1st EDITION | MAY 2021

suzano

Public Summary
of the

Forest Management Plan 2020

Forestry Business Unit

Imperatriz

Public Summary of the Forest Management Plan 2020

Summary

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. **All images depicting unmasked people were taken before the COVID-19 pandemic.**

Coordination
Sustainability

Formatting and Design
Folks Comunicação Conteúdo
folks.cc

Cover
Blue finch *(Porphyrospiza caerulescens)*

Images
Suzano's archives
Casa da Floresta's archive
Diogo Cavenague Casanova
Fernando Igor de Godoy (fauna)
Fernando Soares (social projects)
Julio Henrique R. Magalhães (flora)
Sérgio Zacchi (social projects)

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

or calling

0800 022 1727

About Suzano S.A.

2. About Suzano S.A.

Suzano S.A. *is a Brazilian company 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 100 countries and its products is part of the lives of over 2 billion people. With eleven 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.

Suzano has approximately 36 thousand direct and indirect collaborators and has been investing in innovative solutions in eucalyptus planting for 97 years to allow the replacement of fossil fuels by raw materials from renewable sources. The company has the highest degrees of Corporate Governance with B3, from Brazil, and New York Stock Exchange (NYSE), in the USA, stocks 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

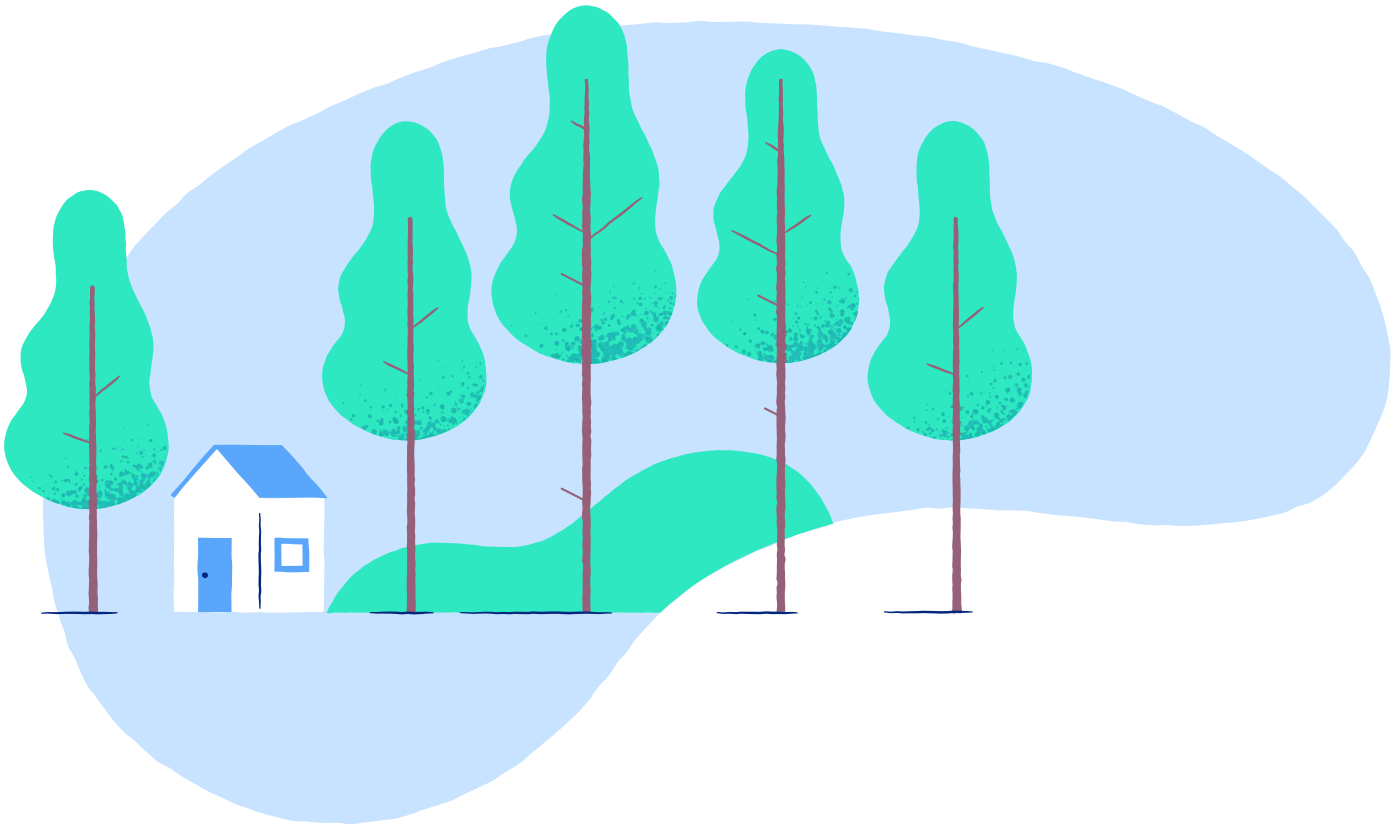
It's only good
for us if
it's good for the world

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.

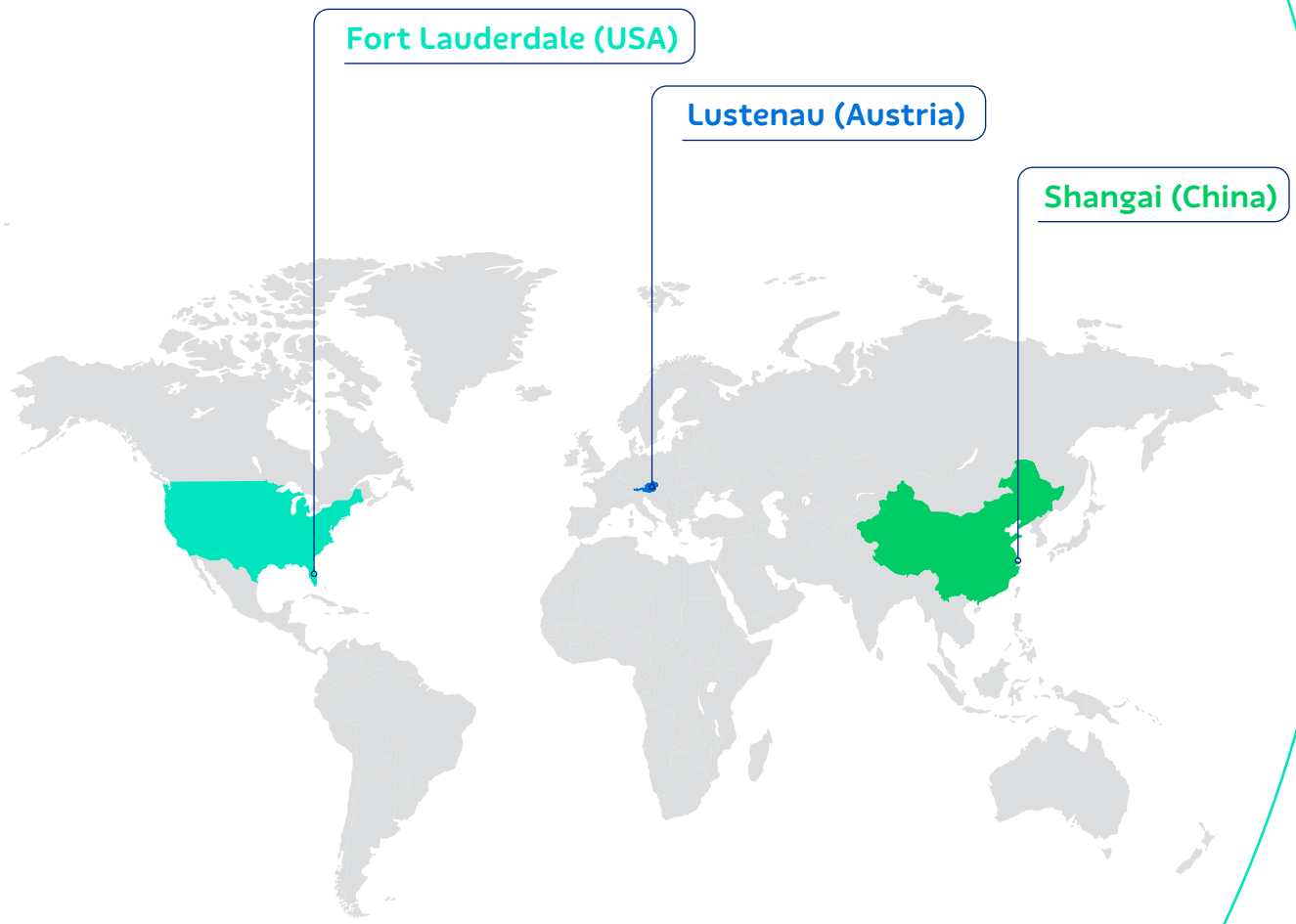
We operate responsibly based on our expertise in Eucalyptus planting. This means that we always use the best global management practices in cropping - that is how we contribute for the maintenance of fertility and protection against erosion and degradation.

