

Public Summary  
of the

# Forest Management Plan

Forestry Business Unit Aracruz

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

### Images

Suzano Archive

Araquém Alcântara



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*

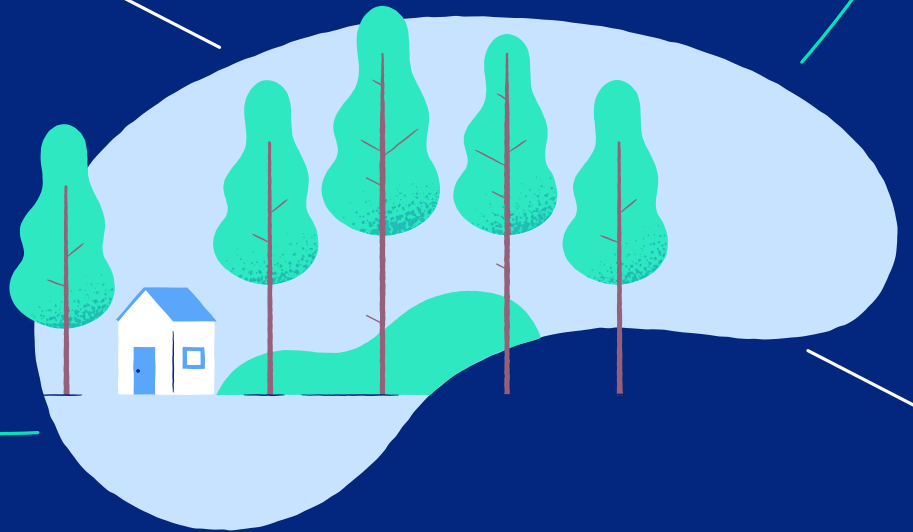
*We are a renewable basis company operating mainly in the segment of pulp and paper from Eucalyptus planting to supply companies all over the globe. Our portfolio is wide and diverse.*

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.





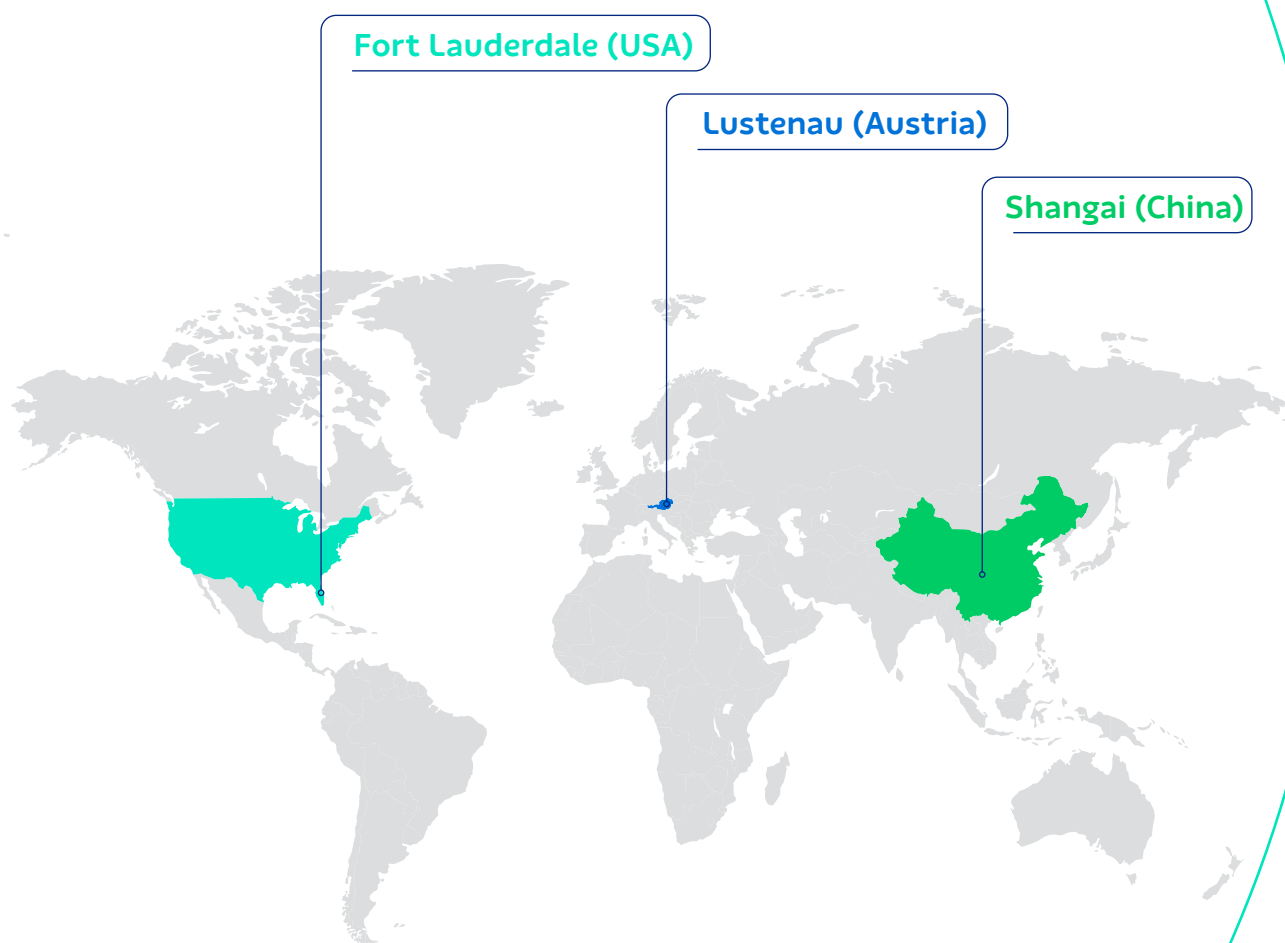


### 3. Where *We Are*

### 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)**

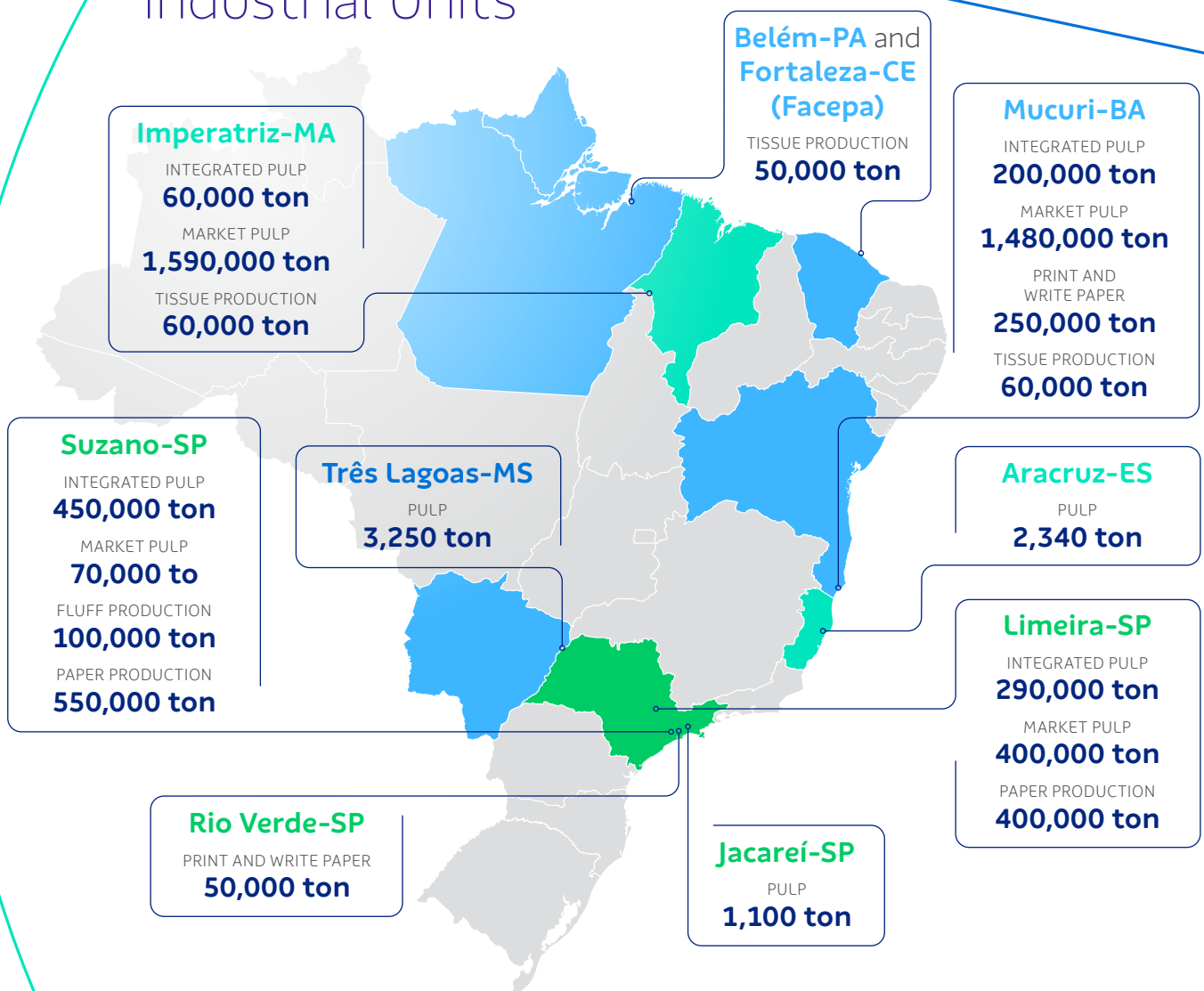




Our organization includes administrative offices in Salvador (state of Bahia) and São Paulo (state of São Paulo), industrial plants and FuturaGene, responsible for the genetic development of forest crops and biofuels, with research laboratories in Israel and China.

