)

If you have any questions, suggestions for improvement, or complaints, please contact us. It is toll-free!

### **Social Networks**

 Facebook  
[www.facebook.com/suzanoempresa/](https://www.facebook.com/suzanoempresa/)  
 Instagram  
[www.instagram.com/suzano\\_oficial/](https://www.instagram.com/suzano_oficial/)  
 Youtube  
[www.youtube.com/user/Suzanovideos](https://www.youtube.com/user/Suzanovideos)  
 LinkedIn  
[www.linkedin.com/company/suzano/](https://www.linkedin.com/company/suzano/)

### **Ombudsman Suzano**

*Phones (toll-free)*

Brazil  
0800 771 40 60

Phones abroad  
Check for the specific numbers on the Suzano Ombudsman website.

E-mail  
[ouvidoriaexterna@austernet.com.br](mailto:ouvidoriaexterna@austernet.com.br)

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