3. Where We Are



Business offices

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



Distribution Centers

United States (4)

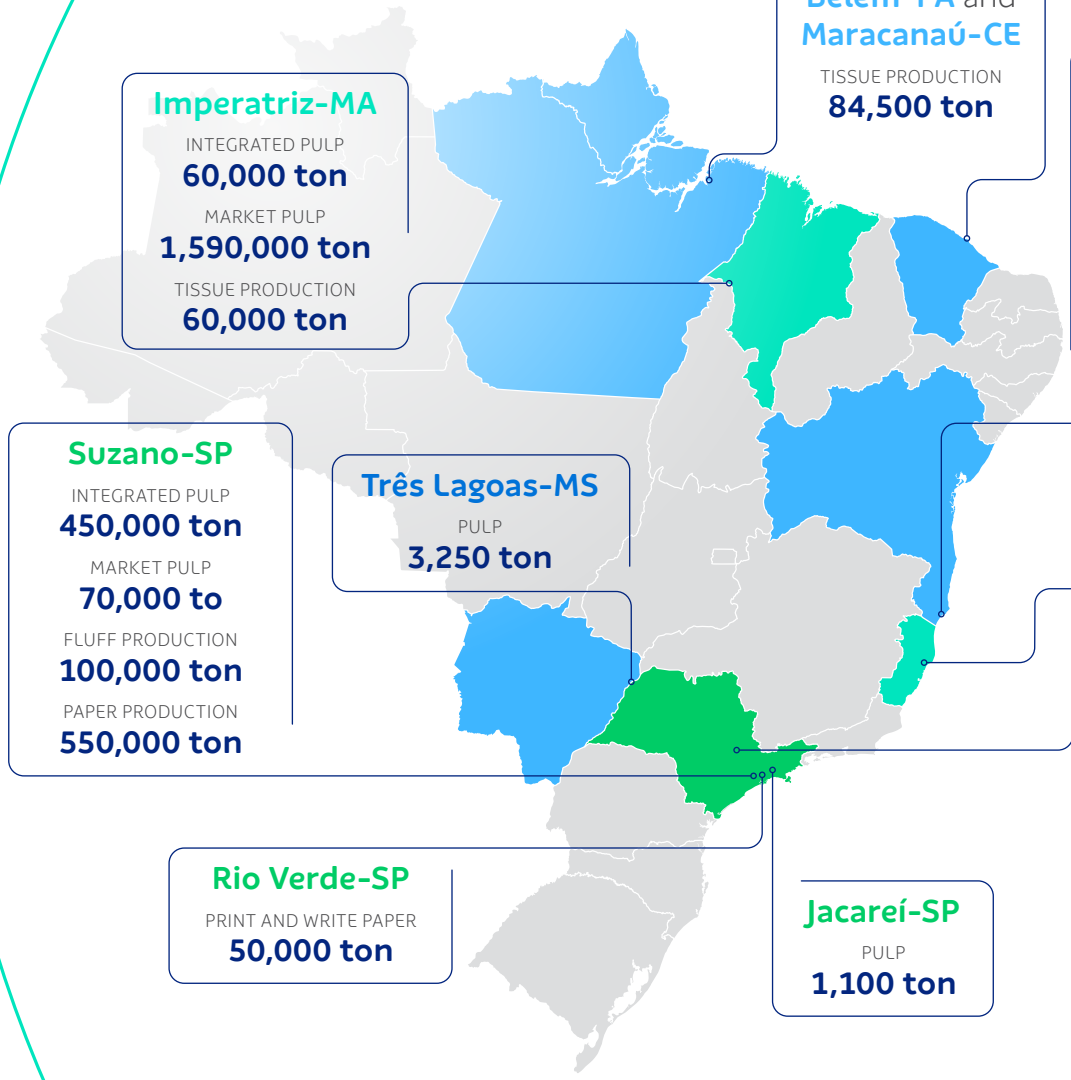
Europe (6)

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 1.3 million hectares of planted forests and 960 thousand hectares of preserved forest, situated in the states of Bahia, Espirito Santo, Minas Gerais, São Paulo, Mato Grosso do Sul, Maranhão, Tocantins, Para and Piaui.

Industrial Units*



Belém-PA and **Maracanaú-CE**
TISSUE PRODUCTION
84,500 ton

Imperatriz-MA
INTEGRATED PULP
60,000 ton
MARKET PULP
1,590,000 ton
TISSUE PRODUCTION
60,000 ton

Mucuri-BA
INTEGRATED PULP
200,000 ton
MARKET PULP
1,480,000 ton
PRINT AND WRITE PAPER
250,000 ton
TISSUE PRODUCTION
60,000 ton

Suzano-SP
INTEGRATED PULP
450,000 ton
MARKET PULP
70,000 to
FLUFF PRODUCTION
100,000 ton
PAPER PRODUCTION
550,000 ton

Três Lagoas-MS
PULP
3,250 ton

Aracruz-ES
PULP
2,340 ton

Limeira-SP
INTEGRATED PULP
290,000 ton
MARKET PULP
400,000 ton
PAPER PRODUCTION
400,000 ton

Rio Verde-SP
PRINT AND WRITE PAPER
50,000 ton

Jacareí-SP
PULP
1,100 ton

**relative to production capacity of each industrial unit*

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	372,008	284,130	26,352	682,490
Imperatriz	225,352	297,336	17,123	539,811
Limeira / Suzano / Jacareí	230,572	130,551	17,528	378,651
Três Lagoas	391,162	162,500	18,583	572,245
Total	**1,219,094**	**874,517**	**79,586**	**2,173,197**

Data Dec/2020, 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

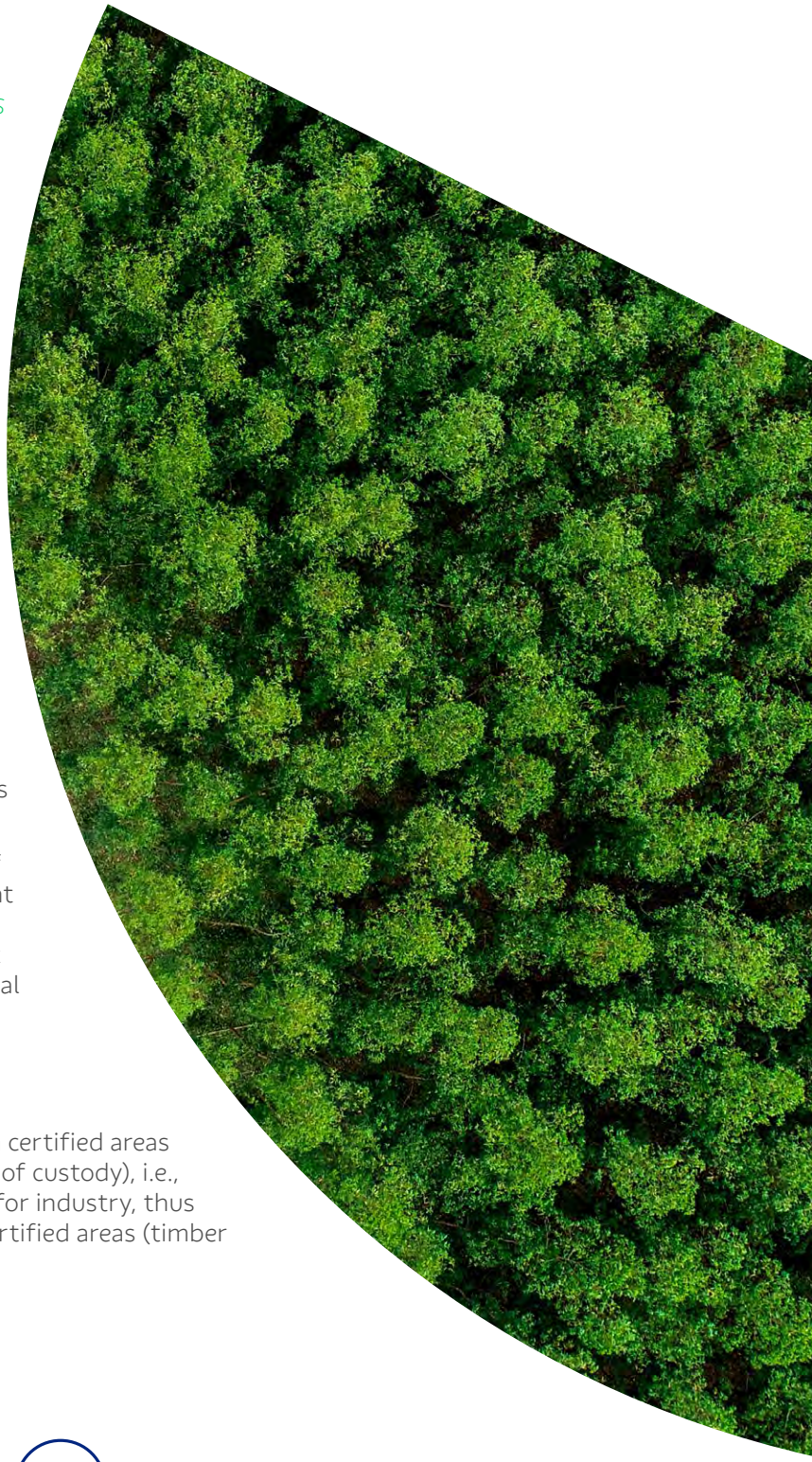
FBU	Certified areas FSC® and PEFC (ha)
Aracruz (ES)	215,750
Jacareí, Suzano and Limeira (SP)	349,750
Imperatriz (MA)	401,455
Mucuri (BA)	355,877
Três Lagoas (MS)	309,094
Total Suzano S.A.	**1,631,926**

5. Forest Certification

5. Forest *Certification*

Suzano is
certified by
FSC® and CERFLOR
(NBR 14,789)

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 towards developing 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 from eucalyptus planting in certified areas have their traceability ensured (stedwardship chain of custody), i.e., origin guaranteed from planting to transportation for industry, thus eliminating the risk of a mix up with logs from uncertified areas (timber controlled by Due Diligence assessment).