*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\*



## 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

# Aracruz



## 6. Forestry Business Unit **Aracruz**

*Suzano S.A. Forest Business Unit in Aracruz-ES is responsible for the forest management of the operations embracing 19 (nineteen) cities in Espírito Santo state. This unit is divided between Aracruz and Sao Mateus Regionals.*

Plantings are carried out in owned lands, through leasing contracts, or through partnerships with rural producers. With a forest base of 243 thousand hectares, which 83 thousand hectares are intended for biodiversity conservation (data from December, 2019), Suzano-ES forest management is carried in a way to balance eucalyptus planting with natural resources conservation, technological innovations and the respect for the communities.

All production is based on renewable eucalyptus plantation, with the aim of supplying the industrial complex of Aracruz - ES, with capacity to produce 2.3 million tons of bleached eucalyptus pulp per year.

The seedlings used have been created with clonal technology, from a certified partner nursery and hold the most advanced genetic database to grow forest towards cellulose production.

The harvesting process used respects the region characteristics and uses efficient systems which use equipment that allow an efficient, safe and environmentally friendly operation.

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 the communities, in partnership with universities and technical institutions.

The FBU Aracruz encompasses a forest basis of  
**243,000 ha,**  
 of which, about  
**83,000 ha**  
 are destined to conservation.



## Area of operation per municipality

Municipality	Area of the Municipality (ha)	Planting (ha)	Conservation (ha)	Other Uses (ha)	Total occupied area (ha)	Total occupied area (%)
Aracruz	142,028.50	26,250.99	17,859.51	3,949.01	48,059.51	34%
Boa Esperança	42,871.60	395.17	510.35	419.47	1,324.99	3%
Conceição da Barra	118,258.70	41,494.67	19,030.04	3,144.12	63,668.83	54%
Fundão	28,685.40	528.31	382.75	61.85	972.91	3%
Ibatiba	24,027.80	-	6.10	14.31	20.41	0%
Jaguaré	65,975.10	3,322.65	1,648.19	286.76	5,257.60	8%
Linhares	349,626.30	6,813.99	10,206.24	1,226.55	18,246.78	5%
Montanha	109,906.00	7,770.67	5,399.85	494.58	13,665.10	12%
Mucurici	54,052.90	2,971.21	2,533.16	238.13	5,742.50	11%
Pedro Canário	43,345.30	1,745.38	1,566.51	509.59	3,821.48	9%
Pinheiros	97,313.60	5,621.93	2,651.19	1,088.19	9,361.31	10%
Ponto Belo	36,011.00	-	175.08	706.05	881.13	2%
Rio Bananal	64,192.90	375.76	509.46	38.57	923.79	1%
Santa Leopoldina	71,809.70	257.79	362.04	104.98	724.81	1%
Santa Teresa	68,321.90	-	2.95	1.67	4.62	0%
São Mateus	234,604.70	39,640.74	15,513.63	3,229.27	58,383.64	25%
Serra	54,763.10	2,417.74	2,377.09	265.12	5,059.95	9%
Sooretama	58,703.60	2,530.21	705.58	183.31	3,419.10	6%
Vila Valério	47,034.30	1,831.31	1,098.70	176.35	3,106.36	7%
<b>Total</b>	<b>1,711,532.40</b>	<b>143,968.52</b>	<b>82,538.42</b>	<b>16,137.88</b>	<b>242,645</b>	<b>14%</b>

Source: Suzano Database on 02/03/2020 / Area in hectares / City Areas - Source IBGE

\* Other Uses correspond to roads, buildings, clear areas under overhead power lines, etc.







## 7. Environmental *Aspects*

## 7. Environmental *Aspects*

### Forestry Areas

*The forest areas and other native Phyto physiognomies present in Suzano's FBU-ES areas offer a number of conservation possibilities for local biodiversity.*

We're included in the Atlantic Forest, containing broad biodiversity, traditional communities, a rich cultural heritage, tourist sites and water springs.

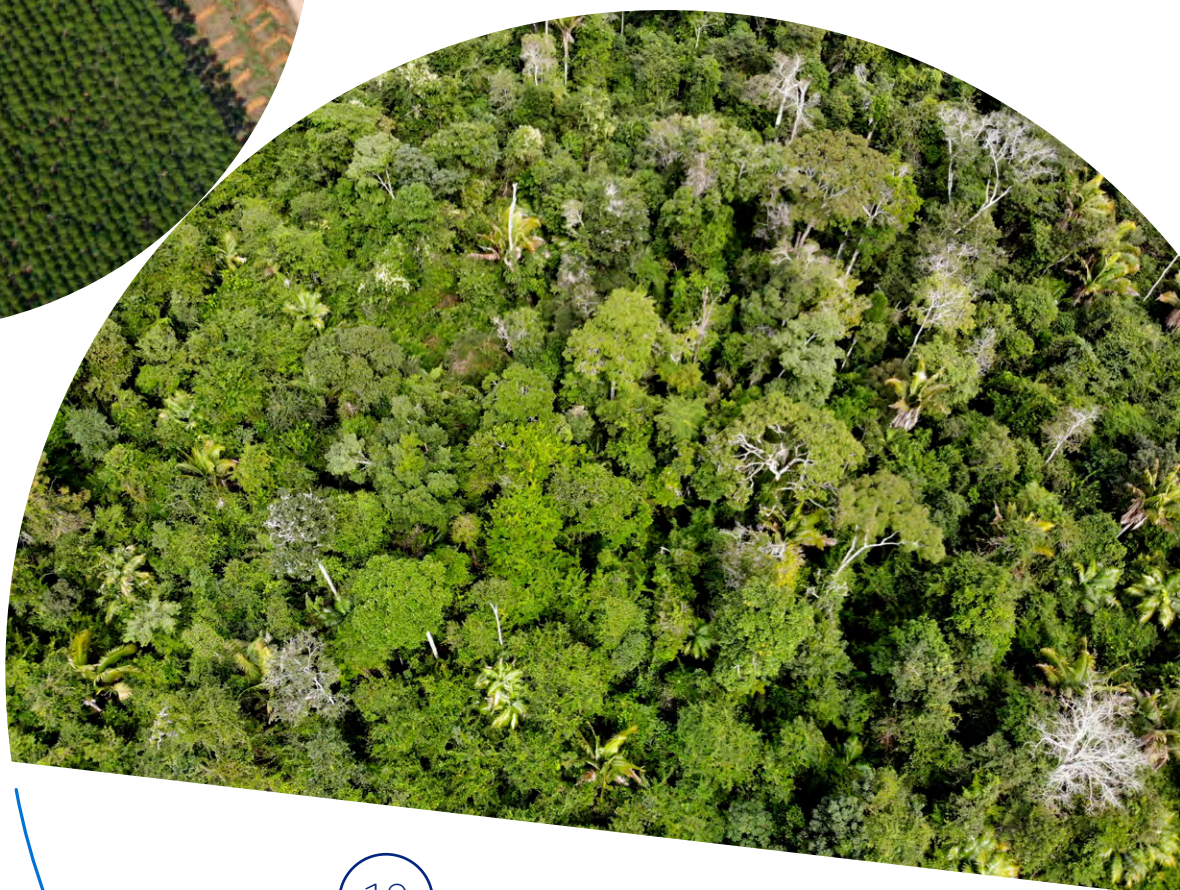
#### Soil, climate and hydrography

The soil in Aracruz Unit is mostly acid, deep, highly weathered, well drained, low in organic matter, with low fertility, cohesive, resistant to erosion and compaction; very hard when dry and brittle when humid.

According to IBGE (Brazilian Institute of Geography and Statistics), Suzano's plantings in Espírito Santo are centered on a region of tropical warm humid and tropical super-humid, where the annual average rainfall is between 1,200 and 1,400 mm/year.

In its influence zone, average temperature is around 24oC and varies up to 5oC between the warmest and coldest months.

The main hydro graphic regions of the Espírito Santo state where Suzano's areas of influence are located are the North Central Coast (basins of the rivers Riacho, Reis Magos, Piraqueaçu and Jacaraípe), Doce river, the affluents of the North and South branches of the São Mateus river, and Itaúnas river.