6.
Forestry Business Unit
Imperatriz

6. Forestry Business Unit Imperatriz

The Forest basis of the MA Unit is distributed across the states of Maranhão, Pará and Tocantins. In the state of Maranhão, the farms are located in the route Cidelândia - Imperatriz – Açailândia– Buriticupu. In the state of Para, the farms are located in the route Rondon - Dom Eliseu – Ulianópolis – Paragominas. In the state of Tocantins, the farms are located in the route Darcinópolis – Ananás – Araguatins. We also rely on planting areas in the region of Urbano Santos (Maranhão) and Teresina (Piauí).

The crops are maintained in owned lands, through leasing contracts, or through partnerships with rural producers. With a forest basis of 539,811 hectares, interspersed with an area of 297,336 hectares destined to biodiversity conservation, Suzano MA's forest management seeks to combine eucalyptus planting with the conservation of natural resources, technological innovation and respect to communities.

All production is based on renewable eucalyptus planting, with the aim of supplying the industrial complex of Imperatriz - MA, that has a production capacity of 1.6 million tons of bleached eucalyptus pulp per year.

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

The seedlings are produced using cloning technology in nurseries from licensed third-party partners and free-lease agreements. Those partners maintain some of the most advanced genetic bases, adapted to the natural conditions and selected for the production of pulp.

FBU-MA has
a forest basis of
539,811 ha,
of which, about
297,336 ha
are destined to
conservation.

The harvest process observes the characteristics of the region and uses efficient systems that rely on equipment that allow an efficient, safe and environment-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.

Area of Operation in the Municipalities

Municipality	FU	Municipality area (ha)	Total area of farm (ha)	Total area of crop (ha)	Infrastruc. area (ha)	Sum of VEG* area (ha)	Sum of WAL** area	Total area occupied in the Municipality (%)
Abel Figueiredo	PA	60,017.75	91.36	178.81	1.15	4.76	276.06	0.5%
Açailândia	MA	583,475.70	45,796.95	40,934.43	225.15	2,917.03	89,866.73	15.4%
Ananás	TO	160,312.39	1,080.03	838.82	-	43.83	1,962.71	1.2%
Anapurus	MA	60,924.25	2,525.38	2,118.32	-	117.33	4,760.95	7.8%
Angico	TO	43,942.76	2,016.34	3,833.99	-	130.72	5,981.03	13.6%
Araguatins	TO	267,177.44	1,642.33	1,248.84	3.12	106.59	3,000.86	1.1%
Barreirinhas	MA	309,499.55	0.00	1,084.76	-	101.40	1,186.15	0.4%
Bom Jardim	MA	662,404.68	18,457.41	11,278.05	108.95	963.74	30,808.07	4.7%
Bom Jesus das Selvas	MA	267,383.77	10,417.39	15,405.60	170.01	727.39	26,720.28	10.0%
Brejo	MA	107,827.68	-	1,947.57	-	154.27	2,101.84	1.9%
Caxias	MA	515,896.16	-	349.24	-	40.83	390.07	0.1%
Centro Novo do Maranhão	MA	825,966.88	-	2,767.03	-	-	2,767.03	0.3%
Chapadinha	MA	324,189.94	2,485.99	9,338.69	10.30	134.90	11,969.79	3.7%
Cidelândia	MA	148,231.50	4,805.72	9,002.83	7.33	520.95	14,334.29	9.7%
Darcinópolis	TO	163,859.98	925.93	1,019.53	-	50.77	1,996.17	1.2%
Davinópolis	MA	31,967.11	808.56	2,312.13	0.66	86.29	3,207.62	10.0%
Dom Eliseu	PA	532,524.65	21,608.51	31,996.45	55.60	1,821.36	55,481.82	10.4%
Estreito	MA	271,793.03	6,932.83	7,884.43	12.91	519.02	15,347.34	5.6%
Feira Nova do Maranhão	MA	147,628.90	2,351.05	1,935.43	-	137.09	4,423.56	3.0%
Governador Edison Lobão	MA	62,465.62	443.51	433.46	0.53	31.96	909.46	1.5%
Grajaú	MA	881,198.91	4,087.89	5,488.41	130.20	286.97	9,993.47	1.1%
Imperatriz	MA	135,841.03	7,592.58	19,192.84	117.95	1,467.36	28,370.53	20.9%
Itinga do Maranhão	MA	352,973.22	23,046.98	21,105.93	76.73	1,472.66	45,702.25	12.9%
Jatobá	MA	58,582.36	-	13,524.79	-	1,513.39	15,038.17	25.7%
João Lisboa	MA	61,607.28	992.82	1,056.74	3.98	134.32	2,187.84	3.6%
Lagoa do Mato	MA	169,734.62	883.94	6,252.08	20.40	208.74	7,364.74	4.3%
Mata Roma	MA	54,580.33	580.86	1,649.59	0.37	71.61	2,301.55	4.2%

Municipality	FU	Municipality area (ha)	Total area of farm (ha)	Total area of crop (ha)	Infrastruc. area (ha)	Sum of VEG* area (ha)	Sum of WAL** area	Total area occupied in the Municipality (%)
Matões	MA	196,291.46	4,980.52	7,329.73	8.26	293.44	12,612.03	6.4%
Milagres do Maranhão	MA	63,650.38	391.91	8,363.00	-	992.50	9,747.13	15.3%
Palmeiras do Tocantins	TO	75,067.63	1,084.20	1,315.30	-	48.65	2,448.16	3.3%
Paragominas	PA	1,932,601.80	19,268.66	47,934.44	221.37	1,700.12	69,124.58	3.6%
Parnarama	MA	346,943.06	100.00	2,082.39	-	70.24	2,252.62	0.6%
Porto Franco	MA	141,453.71	532.95	573.11	6.92	68.75	1,181.68	0.8%
Riachão	MA	635,169.97	330.77	536.82	-	26.47	894.02	0.1%
Riachinho	TO	53,077.36	422.02	649.52	-	26.29	1,097.84	2.1%
Ribamar Fiquene	MA	74,712.69	235.04	584.17	-	20.67	839.88	1.1%
Rondon do Pará	PA	825,659.29	360.82	9,508.43	412.59	59.20	10,341.05	1.3%
Santa Luzia	MA	548,227.27	1,382.69	6,204.95	85.03	97.13	7,769.80	1.4%
Santa Quitéria do Maranhão	MA	193,528.35	22,748.93	28,181.50	-	2,197.82	53,127.92	27.5%
Santa Terezinha do Tocantins	TO	28,145.95	24.57	77.16	-	1.69	103.42	0.4%
Santana do Maranhão	MA	94,116.63	-	4,480.74	-	527.00	5,007.75	5.3%
São Benedito do Rio Preto	MA	96,764.00	1,497.35	817.71	-	46.08	2,907.80	3.0%
São Bento do Tocantins	TO	112,042.25	728.12	1,730.51	1.76	52.87	2,513.21	2.2%
São Bernardo	MA	102,301.45	-	1,486.79	-	164.80	1,651.58	1.6%
São Francisco do Brejão	MA	76,156.60	5,116.59	4,644.08	22.83	414.98	10,196.87	13.4%
São Francisco do Maranhão	MA	235,131.28	300.04	11,976.26	-	1,046.69	13,284.76	5.6%
São João do Araguaia	PA	127,799.33	1,580.87	1,785.75	0.13	114.96	3,481.71	2.7%
São João do Paraíso	MA	204,413.98	1,200.73	1,377.39	-	79.06	2,657.19	1.3%
São Pedro da Água Branca	MA	72,645.72	14,301.22	14,628.64	13.72	1,032.11	29,975.49	41.3%
São Pedro dos Crentes	MA	97,099.46	3,269.18	2,397.04	-	205.57	5,871.31	6.0%
Senador La Rocque	MA	125,262.21	116.72	129.13	0.10	11.77	257.72	0.2%
Sítio Novo	MA	311,397.72	3,234.20	3,836.53	0.03	238.85	7,309.60	2.3%
Timon	MA	175,289.46	150.01	2,385.55	-	277.61	2,793.78	1.6%
Ulianópolis	PA	508,611.76	12,974.01	18,539.97	58.91	1,034.17	32,606.89	6.4%
Urbano Santos	MA	120,304.16	4,003.36	20,245.84	-	1,350.74	25,599.92	21.3%
Vila Nova dos Martírios	MA	121,108.81	4,042.88	3,471.80	8.99	378.44	7,902.10	6.5%

Source: Suzano registry database in april/2021
Municipalities areas - Source IBGE
(*) VEG: Native Vegetation
(**) WAL: Water Line

7. Environmental Aspects

7. Environmental Aspects

Forest regions

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

We are present in three macro-regions: Cidelândia (MA2, MA4, MA5 e MA6), Dom Eliseu (PA1 e PA2) and Porto Franco (MA1). With a unique biodiversity, FBU-MA spreads across two biomes: Amazon and Cerrado, as well as the transition areas between them.