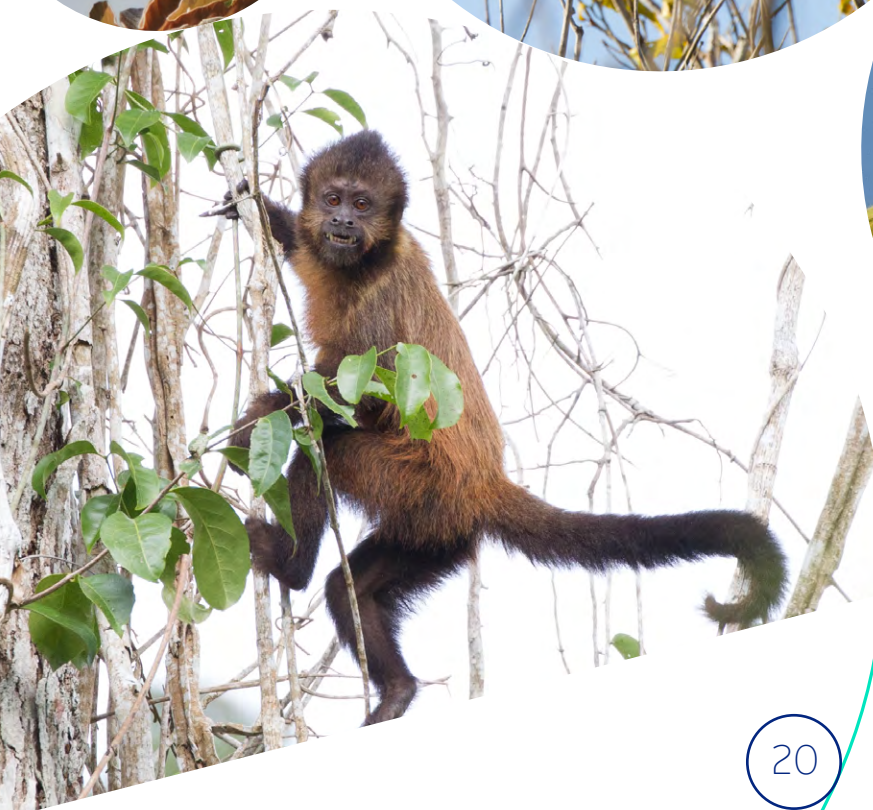


## Fauna and Flora

Suzano S.A. Farms - FBU-ES are included in different mosaics of forest coverage and shelter different vegetations from the Atlantic Forest biome. In general, our farms shelter remaining areas capable of contributing to the conservation of a number of species, especially those endemic to the biome or threatened.

The environmental characterization in Suzano's areas of operation is done through diagnostics and monitoring of the fauna and flora. In a general way, the studies seek to identify, randomly or systemic, the local fauna and flora species, enabling the identification of critical species (protected by law), mapping the habitats of endemic, rare and endangered species, and finding opportunities for more detailed studies, restorative actions on the flora, or improvement of environmental conditions for the fauna.

The fauna monitoring campaigns are carried every three years, while flora monitoring is carried every four years and it includes hiking during dry and rain seasons.







## 8. Socioeconomic *Aspects*

## 8. Socioeconomic *Aspects*

### Forestry areas

*To characterize and identify the main social economic and cultural aspects present in the Forestry Centers supporting the work of the company in identifying the specific strategies in its area operation.*

The Management Unit is situated in an area that includes urbanized municipalities in the metropolitan region of Vitória, important regional centers such as Linhares and São Mateus, and small rural municipalities such as Montanha.

Eucalyptus planting consists of a dynamic activity in the region, being responsible for important social productive changes, even though traditional activities such as livestock, subsistence farming and fishing have great importance in

The cities of Rio Bananal, Vila Valério, Sooretama, Pinheiros, Linhares, Montanha, Ecoporanga, Ponto Belo, Jaguaré and Mucurici are characterized in general by a higher number of small agricultural units occupied by family groups dedicated to the production of food and traditional commodities (mainly coffee), partners, sharecroppers, tenants, much of those complement their income as day laborers in local farms.

Cattle farms and the related cowboy sociability occupy a significant part of the landscape, especially in the northwest part of the state.

The predominant presence of communities formed by African slaves' descendants occupy the area of the cities of São Mateus and Conceição da Barra. Groups of farmers, cowboys, riparian's and traditional fishermen complete the picture of traditional occupation in this area, that has been facing a steep urbanization.

The indigenous presence is strong in Aracruz area, which concentrates all acknowledge indigenous land, sheltering lands of Tupiniquins and M'bya (Guarani) nations. Region widely occupied due to an ongoing urbanization.

The company identifies the social assets, by means of tools and procedures to frame the location profiles. These procedures and tools are used to understand and map the main social economic characteristics of the cities nearby and, in this way, to guarantee a strategic direction of the activities with the people, set by the Director of Sustainability planning and priority tools.

#### Archaeological information

The archaeological sites and locations with significant historical and/or cultural relevance located in the company's areas or surroundings are identified in our cartographic base. Among the main actions performed, we highlight: identifying sites of special historical, archaeological, cultural, ecological, economic or religious significance for the communities and training field staff on archaeological heritage.

*The indigenous presence*  
is strong in  
Aracruz area





## Distribution of Suzano's farms, Conservation units and Management Units of Water Resources

*Conservation Units are legally recognized areas, with relevant natural features with the role of securing the representativeness of significant and ecologically viable samples of the different populations, habitats and ecosystems.*

The fragments of native vegetation and planted forest have an important role in the set of biodiversity conservation actions both locally and state-wide.

The areas operated by Suzano, with the techniques provided to protect fragments and manage commercial crops, have relevant positive effects on the neighboring conservation units because they shelter significant amounts of biodiversity and maintain the functionality of key biological and ecological processes.

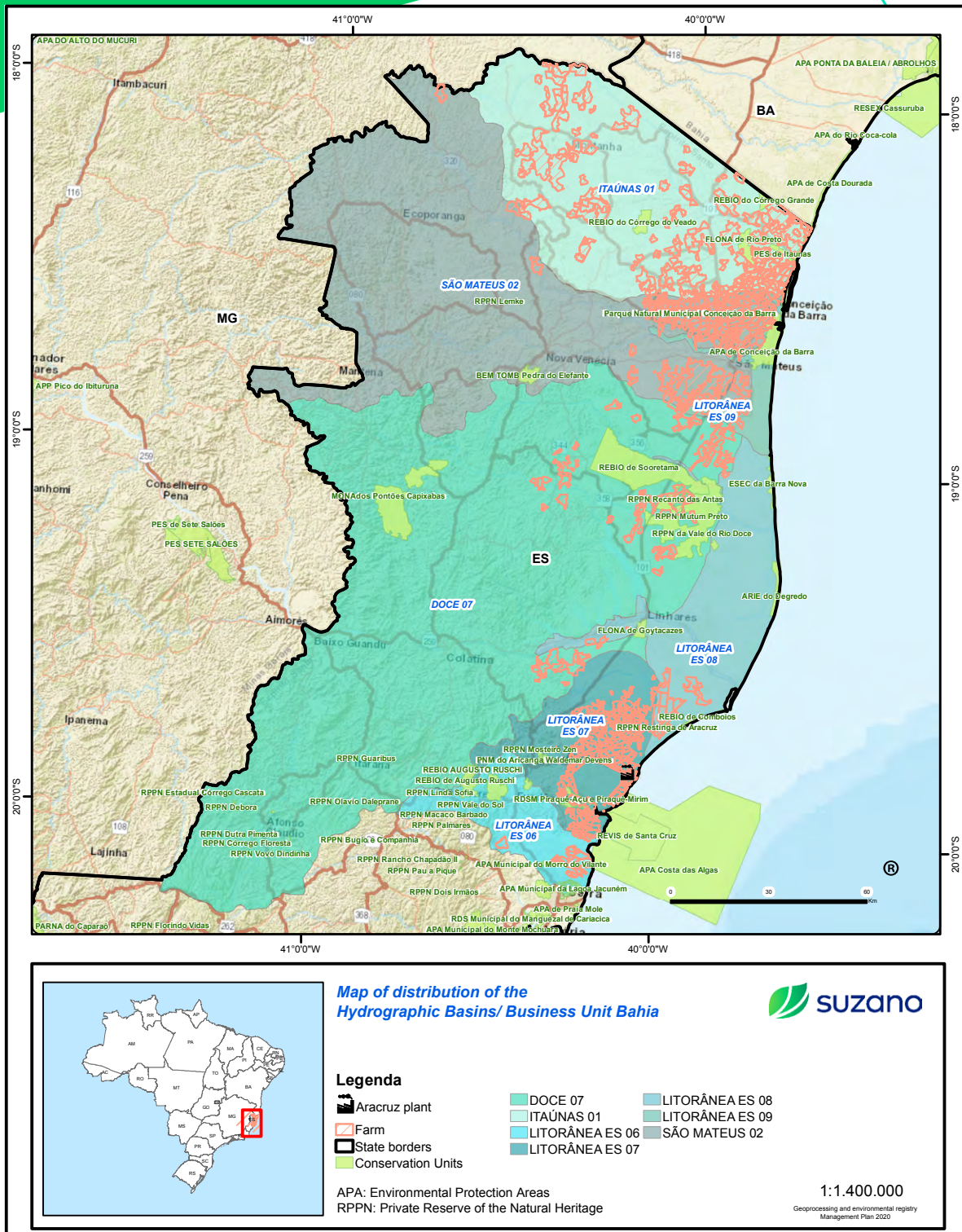
Furthermore, understanding where the company's areas are inserted relative to the river basins helps us to plan new implementation areas, and to maintain existing plantings.