Soil, weather and hydrography

Macro-region Cidelândia - MA2, MA4, MA5 and MA6

The areas pertaining to the macro-region Cidelândia are located in the municipalities of Açailândia, Cidelândia, Davinópolis, Governador Edison Lobão, Imperatriz, João Lisboa, São Francisco do Brejão, São Pedro da Água Branca, Vila Nova dos Martírios, Itinga do Maranhão, Bom Jardim, Bom Jesus das Selvas and Santa Luzia, all of which are in the state of Maranhão.

In this region, soil is composed of yellow latosol, red-yellow podzolic, plinthosols, lytholic and alluvial soils.

Hydrogeology is entirely in sedimentary rocks domain and presents four aquifers: Codó, Itaperucu, tertiary-quaternary coverage and alluvionars.

The main watercourse is the Tocantins River, formed by rivers Alma and Maranhão. The Gurupi river also crosses the region, with a contribution basin of approximately 33,950 km², encompassing portions of the states of Maranhão and Pará.

We are present in three macro-regions: Cidelândia (MA2, MA4, MA5 and MA6), Dom Eliseu (PA1 and PA2) and Porto Franco (MA1). With a unique biodiversity, FBU-MA spreads across two biomes: Amazon and Cerrado, as well as the transition areas between them.

The macro-region Cidelandia is located in tropical latitude, with maximum average temperatures of 32.4 °C and minimum average of 21.5 °C, and relative humidity varying from 83% (January to March) to 63% (June to September), with annual average of 67.8%.

With a unique biodiversity, FBU-MA spreads across *2 biomes*

Macro-region Dom Eliseu – PA1 and PA2

The areas belonging to the macro-region Dom Eliseu are located in the municipalities of Dom Eliseu, Rondon do Pará, São João do Araguaia, Ulianópolis and Paragominas. The region has two main types of soil: yellow dystrophic latosol and red-yellow dystrophic argisol.

The macro-region Dom Eliseu is located on the hydrographic basin of Tocantins-Araguaia. This hydrographic region is covered by the biomes: on the North and North West portion is the Amazon Forest, and the Cerrado in the remaining areas.

Climate in the region is humid mesothermal. The average annual temperature is around 25° C and average daily minimum is around 20° C. The rainfall regime is usually between 2,250mm and 2,500mm. Rainfall regimen is regular, but not evenly distributed throughout the year, being concentrated between the months of January and June (approximately 80%). This implies large amounts of water surplus and, as a consequence, the occurrence of surface run-offs and floods. Relative humidity is around 85%.

Macro-region Porto Franco – MA1 and TO1

The macro-region Porto Franco encompasses the municipalities of Estreito, Feira Nova do Maranhão, Grajaú, Porto Franco, Riachão, Ribamar Fiquene, São João do Paraíso, São Pedro dos Crentes and Sítio Novo, all of which are in the state of Maranhão. In the state of Tocantins, it stretches across the municipalities of Ananás, Angico, Araguatins, Darcinópolis, Palmeiras do Tocantins, Riachinho and São Bento do Tocantins.

The region presents seven types of soil: glazed hydromorphic, red-yellow latosol, quartzite sands, red-yellow podzolic, concretionary, and lytholic soils.

Climate is predominantly humid with moderate water deficiency, and average annual potential evapotranspiration of 1600 mm. During summer, evapotranspiration stays around 410 mm throughout the three consecutive months with highest temperatures.

The North of Tocantins is characterized by the transitional forest between cerrado and the Amazon forest.

Macro-region Porto Franco is located on the Parnaíba basin. The main aquifers are the Serra Grande, Cabeças and Poti-Piaui.

Fauna and Flora

Suzano's FBU-MA farms are inserted into different forest coverage mosaic and house several phytophysiognomies of the biomes Amazon, Cerrado and Caatinga.

In general, our farms have remaining areas capable of contributing to the conservation of several species, particularly those endemic to the biome or threatened.

Monitoring of fauna and flora provides information for the characterization of the natural environment in the areas where Suzano operates. In a general way, the studies seek to identify, randomly or systematically, 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 aimed at the flora, or improvement of environmental conditions for the fauna.

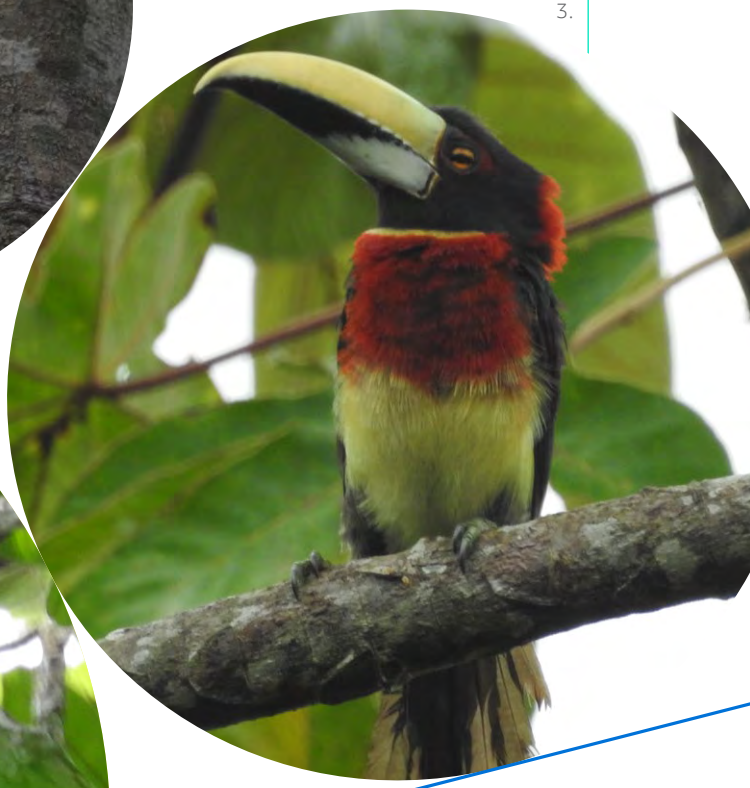
Fauna monitoring campaings are carried out every three years, while the flora monitoring takes place every five years following an adjustment of its periodicity, and involves expeditions in rainy and drought seasons.

1.

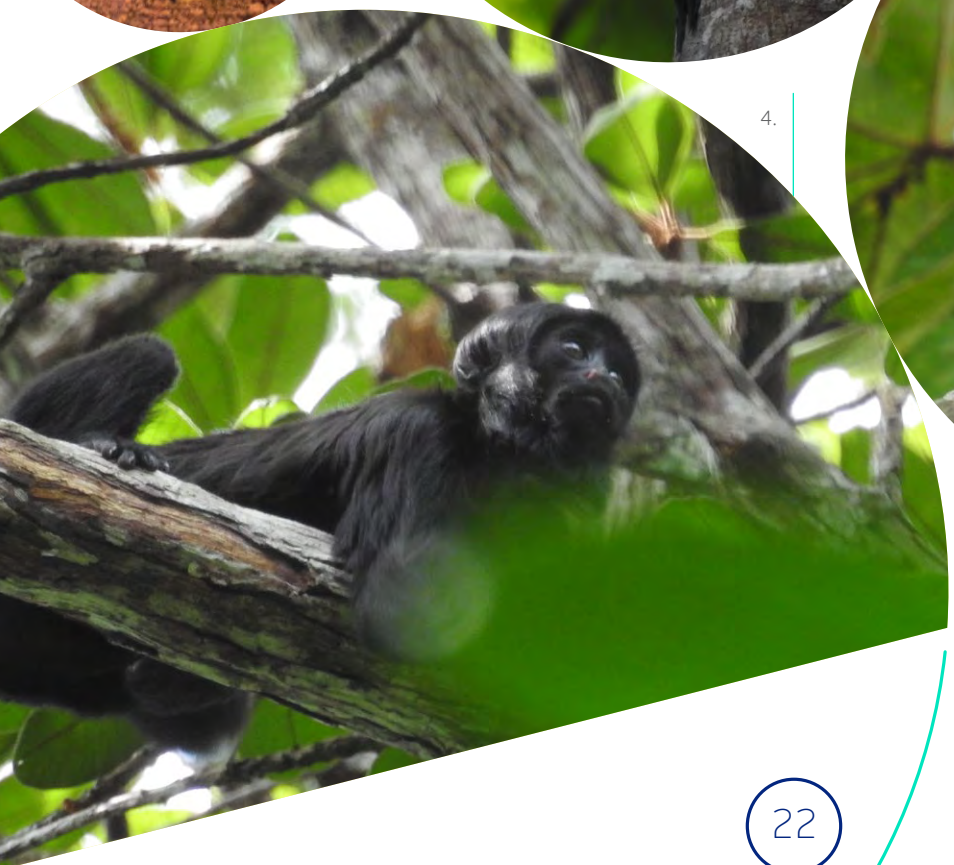
2.

5.

3.



4.



1. Blue-crowned trogon *(Trogon curucui)*, **2.** Lineated woodpecker *(Dryocopus lineatus)*, **3.** Red-necked aracari *(Pteroglossus bitorquatus bitorquatus)*, **4.** Black-bearded saki *(Chiropotes satanas)* **5.** Crab-eating fox *(Cerdocyon thous)*

Vegetation in the macro-region Cidelândia is characterized by Lowland Ombrophilous Dense Forest and by an area of mixed forests. Currently, vegetation consists, mostly, by eucalyptus reforestation and areas of native forest in several stages of succession. Species from several taxonomic groups have been recorded in this macro-region: Herpetofauna, Avifauna, mammalians and Ichtiofauna.

Vegetation in the macro-region Dom Eliseu corresponds to Amazon Forest, dense forest of the sub-region of the high plateau of Pará-Maranhão, alluvial plains dense forests, and terrace dense forests. The great majority of species in this forest are arboreal small or medium-sized animals. Some typical examples of the Amazon forest animals are: monkeys, snakes, marsupials, toucans, woodpeckers, rodents, bats, among others.

The North of Tocantins is characterized by the transitional forest between cerrado and the Amazon. Studies conducted on the Northern region of Tocantins show a huge variety of animal species due to the large ecotone area found in the region.

Pau-santo
(Kielmeyera coriacea)

Picramnia latifolia

Gameleira
(Ficus sp.)

8. Socioeconomic Aspects

8. Socioeconomic Aspects

Forest regions

The company bases its actions on the characterization and identification of key socioeconomic and cultural aspects found in the Forest Centers to define specific strategies for the region of operation.

The extensive area of operation in the BFU-MA is characterized by different socioeconomic and cultural realities and by small, essentially rural, municipalities.

Eucalyptus crops are responsible for significant socioproductive changes in the region, as is the strong presence of soy crops. Nonetheless, traditional activities, such as cattle ranching and subsistence agriculture, are very important for the productive structure of the regional economy.

Except for Imperatriz and Governador Edison Lobão, all municipalities have demographic densities lower than that of the state and the country. In terms of territorial occupation, the population seems to be distributed mainly in urban areas.

The north west region of Maranhão is known as a technical and higher education hub, with particular emphasis to the courses of Nursing, Pharmacy, Animal Science, Veterinary and Agronomy (STCP, 2009) and, recently, Forest Engineering.

In the macro region Cidelandia, between 56% and 90% of residences are supplied by the water supply network.

In the region of Dom Eliseu, cattle ranching activities have been boosted by the inauguration of the highway BR-010, that connects Belém to Brasília, passing through Paragominas, and has quickly become the economic basis of the municipality.

In the macro region of Porto Franco, subsistence agriculture and cattle ranching are the main uses of land and large areas of the biome Cerrado have been degraded by indiscriminate use and the recurring use of fire for management and expansion of pasture.

The company maps social assets - tool used to learn and map the main socioeconomic characteristics of the surrounding communities

Archaeological Information

The archaeological sites and places with historical and/or cultural relevance located in the company's areas or surroundings are identified in our cartographic base..

Among the main actions conducted by the company, we emphasize the identification of places with special historical, archaeological, cultural, ecological, economic or religious meaning for the communities, and training of field employees on the archaeological heritage.

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.

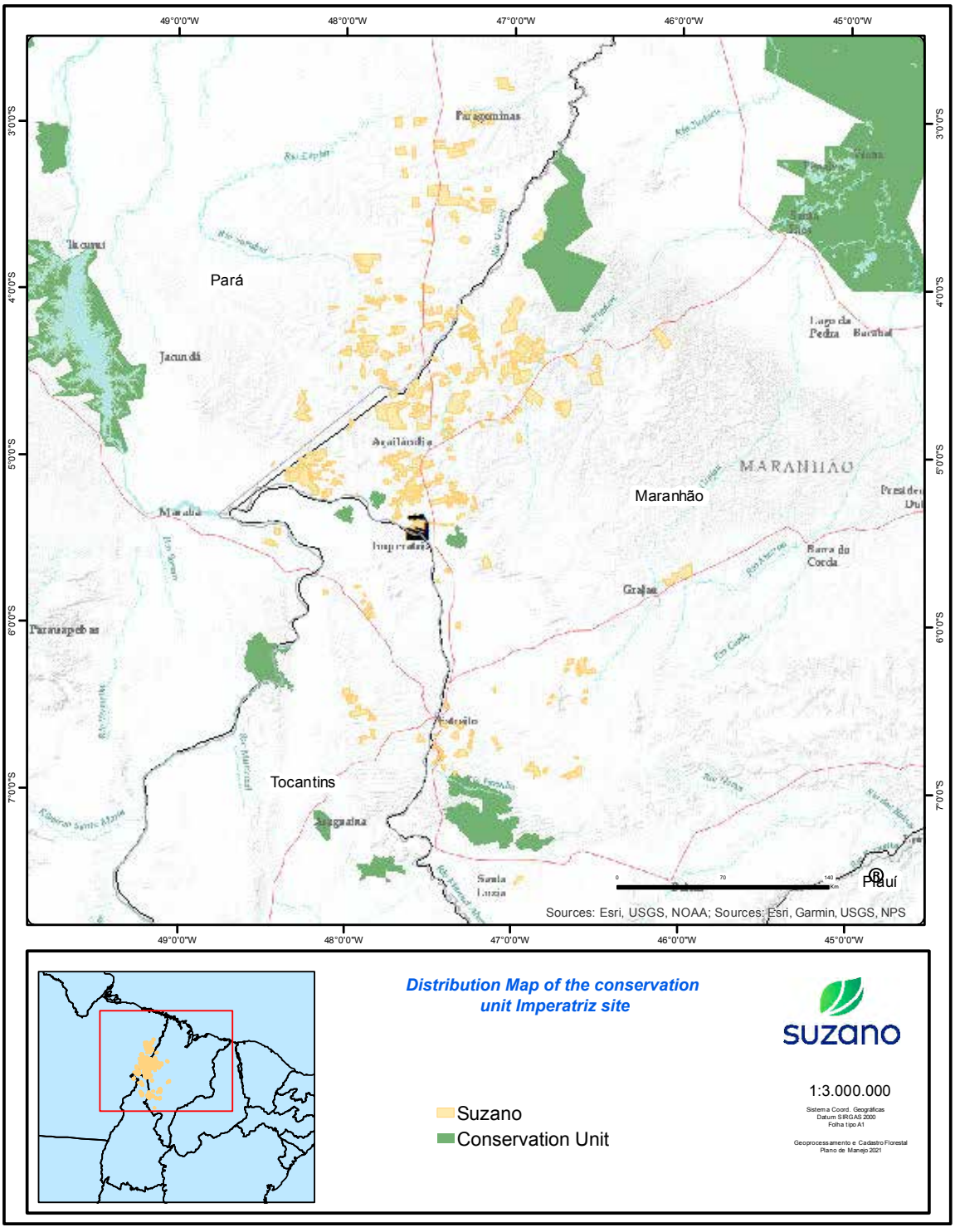
The areas operated by Suzano, with the techniques provided to protect fragments and manage commercial crops, have relevant positive effects on the neighboring conservation units because they shelter significant amounts of biodiversity and maintain the functionality of key biological and ecological processes.

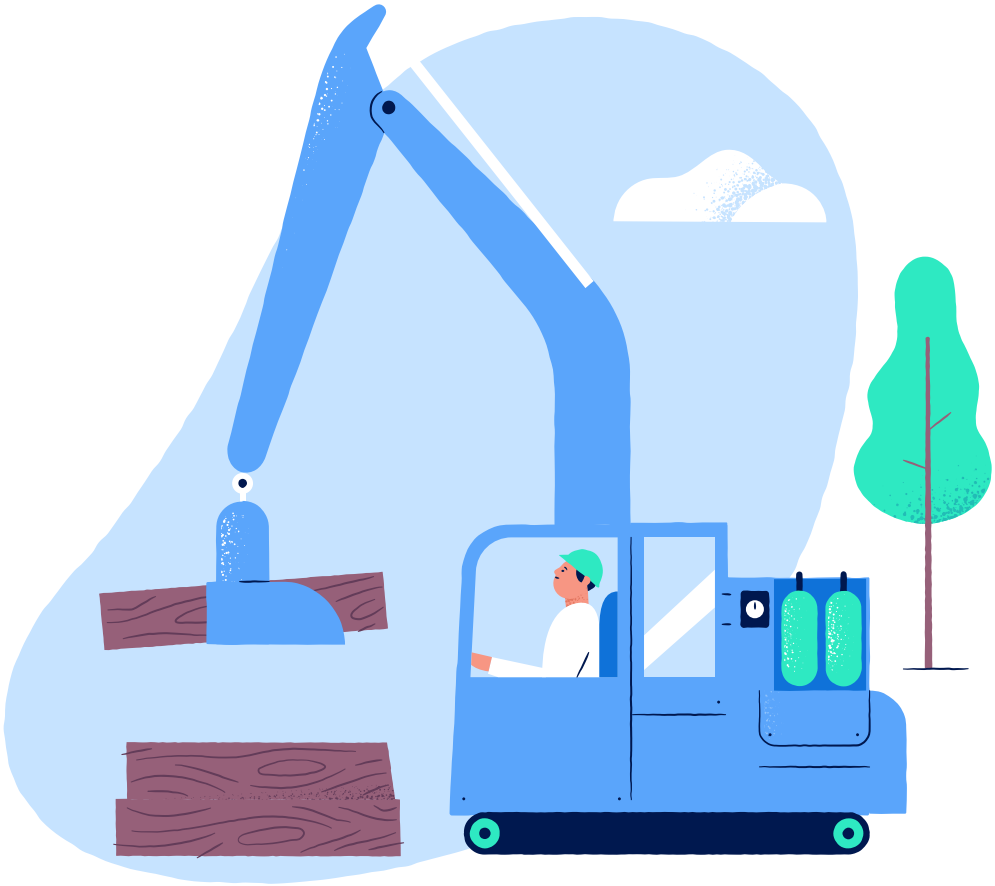
Furthermore, understanding where the company's areas are inserted relative to the river basins helps us to plan new implementation areas, and to maintain existing plantings.