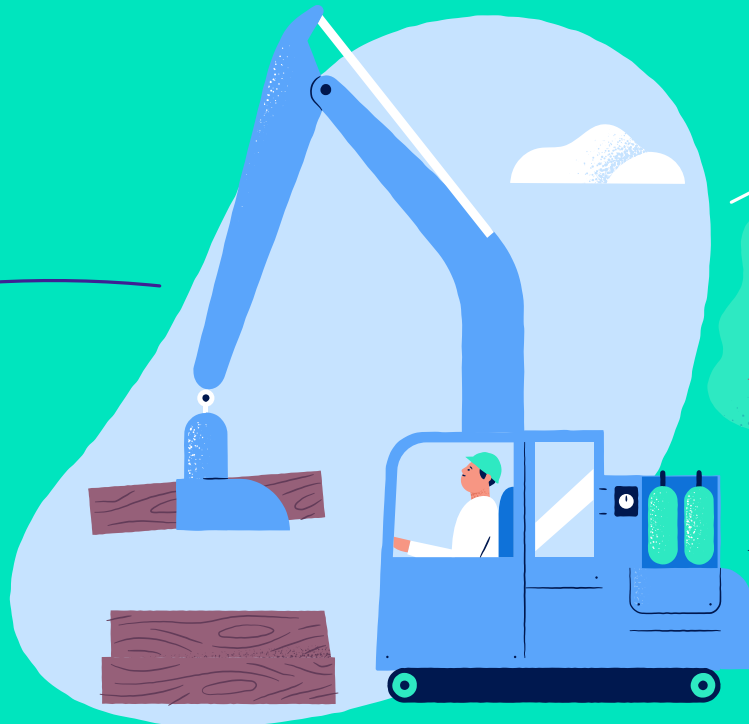
The use of water in the operations is ruled by a state agency which, depending on each resource water availability and, the volume required for the other users, sets the max volume of water to be used by the company, to ensure the water supply to the processes' other users of the watershed.



Some Conservation Units bordering the Suzano ES areas are the **Biological Reserves of Comboios, Sooretama, Córrego Grande, Córrego do Veado, National Forest of Rio Preto** and the **Itaúnas State Park**.

Map of water resources management





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.

Average annual production of plantings is approximately

**34.6 m<sup>3</sup>/ha/year**



## 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.

FBU-ES receives some  
**35 million**  
 seedlings per year from a  
 local certified nursery,  
 with a successful use of  
**78%**

## 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.



## 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  
**2,491 ha (implantation),**  
**14,027 ha (renovation)** and  
**17 ha (regrowth),** totaling  
**16.603 ha**



In 2019, the annual  
harvest volume was

**1.994.772 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

FBU-ES uses precision technology for operational management. The truck fleet has telemetry for operation and distribution monitoring, and fleet tracking on company's roads and farms, loading and unloading control, besides contributing with our partners in safe operation management, with driver's working day monitoring and the detection of possible speed limit deviations.

With this system, Suzano strengthens the daily routine management culture among logistic operation partners, maximizing people's safety standards and operational efficiency, with a trustworthy database.

## 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

**5.398.595 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

*Prevention and forest fire combat receive great attention from Suzano's staff involved with forest productive processes.*

The Forest Fire Brigade acting on the plantation and conservation areas consists of the property surveillance with the forest fire activities with the aim of working preventively, by monitoring the areas and an effective readiness to act upon call of forest fire.

The company provides frequent training to the Forest Fire Brigade teams, which monitor the company's premises and are capable of assisting firefighting in the surroundings.

Annually, we carry out Forest Protection work along with the competent authorities, aiming to reduce the Forest Fire incidents, as well as to other issues found within the premises.

To keep our forest plantation and environment conservation areas, we rely on the daily monitoring of the Property Surveillance Staff and cameras to indicate problems and fires.



## Live Forest Program

The Live Forest Program aims to raise awareness among the staff (own and third parties), partners and surrounding communities over the impact and danger of fire, what to do to prevent it and how to proceed when detecting an outbreak.



Suzano invests in awareness by distributing reading material such as educational folders, regarding the dangers of fires and wild fires.

Among these roles we can mention environmental monitoring, property surveillance and environment conservation lectures in schools and community centers surrounding our forests.



## Safety and Protection of forest areas

Suzano has an Electronic forest fire monitoring system in Espírito Santo with monitoring towers with 360° vision operated by 2 central stations. This system covers over 95% of the forest area, including the plantation and environment conservation areas.



**Teams location**



**Daylight incident detection**



**Night incident detection**



**Detection of pests and diseases**

Tank-trucks



3 Surveillance centers operating non-stop



18 towers equipped with moving and fixed cameras

Fire brigade







11.

# Environmental Management

## 11.Environmental **Management**

### High Conservation Value Areas

*The term High Conservation Value Areas (HCVA) was created along with the standards for the forest management certification and refers to the areas with high environmental or social relevance for conservation.*

Examples are: Native forests that house endemic (that can't be found anywhere else) or endangered animals and plants, and forests that provide essential resources for the local population.

Suzano uses this concept to guide its conservation efforts, evaluating the HCVAs present in its areas according to: biological, ecological, social or cultural value considered remarkably significant or of extreme relevance at national, regional or global level. These are the values to be protected.

The company uses, as reference, attribute criteria adapted from the High Conservation Value Resource Network, HCVRN, 2018 edition.

Suzano-ES identified

**8 environmental HCVAs**

in its premises with a total of 8,4 thousand hectares and,

**4 social HCVAs ,**

with important values to the community.

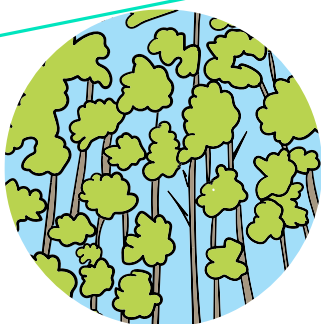


## Consultation of Stakeholders

Suzano had a consultation with its stakeholders, according with the criteria to identify HCVAs and LSIs (Location of Special Interest), aiming to develop management regimes for the HCVAs and LSIs as per their efficiency.

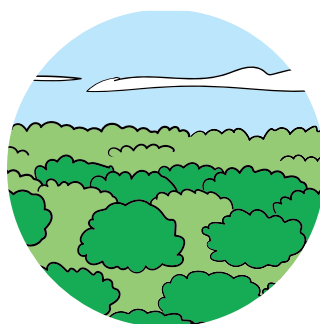
While studying the areas, Suzano consulted researchers and specialists on their areas of expertise before taking decisions concerning the proper identification and management of HCVAs and LSIs.

*The key to identify an area as being of high value is to find if it holds one or more High Conservation Values as described below:*



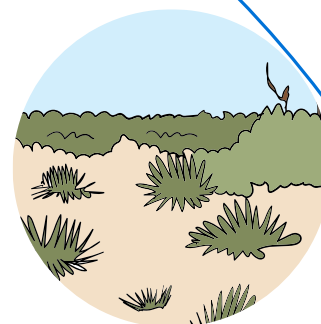
### HCV 1

Areas containing significant concentration of biodiversity values.



### HCV 2

Extensive and preserved areas of native vegetation, of global, national or regional biodiversity relevance.



### HCV 3

Areas inside of or including rare ecosystems, threatened or in danger of extinction.



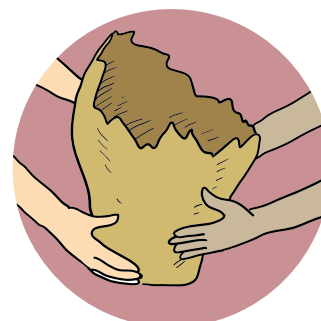
### HCV 4

Areas capable of promoting environmental services in critical scenarios, such as watersheds and erosion control.



### HCV 5

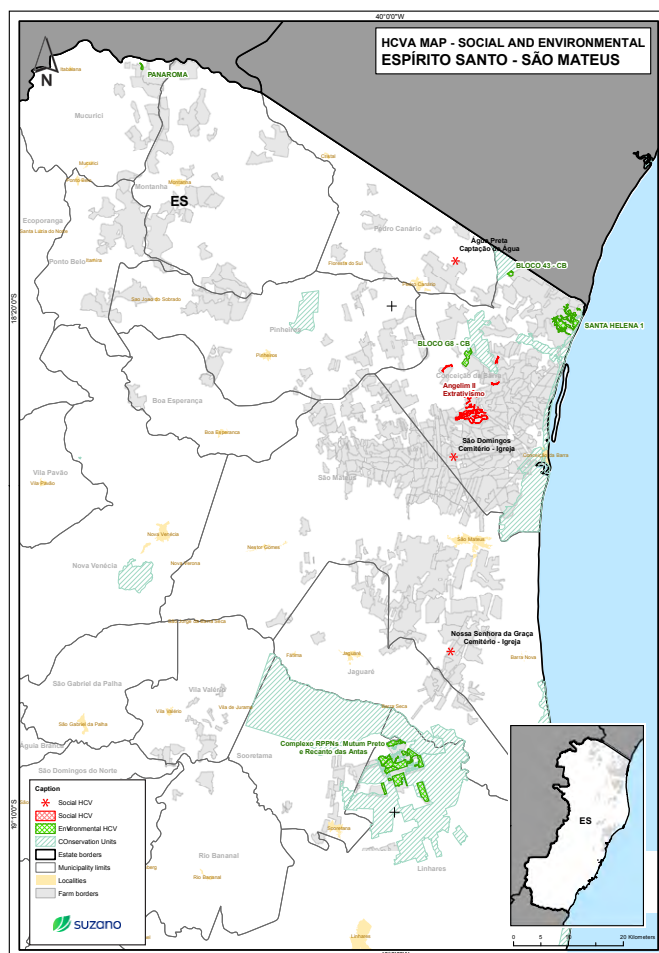
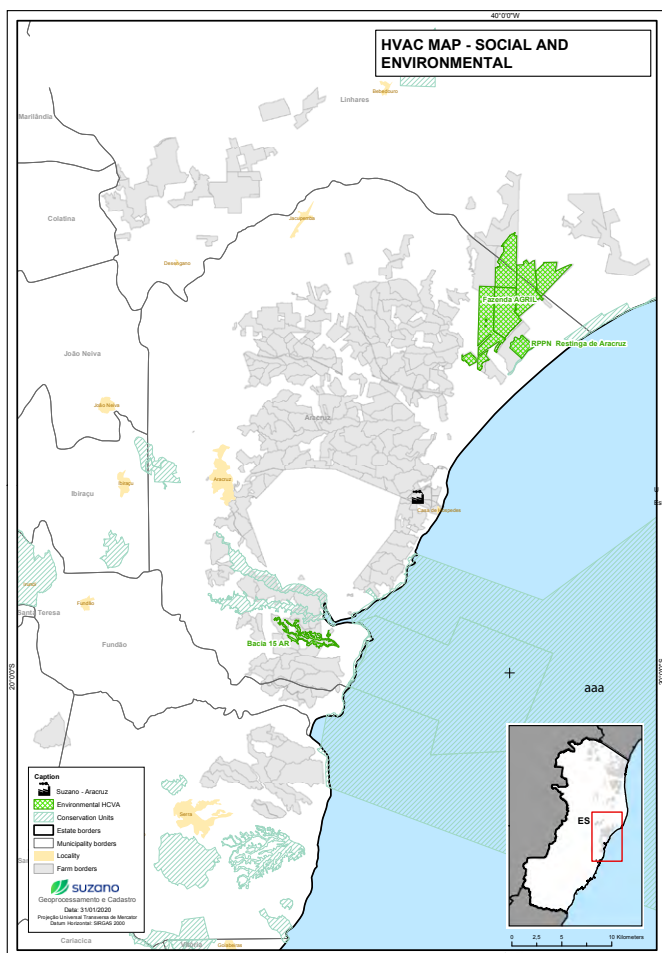
Important areas to serve communities basic needs, such as those related to health and livelihood.