The conservation units surrounding Suzano MA Unit in the macro-region Cidelândia are the Biological Reserve Gurupi, and the Extrative Reserves Ciriaco, Mata Grande, and extreme north of the State of Tocantins, managed by Chico Mendes Institute for Conservation of Biodiversity - ICMBio

There are no conservation areas or Indigenous Lands in the areas next to the company's in the macro-region Dom Eliseu.

The macro-region Porto Franco encompasses a few protected areas, such as the National Park Chapada das Mesas, with 160,046 hectares in the municipalities of Carolina, Riachão and Estreito (MA), and the Natural Monument of Fossilized Trees, a conservation unit of great relevance with 31,758 hectares, located at the municipality of Filadélfia, in the North of the State of Tocantins.





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.

The annual average production of the plantings in the FBU-MA is around

32 m³/ha/year

Technology and Innovation

Suzano maintains advanced Technology Centers that develop studies and research on forestry and industry. These activities aim to a consistent enhancement of its operations and technological innovations, focusing on 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.

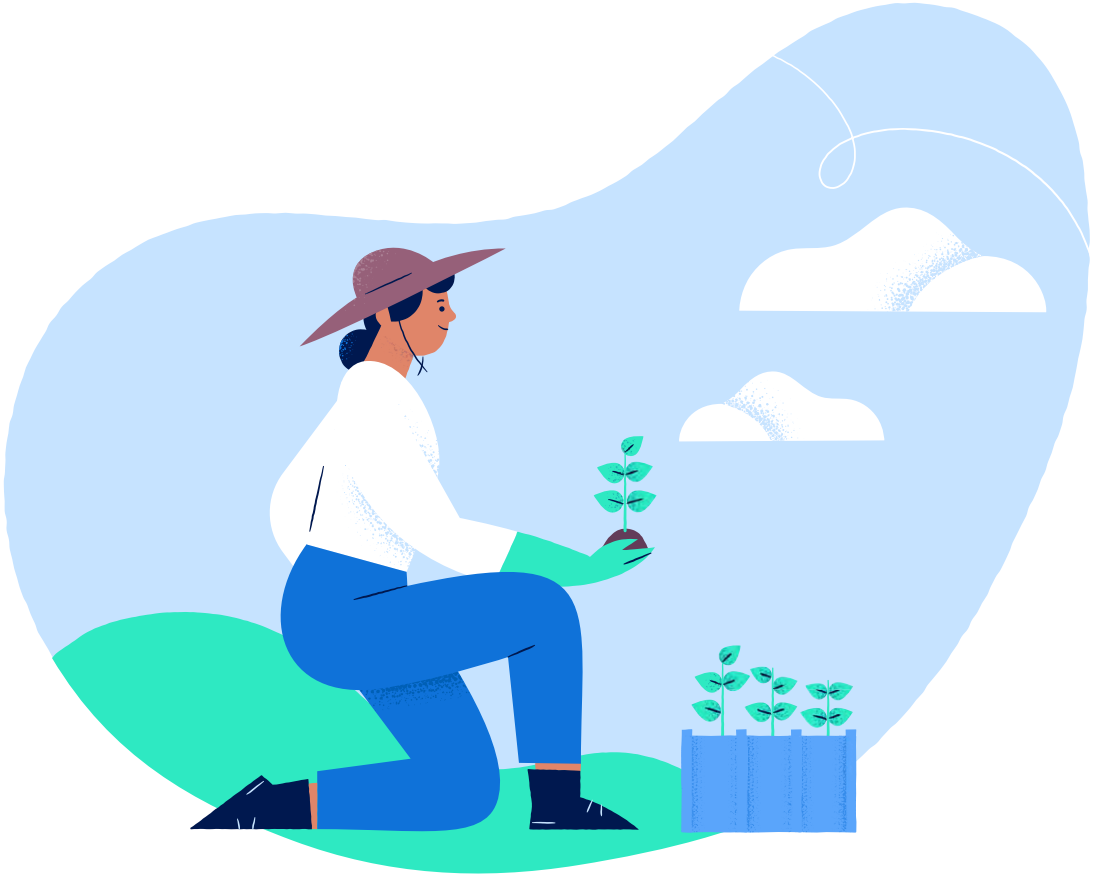
Suzano's plantings are mostly formed by hybrids obtained from the crossbreeding of *Eucalyptus grandis* and *Eucalyptus urophylla*.

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 develops studies and research in collaboration with outstanding public and private institutions in Brazil and abroad. All projects and activities seek to meet market and operational demands, legal requirements, new tendencies, technologies and products of internal research strategies.

As a result, Suzano stands out in developing and recommending new genetic materials, in monitoring and recommending forest management practices and fertilization, in using new technologies in forest protection and more sustainable production practices. In addition to the results highlighted in forestry, Suzano also sustains solid and robust results in industrial and new businesses research and development.



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

On its first 120 days, the forest is monitored through a Qualitative Inventory that allows inferences on the quality and homogeneity of plantings. In regrowth forests, performance is monitored at 90 and 180 days upon harvesting also through qualitative forest inventory.

The Forest Inventory 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.

The licensed nurseries of FBU-MA have an installed capacity of

41.9 million

seedlings per year with final yield of

95%

Seedling Production

The plant nursery is where the eucalyptus seedlings are produced and managed through several stages until reaching the proper size to be planted in the field.

The seedling development time ranges from 90 to 120 days. To produce seedlings of outstanding quality, the distance between them needs to be increased when they reach 60 days so that they can grow healthier.

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 2020, FBU-MA acquired **16,940 ha (implantation)**, **13,631 ha (renovation)** and **1,167 ha (regrowth)**, totaling

31.738 ha

**Disregarding production units awaiting implantation*

In 2019, the annual harvest volume in the FBU-MA was

5,763,051 m³

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 forest maintenance activities are: manual or mechanical mowing, chemical or mechanical weeding, fertilizing, control of leafcutter ants, prevention of forest fire and diseases and pest control.

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

Use of precision technology for the management of operations. Our fleet is equipped with telemetry for the improvement of the drivers working hours, detection of occasional violations of speed limits, and monitoring of the distribution and positioning of the fleet on the roads and farms.

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 from FBU-MA in 2020 was

5,115,382 m³

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.

- Drainage works, such as containment boxes, are built to store rain water and 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.

Imperatriz Unit has an Electronic Fire Detection System formed by surveillance towers with 360o view distributed across the company's areas and operated from a monitoring center. This system provides over 95% coverage of the forest, including planted and conservation areas.

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

Monitoring structure

Cameras	Towers	Radio repeaters	Radios distributed along the operation own	Operating radius
39	43	26	500	Average of 800-900 km from Paragominas to the region of Grajaú/Araguaína

11. Environmental Management

11.Environmental Management

We preserve over
25,000 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 a High Conservation Value Forest (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