### HCV 6

Important areas for community's traditional cultural identity.










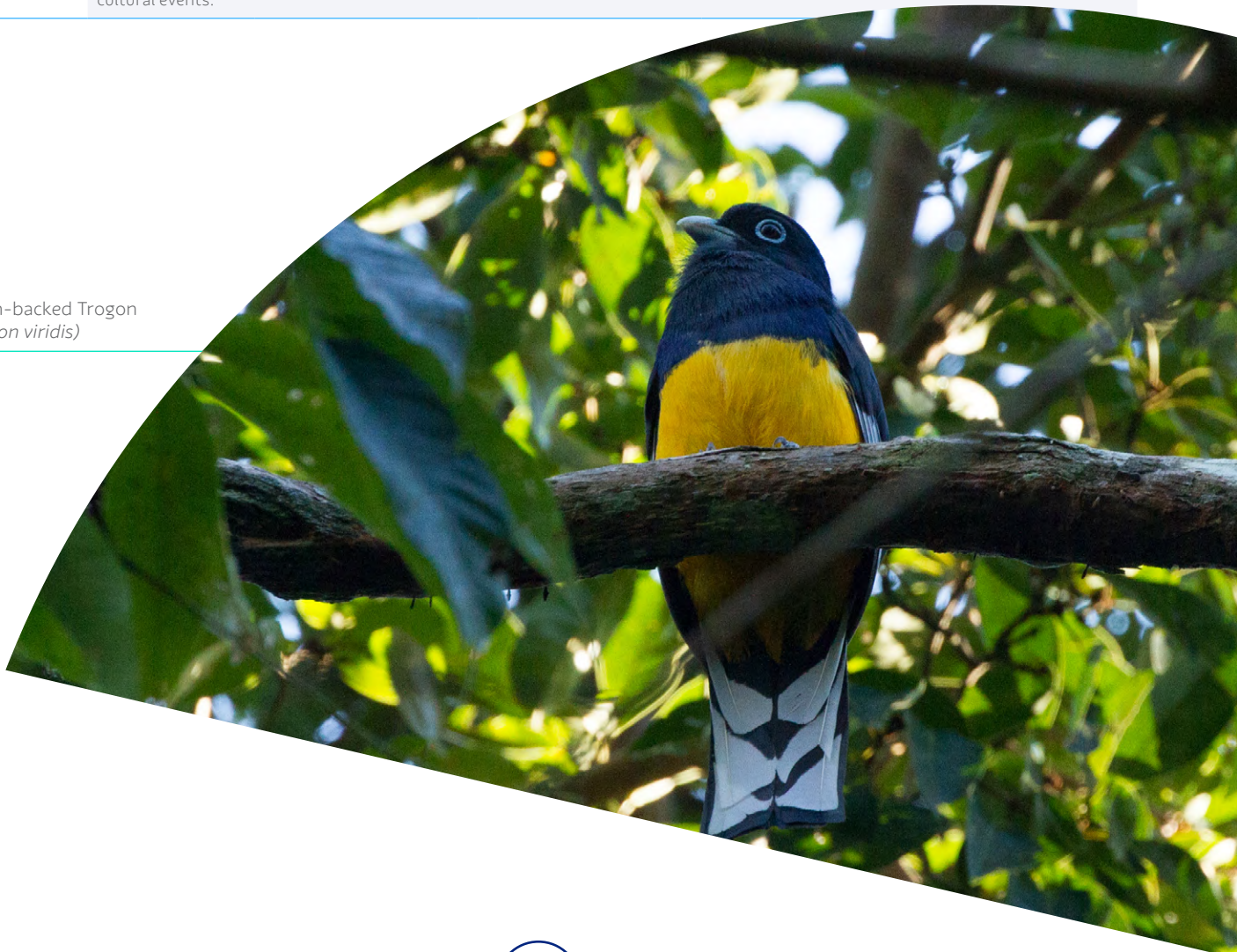
# Measures of protection and monitoring actions of HCVA's and LSIs

High Conservation Value	Characteristics	Risks and Threats	Impact	Protection Measures	Monitoring
					
<b>HCV 1</b>	Species that are endemic, rare, threatened or in danger of extinction in a global, national or regional level.	<ul style="list-style-type: none"> <li>Illegal practices: <ul style="list-style-type: none"> <li>Fires;</li> <li>Theft of timber and native plants;</li> <li>Theft of minerals</li> <li>Poaching;</li> <li>Livestock presence;</li> </ul> </li> <li>Illegal waste disposal</li> <li>Trespassing and others.</li> <li>Exotic species invasion;</li> <li>Improper management of bordering areas;</li> </ul>	<ul style="list-style-type: none"> <li>Biodiversity loss;</li> <li>Damage to individuals in bordering areas;</li> <li>Ecosystem unbalance;</li> <li>Gene flow behavior;</li> <li>Disturbance of animals.</li> </ul>	<ul style="list-style-type: none"> <li>Property surveillance;</li> <li>Deployment of fire combat preventive measures;</li> <li>Environmental Restoration;</li> <li>Environmental/ operational training to staff and Environmental Education to the communities;</li> <li>Implementation of signboards identifying the HCVA and presenting the illegal practices;</li> <li>Identification in the operation map;</li> <li>Social Environmental Recommendations / PPS (Partnership for Sustainability).</li> </ul>	<ul style="list-style-type: none"> <li>Anthropic actions: Monthly</li> <li>Avifauna: Three-year</li> <li>Mammals: Three-year</li> <li>Flora: Four-year</li> <li>Ground cover per satellite image: Annual</li> </ul>
<b>HCV 2</b>	Significantly extensive area in a global, national or regional level, with viable populations of native species.	<ul style="list-style-type: none"> <li>Operational damage to the vegetation.</li> </ul>			<ul style="list-style-type: none"> <li>Anthropic Actions: Monthly</li> <li>Ground cover per satellite image: Annual</li> </ul>
<b>HCV 3</b>	Ecosystems, habitats or refugees of rare or threatened biodiversity or in danger of extinction.	<ul style="list-style-type: none"> <li>Illegal practices: <ul style="list-style-type: none"> <li>Fires;</li> <li>Theft of timber and native plants;</li> <li>Theft of minerals;</li> <li>Livestock presence.</li> </ul> </li> <li>Invasive species;</li> <li>Erosion and sedimentation.</li> </ul>	<ul style="list-style-type: none"> <li>Reduction of native ground coverage;</li> <li>Soil loss;</li> <li>Soil compaction;</li> <li>River silting;</li> <li>Reduced water availability;</li> <li>Worsened water quality.</li> </ul>	<ul style="list-style-type: none"> <li>Property surveillance; Anthropic Actions: Monthly</li> <li>Deployment of fire combat preventive measures;</li> <li>Environmental Restoration;</li> <li>Environmental/ operational training to staff and Environmental Education to the communities;</li> <li>Implementation of signboards identifying the HCVA and presenting the illegal practices;</li> <li>Identification in the operation map;</li> <li>Social Environmental Recommendations / PPS (Partnership for Sustainability);</li> <li>Water usage (. demand from stakeholders)</li> </ul>	<ul style="list-style-type: none"> <li>Anthropic Actions: Monthly</li> <li>Ground cover per satellite image: Annual</li> </ul>
<b>HCV 4</b>	Areas capable of promoting environmental services in critical scenarios.	<ul style="list-style-type: none"> <li>Illegal practices: <ul style="list-style-type: none"> <li>Fires;</li> <li>Theft of timber and native plants;</li> <li>Theft of minerals;</li> <li>Livestock presence.</li> </ul> </li> <li>Invasive species;</li> <li>Erosion and sedimentation.</li> </ul>	<ul style="list-style-type: none"> <li>Reduction of native ground coverage;</li> <li>Soil loss;</li> <li>Soil compaction;</li> <li>River silting;</li> <li>Reduced water availability;</li> <li>Worsened water quality.</li> </ul>	<ul style="list-style-type: none"> <li>Property surveillance; Anthropic Actions: Monthly</li> <li>Deployment of fire combat preventive measures;</li> <li>Environmental Restoration;</li> <li>Environmental/ operational training to staff and Environmental Education to the communities;</li> <li>Implementation of signboards identifying the HCVA and presenting the illegal practices;</li> <li>Identification in the operation map;</li> <li>Social Environmental Recommendations / PPS (Partnership for Sustainability);</li> <li>Water usage (. demand from stakeholders)</li> </ul>	<ul style="list-style-type: none"> <li>Anthropic Actions: Monthly</li> </ul>