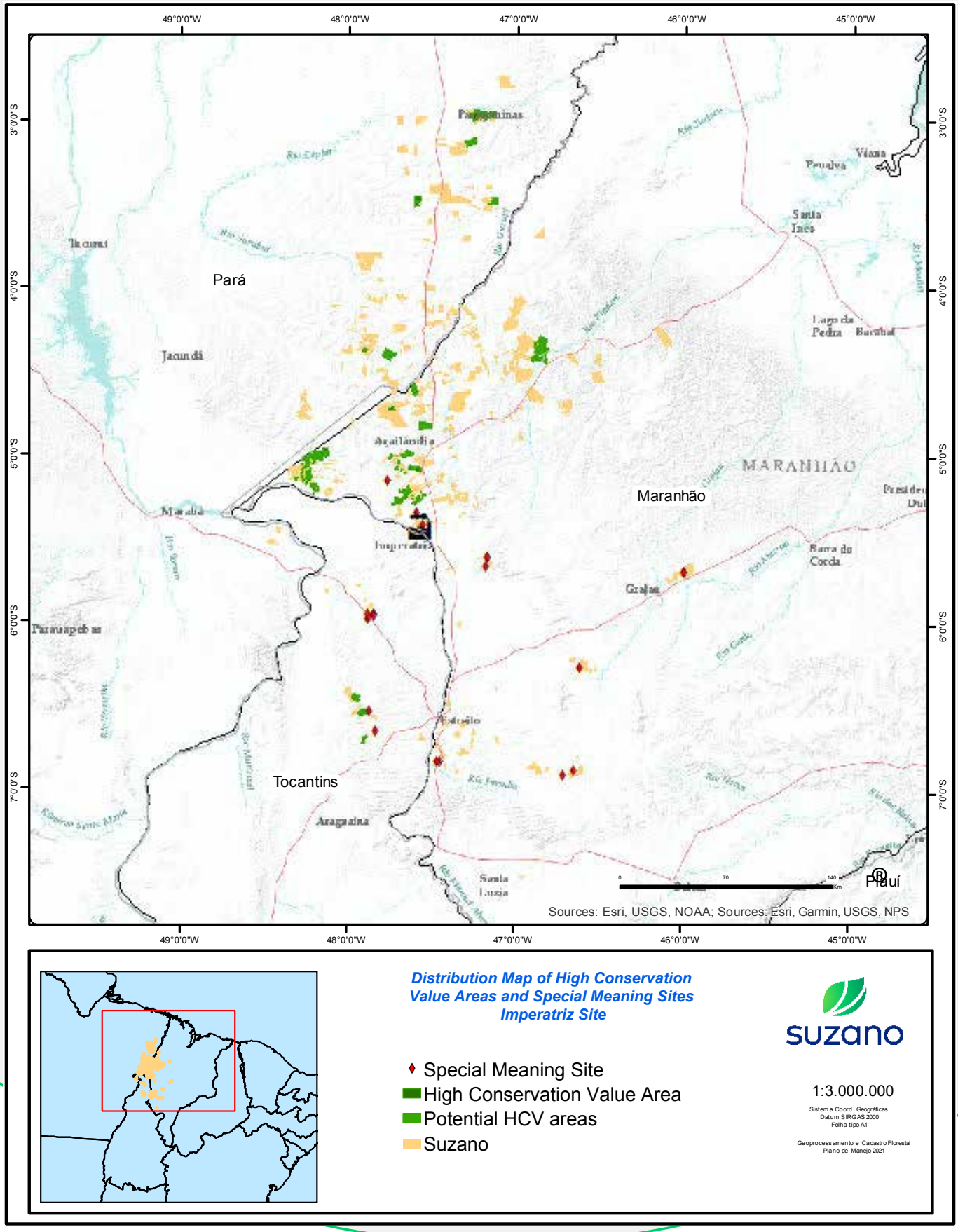
Stakeholders Consultation

Suzano has consulted the stakeholders to develop management regimes and review their efficiency, based on the criteria for the identification of HCVs.

During the preparation of the diagnosis, Suzano consulted researchers and specialists on their areas of expertise to ensure safe decisions were taken concerning the proper identification and management of HCVs.

This surveys has identified 15 forest fragments as HCVs, where species of fauna and flora are found in significant number, diversity and relevance for conservation. Also, places with social value for the surrounding communities were identified as HCV 3.

Localization of High Conservation Value Areas



Measures of protection and Monitoring actions in the HCVs

High Conservation Value	Characteristics	Risks and Threats	Impact	Protection Measures	Monitoring
HCV 1	Endemic, rare, threatened or endangered species at the regional, national or global level.	a) Wildfires; b) Timber theft; c) Invasion of exotic species; d) Hunting and predatory fishing; e) Inadequate management of bordering areas; f) Deforestation.	a) Loss of Biodiversity; b) River sedimentation; c) Damage to biodiversity; d) Ecosystem Imbalance	a) Asset Surveillance; b) Implementation of preventative measures against fire; c) Prioritize, whenever possible, forest restoration to form connections through ecological corridors; d) Environmental Education; e) Placement of Identification Plates;	• Anthropic activities: Quarterly • Avifauna: three-yearly • Mammals: three-yearly • Flora: Five-yearly
AVC 2	Significantly wide areas at the global, national or regional level, containing viable populations of naturally occurring species.				• Anthropic activities: Quarterly • Plant composition via satellite image: Annually
HCV 3	Ecosystems, habitats or refuges of rare, threatened or endangered biodiversity				• Anthropic activities: Quarterly • Avifauna: three-yearly • Mammals: three-yearly • Flora: Five-yearly
HCV 4	Critical Environmental Services. Protection of springs	a) Wildfires; b) Timber theft; c) Inadequate management of bordering areas; d) Deforestation	a) Loss of access to natural resources; b) Water scarcity; c) River sedimentation; d) Damage to biodiversity;		Anthropic activities: Quarterly Plant composition via satellite image: Annually
HCV 5	Key areas to meet the basic needs of local communities	a) Damage and pillage; b) Wildfires; c) Deforestation; d) Inadequate management	a) Loss of access to natural resources; b) scarcity of sources of collection; c) Disfigurement of the area;		Anthropic activities: Quarterly
HCV 6	Area of great relevance for the traditional culture identity of local communities		a) Loss of access to resources of cultural and religious value; b) Disfigurement of the area; c) Weakening and loss of cultural identity;	a) Conservation of the area; b) Granting of access; c) Identification plates; d) Open dialog with the community; e) Asset surveillance; f) Operational patrolling; g) Identification on the company's geographical tools.	Anthropic activities: Quarterly
LSI (Location of Special Interest)	Areas occasionally used by the local communities for non-traditional activities, related to cultural, historical, ecological, economic and/or religious manifestations.				Anthropic activities: Biannually

Biodiversity management

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

Black tamarin
(Saguinus niger)

Fauna and Flora

In the studies conducted between 2013 and 2016, Birds accounted for 566 species appearing in the FBU database, of which, 18 are threatened. The last monitoring, in 2019, has identified 354 bird species.

Studies conducted between 2013 and 2016 showed 16 medium and large-sized mammals in the FBU database, 13 of which are threatened. In the last monitoring, conducted in 2019, 32 species of mammals were identified.

With the survey of fauna and flora in the company's areas, it is possible to establish indicators of the environmental status. Monitoring includes surveying, demarcation, restoration, and conservation of the areas, allowing a continuous learning based on the improvement of environmental management techniques, thus contributing to the local biodiversity conservation.

Studies conducted between 2013 and 2016 identified 375 plant species in the FBU database, 04 of which are threatened. The last monitoring, conducted in 2018, identified 369 plant species, 11 of which are threatened.

Species recorded up to the last monitoring

354	32	369
Birds	Mammals	Plants

** Monitoring takes place every 3 or 5 years. In 2020, no fauna or flora monitoring were conducted.*

Threatened species

The last surveys - Flora in 2018 and birds and medium and large-sized mammals in 2019 - have identified several threatened species. See below the table with the description.

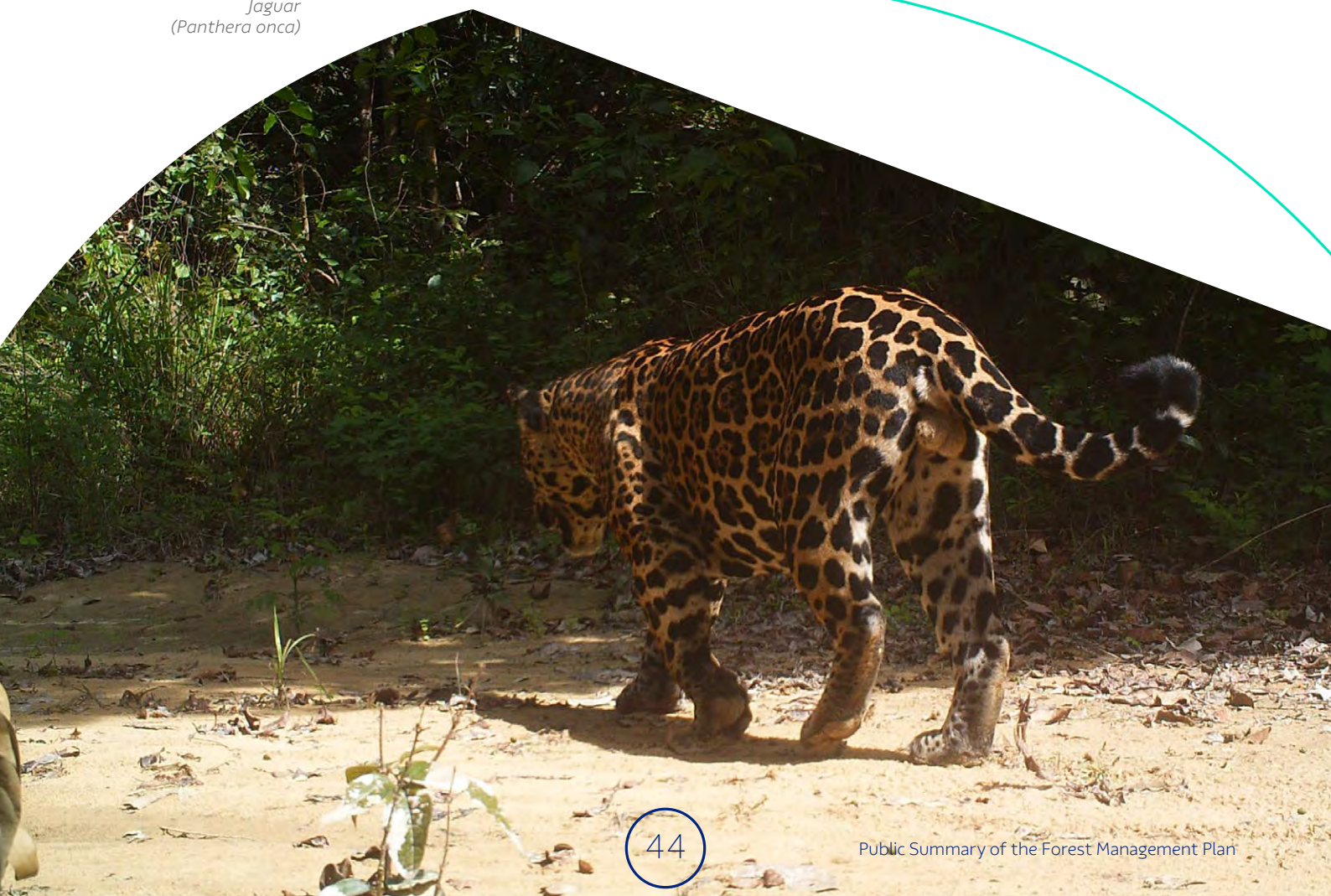
According to the current methodology, the fauna monitorings take place every 3 years and flora monitorings every 5 years, following the adjustment in its periodicity.