High Conservation Value	Characteristics	Risks and Threats	Impact	Protection Measures	Monitoring
					
<b>HCV 5</b>	Fundamental areas to fulfill the local communities basic needs (subsistence, health).	<ul style="list-style-type: none"> <li>• Property damage and depreciation;</li> <li>• Operational damage;</li> <li>• Water availability;</li> </ul>	<ul style="list-style-type: none"> <li>• Water shortage;</li> <li>• Depreciation and loss of cultural identity;</li> <li>• Disfigurement of cultural, traditional, ecological or religious importance locations.</li> </ul>	<ul style="list-style-type: none"> <li>• Property surveillance;</li> <li>• Special attention to firefighting (PROFLOR);</li> <li>• Roads and fire roads maintenance;</li> <li>• Environmental education actions;</li> <li>• Access granting guarantee;</li> <li>• Implementation of signboards identifying the HCVA or LSI;</li> <li>• Open talk with the community;</li> <li>• Identification in the operation map;</li> <li>• Maintenance of physical structures.</li> </ul>	Quarterly
<b>HCV 6</b>	Area of utmost importance to the traditional cultural identity of the local communities (areas of AVC 6 cultural, ecological, economical or religious importance, identified with these communities).	<ul style="list-style-type: none"> <li>• Fires;</li> <li>• Deforestation;</li> <li>• Loss of access to resources and cultural values.</li> </ul>			
<b>LSI (Location of Special Interest)</b>	It is a natural, anthropic area with infrastructure used by communities for cultural events.				Biannual

Green-backed Trogon  
(*Trogon viridis*)





# Biodiversity management

At Suzano, Biodiversity Monitoring is understood 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.

## Fauna

The primary data consist of information gathered in previous monitoring that complement the primary data gathered in the field in Suzano's areas.

## Last monitoring recorded species



**581**

Birds species



**82**

Fish species



**26**

Crustaceans species



**87**

Mammals species



**47**

Reptile species



**806**

Plants species



**39**

Amphibian Species

At FBU-ES, seven HVACs and three eucalyptus planting areas are part of the biodiversity monitoring program. The monitored HVAC are: RPPN Restinga de Aracruz, Fazenda Agril, Panorama, Bloco G8, Santa Helena and Bloco 43CB. The monitored eucalyptus planting are located in farms Bloco 43CB, Dois Irmãos e Santa Joana/ Viveiro I.

Birds accounted for 581 species appearing in the FBU's database. Last monitoring, in 2019 recorded 234 species of birds.

Medium and big size mammals sum up to 67 species, which 26 of those have been identified in the last monitoring, carried out in 2019.

The HVACs Recanto das Antas and Mutum-Preto host one of the last populations of red-billed curassows (*Crax blumenbachii*), becoming important refuges for this species.



## Flora

*Within the flora monitoring, 806 species were recorded. Last monitoring, in 2019 identified 334 species of flora.*

With the vegetation and fauna inventory in the company's area, it's possible to develop recommendations to keep and/or improve the conservation of species, such as environment restoration of priority areas and protection against fire. Continuous monitoring generate knowledge based on the improvement of environment management techniques, contributing to local biodiversity preservation.

Among the species identified in this 2019 monitoring, the chart below presents the species per the danger of extinction according with the IUCN's Red List OF Threatened Species and the National List (IBAMA).

*Number of threatened species identified during the last monitoring in 2019.*

**38**

Flora  
species

**27**

Birds  
species

**10**

Mammals  
species

Brejaúva (*Astrocaryum aculeatissimum*)





# Monitoring of water resources

*Suzano assess 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 across evolutionary processes of the landscape. One example is the well-known relationship between forest coverage and water resources, mainly on Permanent Preservation Areas, aiming to comply with legislation and the conditionals

The monitoring is a continuous process in the small watersheds representing the different regions of FBU-ES operation.

In 2019,

**37 points were  
monitored in 6  
hydrographic  
basins**







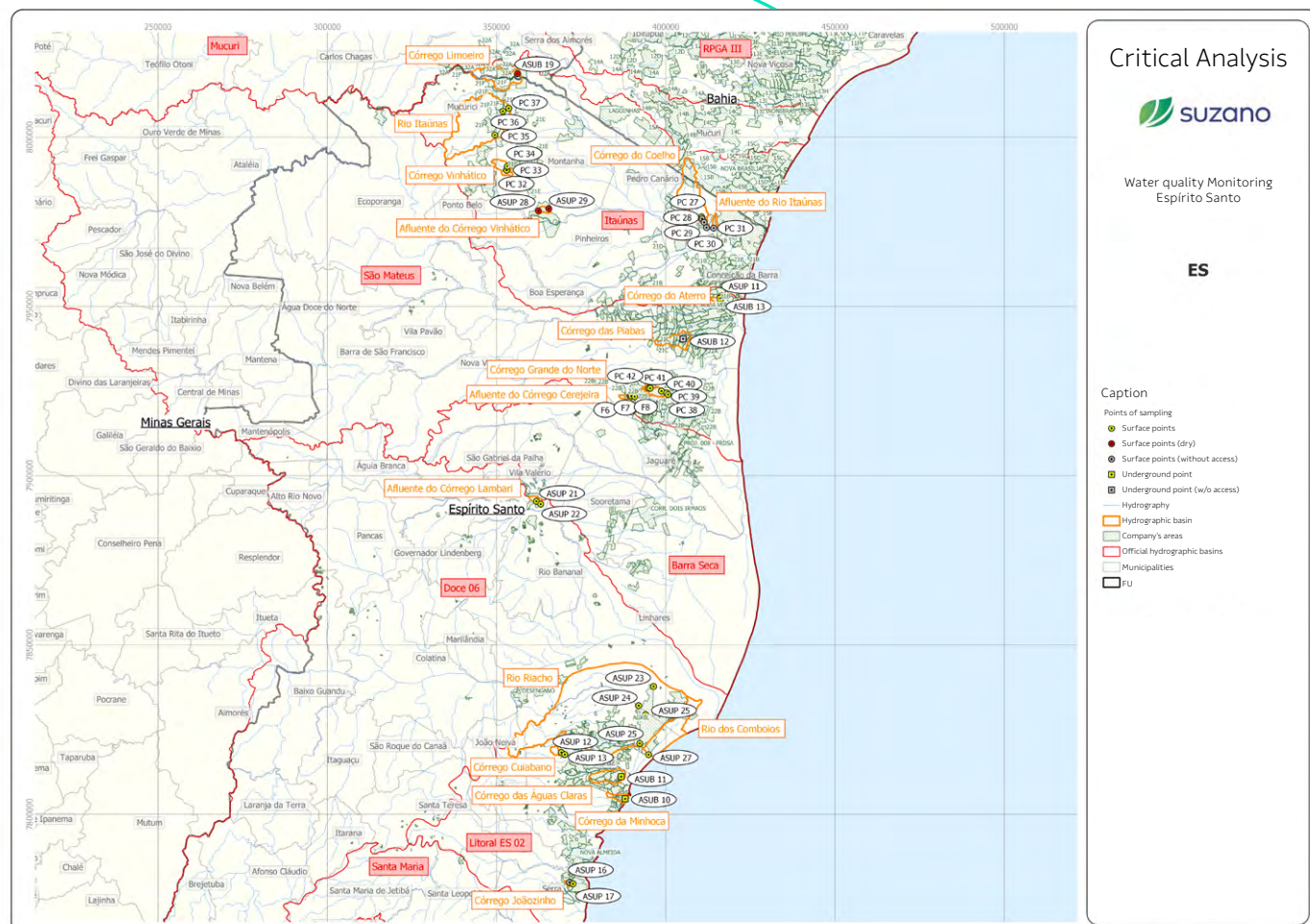
From the lab results it's possible to build an assessment of the monitored areas, in order to set a possible relation between the eucalyptus plantation areas and the surface and underground water conditions located in its area of influence.

This program's execution consists of two monitoring campaigns. These campaigns gather quality-quantity data over the surface and underground water in areas near eucalyptus plantation using in situ measurement of some parameters and collecting samples for lab analysis.

Studies on water quality and flow demonstrate that there's no negative impact to the environment which could be blamed on the eucalyptus plantation.

Below there's a map of the official watersheds, sub-basins and monitored sampling spots in the state of Espírito Santo.

### Small watersheds location (ES) and water quality monitoring spots



# 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	 <b>Water consumption</b>	 <b>Fire</b>	 <b>CO<sub>2</sub> Capture</b> (GGE - Greenhouse gas emission)	 <b>Improvement of ecological processes</b>
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>



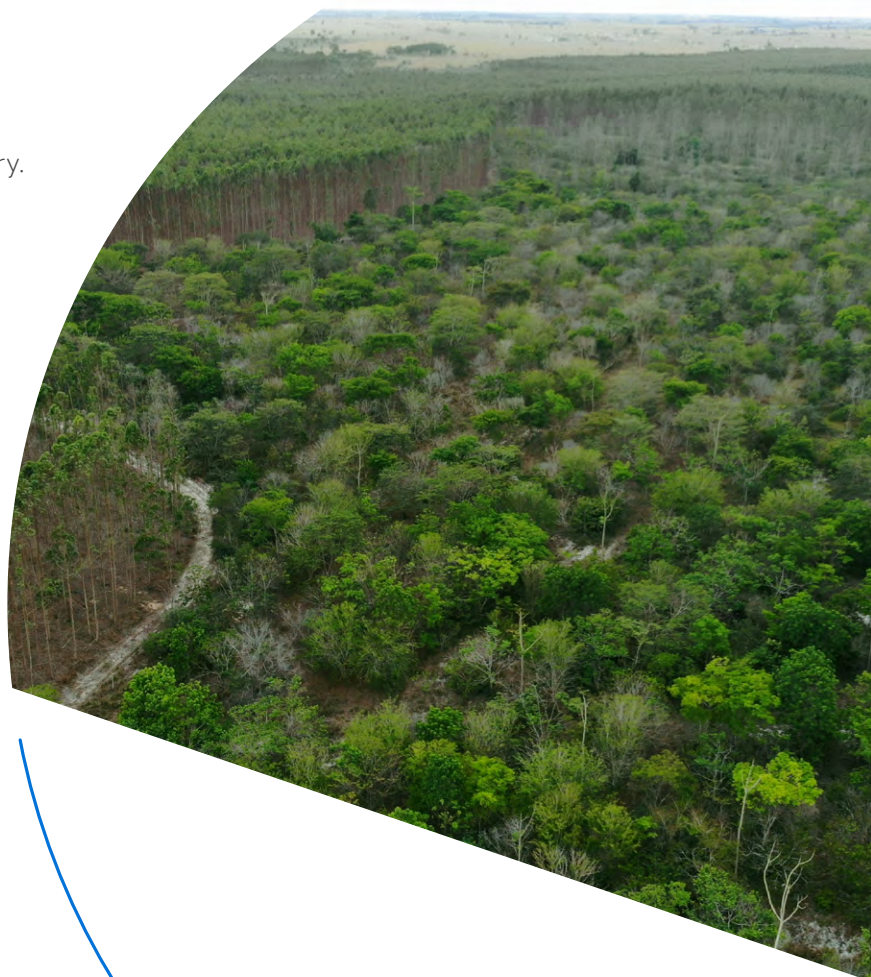
# Ecological Restoration

As part of our commitment with the environment, Suzano promotes restoration actions in its Permanent Preservation Areas (PPAs) and Legal Reserve (LRs) in the states it has operations in. It concerns on of the largest restoration programs in Brazil, with presence in the two-biodiversity hotspot biome - Atlantic Forest and the Cerrado - and, also, in the transition area Cerrado-Amazon.

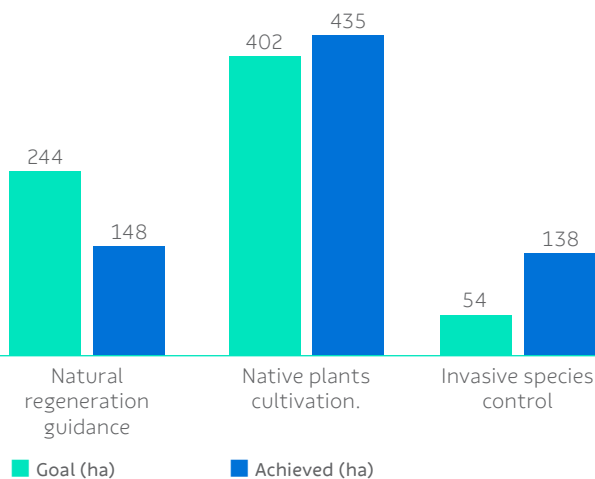
*To reinforce this commitment, the company is a signatory of the Atlantic Forest Restoration Pact, an initiative that aims to restore 15 million hectares in the country until 2050.*

All the deployed areas are monitored to evaluate the success of the implemented techniques and to point out the need of management aiming the ecological succession and consequently the recovery. Overall, were deployed 101.4 hectares of adaptive management, consisting of thickening planting or variety growth in deployed areas, as well as, maintenance of 3,506 hectares including clearings, weeding, ant control and other activities in areas with up to 5 years of deployment.

The Ecological Restoration Program contributes with an increase in biodiversity and the creation of several environmental services in its area of operation using the following restoration methods: planting of native species seedlings from the Atlantic forest, implementation of natural regeneration, invasive species control, and isolation of protected areas. The best technique is defined according to the environmental conditions of the area to be restored, as well as its potential for regeneration, history of land occupation and possible degradation factors.



In 2019, there were deployed 721.4 hectares of new restoration areas, surpassing the goal of 700.1 hectares in Espírito Santo. The graph below shows the foreseen area (goal) and achieved in 2019 according to the methodology of restoration.



Since 2010,  
**7,200 ha**  
of restoration were deployed  
in FBU Aracruz areas

# 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 education at  
Rio Preto's FLONA



## Environmental Training

*The Environmental Training Program propagates information and environmental practices to raise awareness among its participants over sustainable and transformational behavior of the social environmental reality.*

To reach the internal and external audiences, this Program was divided in different projects and activities in line with the reality of each target audience.

### Rio Preto's FLONA Program

This initiative is a partnership with Rio Preto's FLONA and its objective is to serve students from the north of Espírito Santo and far south of Bahia. From the beginning of the project, in 2017, 4,213 students took part in it.

### Internal Environmental Training

Program aiming Suzano's and third parties' staff. In 2019, 1,541 people were taking part in it.



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.

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.

#### FBU-ES Forest operations safety performances

Safety indicators	Goal	Achieved
Frequency rate (accidents with lost work days)	0.43	0.27
Serious injury rate	11	25.51
Compliance with the law, rules and procedures regarding health, safety and environment (SSOMA)	90%	91%
Segurança na Área Program (toolbox meetings in the field)	100%	100%

# 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 Aracruz Forestry Unit

Own*	460
Vendors*	2,651
<b>Total</b>	<b>3,111</b>

\*December/2019 data







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.*

*Espírito das  
Águas Project  
in Aracruz  
communities*





# 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.



# 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)*





# 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\$)	6,660,720.07
			Share of donations to socioenvironmental investments (%)	0.7 (R\$ 48,410.79)
			Number of rural communities in PDRT	32
		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	2.7
		Complaints about damage caused by management	Number of complaints received	105
			Average time to address a complaint	33.5
		Image Survey	Suzano's favorability in the communities (%)	71





# Socioenvironmental Investment

The Social Environmental Investment is the voluntary transfer of private resources, in a planned and monitored manner, to social, environmental and cultural actions and projects of public interest, that contribute to the development of communities where Suzano has operations. Such investments are segmented into four types of intervention, as per follows:

## Cooperation

Specific actions that entail a return from the solicitor and the use in community assets. Obligatorily are requests related to the needs of forest and industrial operations, to the expertise and products from Suzano's business.

## Sponsorship

Provision of funds, equipment and/or service by a sponsor to a sponsored, with the objective of facilitate certain activity or event. Is a communication instrument, given that the main results expected are: visibility increase and sponsor brand favorability with the activity or event target public; the increase in the exposure of sponsor in the media; and being in contact with the direct and indirect stakeholders connected to the sponsor's business.

## Donation

These are specific investments to serve the presented requests from non-profit institutions, agencies or community representatives and without compensation.

## Project

Are social investments planned and developed within a certain program, having a determined proposal and time frame (objectives; goals; cost; deadlines; process, results and impacts milestones; and accountability).



Araçuaia Alcantara



Saber Viver Project



# Socioenvironmental Programs and Projects

The Social Programs and Projects take place mainly in the identification of the enterprise influence level over the community, the Socioeconomic Aspects of each one (level of organization, vulnerability degree, etc.) and the partnership level (company and community). Arise also from the communication processes, in line with the social pillars of Suzano.

The extension in which such programs and projects are carried out, in the community, derive from the following factors:

- The communities and municipalities socioeconomic vulnerability;
- The influence of Suzano's forest management in the city and community areas;
- Relationship and social Investment history in the communities and municipalities;
- Number of directly affected communities by Suzano's forest planting in the municipality;
- Communities interest and availability in taking part in the programs and projects;
- Public authority's interest and availability to co-participate or supporting such programs and projects;
- Budget availability.

Name	State	Summary	Number of Associations	Number of Families Served
PDRT (Rural and Territorial Development Program)	ES	The Rural Territory Development Program has the objective of taking part in the territory development by means of dialog with the surrounding rural communities, strengthening its networks and organizations, considering the agroecological principles.	77	1,956
Beehives	ES	The Beehives Program has the objective of creating an income and improve the quality of life of the communities in the company's areas of operation, by means of promoting and consolidating the beekeeping chain.	7	105
Relationship with indigenous communities (PSTG)	ES	To nurture the relationship between the company and the indigenous communities of Aracruz and facilitate, in Indigenous Land, a set of integrated and long-term actions, which allow the indigenous tribe members to establish the required environmental conditions for sociocultural practices, towards the ethnic identity affirmation and sustainable economic activities.	12	266
Cooperative corporations	ES	Generation of employment and income by providing silvicultural services / <i>Quilombola</i> Communities.	1	21
<i>Saber Viver and Espírito das Águas</i>	ES	The project offers the execution of sports and cultural activities, as well as Convenience Services and after school tutoring classes. The project also leverages the art craft of Aracruz - ES coastal region trying to connect the training with the artisan's talent and the location treasures. The artisan's production gathers the capixaba culture appreciation, the artisan's professionalization and the promotion of environmental preservation.	2	290
Community councils	ES	The community councils are constituted of a participatory model of relationship with the communities, contributing to transforming the reality, in order to develop the local context, creating an entrepreneurial culture / Communities.	11	8,589
Engagement	ES	To qualify the participants to being involved in pondering the social environmental and economical demands, promoting a work in networks and other ways of collaborating / Communities Surrounding the Plant.	8	8,500

## PSTG and Coopyguá

*The Tupiniquim and Guarani Sustainability Program (PSTG) in ES works with 1,315 families in 12 indigenous villages in the municipality of Aracruz. Among the activities of the Program, the meliponiculture deserves to be highlighted.*

There are 70 families using meliponiculture as a supplementary income source, as well as providing an important environmental service, which is the breeding of almost extinct native bees.

The Coopyguá - Cooperative Corporation of Tupiniquim and Guarani Producers, incorporated on 2018 is the result of the meliponiculture groups getting stronger and brings the perspective of autonomy: it broadens the possibilities of collective buy and sell, as well as opens space to include other activities, as it was the case of handicraft in 2019.

The objective is that Coopyguá has, within the cooperative corporation, groups alike that develop a productive chain aligned with the mission and will of the indigenous people from the tribes of Aracruz.

This path requires perseverance and board and cooperative members training. In 2019, the efforts were divided into three main lines of work:

- **Operation:** production and selling.
- **Investment:** asset purchasing and infrastructure
- **Management:** accounting, fiscal and administrative

Tupiniquim craftsmanship from Comboios nation. PSTG supports four groups of artisans who produce pieces with beads, painting and stamping, basketry and biojewelry

### Honey harvest from *uruçu-amarela* bee by the Tupiniquim and Guarani meliponiculture from Aracruz

2019'S harvest came with a good surprise: 460 kilos of honey, surpassing the initial forecast of 360 kilos.

The result can be attributed to the production increase of 2.3 kilos per colony (beehive), or 28% in comparison with the previous year.





# Forest management performance and main indicators

Aspect	Resp. process	Monitoring	Indicators	Goal 2019	Achieved 2019	Critical Analysis	Actions	Systems/ database	Frequency
Environmental	Property Intelligence	Fires	Plantation fire (outbreak)  Preservation fire (outbreak)	The outbreak measurement methodology was deployed in ES after August 2019.	3.0 ha  2.1 ha	2019 was the hottest year ever recorded in the country, with an average high temperature (daylight) of 31,05°C, according with data published in February by the Brazilian National Institute of Meteorology (Inmet), agency of the Ministry of Agriculture, Livestock and Food Supply (Mapa). Fire outbreaks occurred in DNIT and neighboring areas bordering the company.	Investments in technology and innovation for firefighting structures and central monitoring systems, further involvement in social programs and promotion of educational activities, training and firefighting techniques.	IP Database and Zenith internal system.	Daily
	Directory of Technology and Innovation	Climate	Meteorological and climate monitoring by means of meteorological stations	N/A	100%	Maintenance was carried out on all 22 meteorological stations belonging to Suzano at ES unit 15 INMET (Brazilian National Institute of Meteorology) stations also contribute to the unit's database.	In 2020, we're reviewing the system to optimize the meteorological monitoring network, considering the synergy opportunities and improvement in the Suzano area coverage.	Corporate SQL database (Suzano) - BI System (Meteorological Monthly Report)	Data gathering (Rain, Temperature, Relative Humidity, Wind Speed and Solar Radiation): hourly Maintenance: monthly
Social	SSQV	Accidents with trucks overturning, collision, bumps while transporting timber	Frequency by traveled kilometer	0.5	0.65	In 2019 a reduction in traveled kilometer occurred due to the reduction of the plant's production. Concomitant to this, we had 17 traffic accidents, being 10 overturning, which caused the traveled kilometer rate to go over the goal set.	Monitoring of speed, and route schedules, execution of safety blitz, inspections and traffic safety awareness campaigns.	Traveled kilometer rate spreadsheet / Presentation.ppt	Monthly
		Work Plan - Safety Pact per operational process	S Curve on the Safety Pact	100%	96%	With the development of the work plan, it was possible to take specific actions which contributed directly to safety management, and consequently to the results of the forest unit as a whole.	Service to action plan from operational management, with actions targeted to safety management in productive processes.	Excel Spreadsheet / Presentation.ppt	Monthly

\*N/A = Not applicable

Aspect	Resp. process	Monitoring	Indicators	Goal 2019	Achieved 2019	Critical Analysis	Actions	Systems/ database	Frequency
Social	SSQV	Safety Management Programs and Actions	SMI - Safety Management Index	90%	95%	In 2019, actions were carried out using the safety management programs. These programs were the base to the management of the consolidated result of the SMI on that year.	Development and deployment of Safety management programs.	Presentation.ppt	Monthly
	Asset Intelligence	Monitoring and follow-up of forestry waste	Donation of tips and branches	N/A	R\$ 473,600.00. Forecast of amount collected with the volume of tips and branches (R\$ 800,00 for every 50m³)	Larger volume of idle people in the field and unemployment.	Process restructuring and give away tips and branches as income source to the communities.	Monitoring spreadsheet (Property)	Monthly
Economic	Social Responsibility	Income Generation and local market entry (Beehives)	Nº. of benefited communities; Income Received	N/A	12 Associations; 154 participant beekeepers; R\$ 225.00 average monthly income / annual production of 25 tons	In 2020, the income analysis also contemplates the non-monetary earnings (costs avoided, savings with management improvement and other earnings).	Development of new methodology to measure results of the Programs.	Social dashboard Gatherings and local fairs - Sustainability Report	Monthly
		PDRT (Rural and Territorial Development Program)	No. of benefited communities; No. of participant producers; Annual production obtained	N/A	32 communities; 656 participant families; R\$ 1146.00 average monthly income / annual producti			List of benefited; Association Member's List; Production Form; Monitoring report	Annual
	Timber Loading	Loading Time	Aracruz Unit - Time frame trucks parked in the plant	178 min	180 min	Longer period of time due to high storage from production reduction.	Modal adjustment and fleet with upfront termination of contract with road transporter.	EXCEL - Timber loading / Daily Monitoring Plan E-mail. *	Daily
		Distance	Aracruz average radius	486 km	524 km	Higher number of the longer radius modal (reduced number of road transportation).	2020 plan was adjusted according with the multi annual planning.	EXCEL / SAP / Forestry Registration Monthly / GIS On Line	Monthly

\*N/A = Not applicable



Aspect	Resp. process	Monitoring	Indicators	Goal 2019	Achieved 2019	Critical Analysis	Actions	Systems/database	Frequency
Economic	Planning and inventory	Precut inventory	Precut forest inventory (ha)	13,895.98 ha	9,278.09 ha	Area inclusion and changes in the cut sequence alter the program throughout the year.	Keeping the program based on the PB with monthly RF monitoring, aiming to be always ahead of the crop modules.	Supervision on every RF change	Before crop
		24-Month, 36-month inventory and IFC	Continuous forest inventory (ha)	98,301.24 ha	9,6128.64 ha	Area inclusion/exclusion and changes in the cut sequence alter the program throughout the year.	Keep control over measurement schedule, from the dates of planting on the forest registration and changes in the annual cut plan.	Inventory area indicators. Monthly area meeting supervision	Annual
		The 12-month monitoring is carried out to assess the quality of planting, 1 year After forest planting	Carry out monitoring of 12 months (ha)	Monitor 100% of UP planted	22,342.26 ha	Changes in the area and inclusion of new areas alter the program throughout the year	The goal varies according with the area planted, where 100% of suitable areas (>5 ha, commercial use, imp/ref regime etc) must be measured. Keep monthly monitoring of forest registration updates.	Indicators of inventory area / Supervision on monthly meetings the areas	12 months
		Quality assessment monitoring on the plantings after setting the forest	120-Day monitoring (ha)		16,436.69 ha			Power BI of the inventory area indicators / Supervision of the area's monthly meeting	Once on the 120-day
		Productiveness of Harvest	Harvesters productiveness	16.52 m³/hour	17.98 m³/hour	Bigger productivity in comparison to PB.	Operation in larger VMI areas with increased productivity.	GD SAP	Daily
	Harvest								

\*N/A = Not applicable



14.

# Communication with *Stakeholders*



## 14. 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 Ecosciente. 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/](http://www.facebook.com/suzanoempresa/)
-  Instagram  
[www.instagram.com/suzano\\_oficial/](http://www.instagram.com/suzano_oficial/)
-  Youtube  
[www.youtube.com/user/Suzanovideos](http://www.youtube.com/user/Suzanovideos)
-  LinkedIn  
[www.linkedin.com/company/suzano/](http://www.linkedin.com/company/suzano/)

### Ombudsman Suzano

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