			Conservation status		
Type	Especies	Popular name	PA	BR	G
Flora	*Apuleia leiocarpa*	Guarapa		VU	
	Aspidosperma desmanthum	Para-Tudo-Branco	VU		
	Aspidosperma sandwithianum	Araracanga	VU		
	Bertholletia excelsa	Brazil nut	VU	VU	VU
	Campomanesia aromatica	Gabiroba			VU
	Cedrela fissilis	Cedar		VU	VU
	Couratari guianensis	Tauarí			VU
	Hymenaea parvifolia	Jatobá		VU	
	Manilkara elata	Cow tree			EN
	Ptychopetalum olacoides	Marapuama	VU		
	Sorocea guilleminiana	Folha-De-Serra			VU
Birds	*Harpia harpyja*	Harpy Eagle		VU	
	Psophia obscura	Dark-winged trumpeter	EN	CR	CR
	Patagioenas subvinacea	Ruddy pigeon			VU
	Penelope pileata	White-crested guan			VU
	Pteroglossus bitorquatus	Red-necked aracari	VU	VU	EN
	Ramphastos vitellinus ariel	Black-billed toucan			EN
	Celeus torquatus pieteroyensi	Ringed woodpecker	EN	EN	
	Guaruba guarouba	Golden parakeet	VU	VU	VU
	Pyrrhura amazonum	Santarem parakeet			EN
	Pyrrhura coerulescens	Pearly parakeet	EN	VU	VU
	Phlegopsis nigromaculata paraensis	Black-spotted bare eye	EN	VU	
	Thamnophilus aethiops incertus	White-shouldered antshrike	EN		
	Dendrexetastes rufigula paraensis	Cinnamon-throated woodcreeper	EN	EN	
	Dendrocolaptes medius	Barred woodcreeper	EN	VU	
	Synallaxis rutilans omissa	Ruddy spinetail	EN		
	Lepidothrix iris	Opal-crowned manakin		EN	VU
	Piprites chloris grisescens	Wing-barred piprites	VU	VU	
	Tolmomyias assimilis paraensis	Zimmer's flatbill	EN		

Type	Especies	Popular name	Conservation status		
			PA	BR	G
Medium and large-sized mammals	*Alouatta belzebul*	Red-handed howler		VU	VU
	Chiropotes satanas	Black-bearded saki	CR	CR	CR
	Leopardus sp.1	Oncilla		EN/VU	VU
	Myrmecophaga tridactyla	Giant anteater	VU	VU	VU
	Panthera onca	Jaguar	VU	VU	
	Priodontes maximus	Giant armadillo	VU	VU	VU
	Puma concolor	Cougar	VU	VU	
	Puma yagouaroundi	Jaguarundi		VU	
	Saguinus niger	Black tamarin		VU	VU
	Tapirus terrestris	South American Tapir		VU	VU
	Tayassu pecari	Pecari		VU	VU

Conservation status: VU – "vulnerable", EN – "endangered" and CR – "critically threatened" PA – State of Para's list; BR - Brazil's list; G - global list.

Jaguar (Panthera onca)



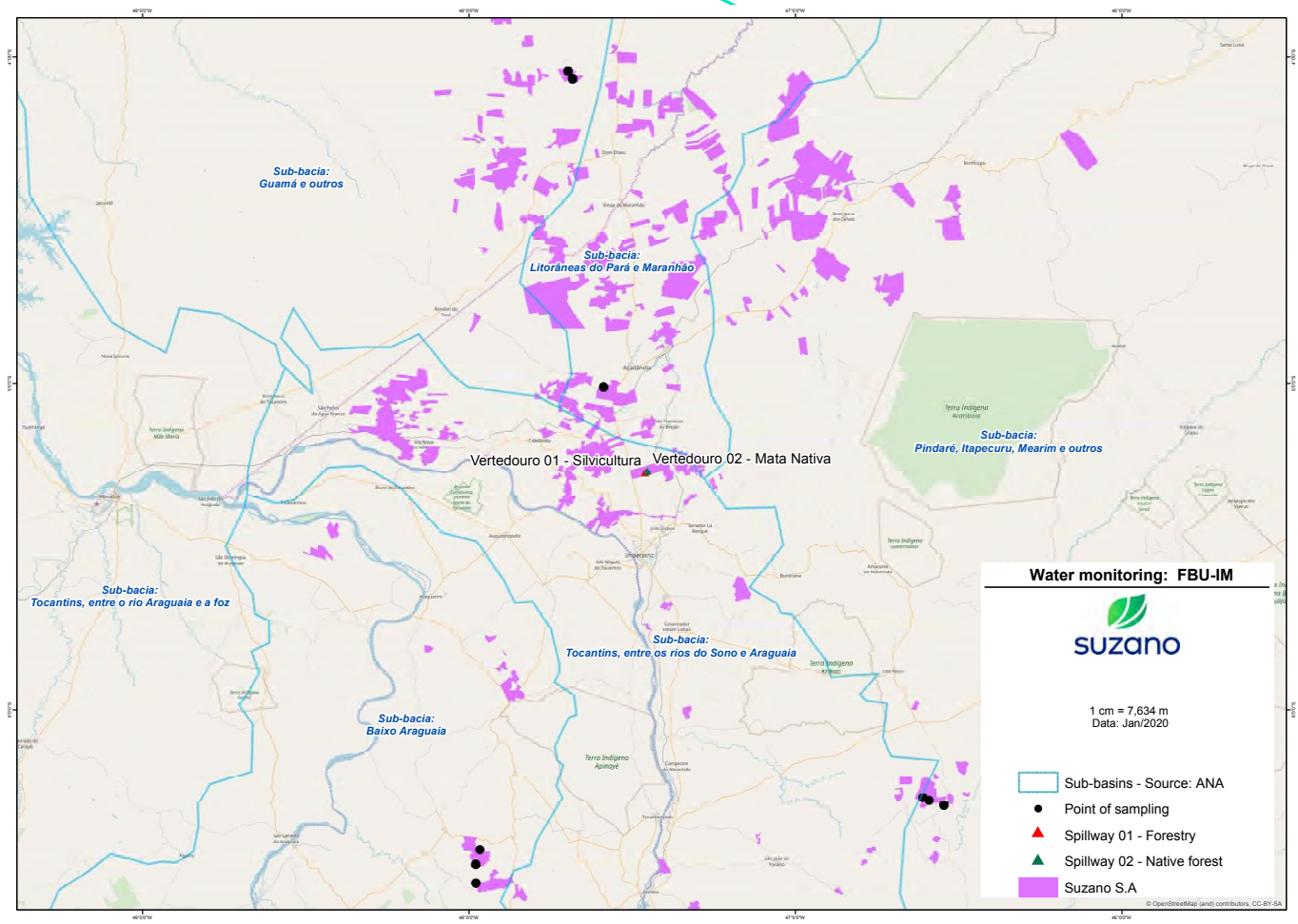
Monitoring of water resources

Suzano 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.

Five hydrographic sub-basins, representing the different regions of operation at the FBU-MA are permanently monitored. Part of the information gathered are sent to the Cooperative Program on Monitoring and Modeling of Hydrographic Basins (Programa Cooperativo sobre Monitoramento e Modelagem de Bacias Hídrográficas - 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.

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

In 2020,
11 points in 5 hydrographic sub-basins
were monitored



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				
Environmental impact	Scarcity of water resources.	Alteration in the physical properties of the soil.	Reduction of Greenhouse effect.	Recuperação da Biodiversidade.
Control measure	· Physical control: · field notes. · Limits of water use rights.	Fire control systems and fire brigade teams.	CO_2 sequestration by forestry production and conservation areas.	· Restoration of degraded areas; · Conservation of PPA and LR.

Ecological Restoration

The Ecological Restoration Program aims to restore the ecological processes that are responsible for a sustainable functional forest. These actions are implemented primarily in Permanent Preservation Areas.

The process of ecological restoration is very recent in the region where Unit Imperatriz is located. Little is known about the adequate methodology and set of actions necessary for the success of the restoration.

With this aim, in 2018, we started the implantation of 107.52 hectares to learn the dynamics of the ecological restoration process in the region. In 2020, only maintenance activities were conducted on the areas undergoing restoration.

Suzano's program promotes an increase in biodiversity and creates several environmental services in our region of operation by using the following restoration methodologies: planting of native species saplings, conduction of natural regeneration, control of invasive species, and isolation of protected areas.

From 2017 to 2020, Suzano has started the restoration process of

122.76 ha

of protected areas in the Imperatriz Unit

Solid waste management

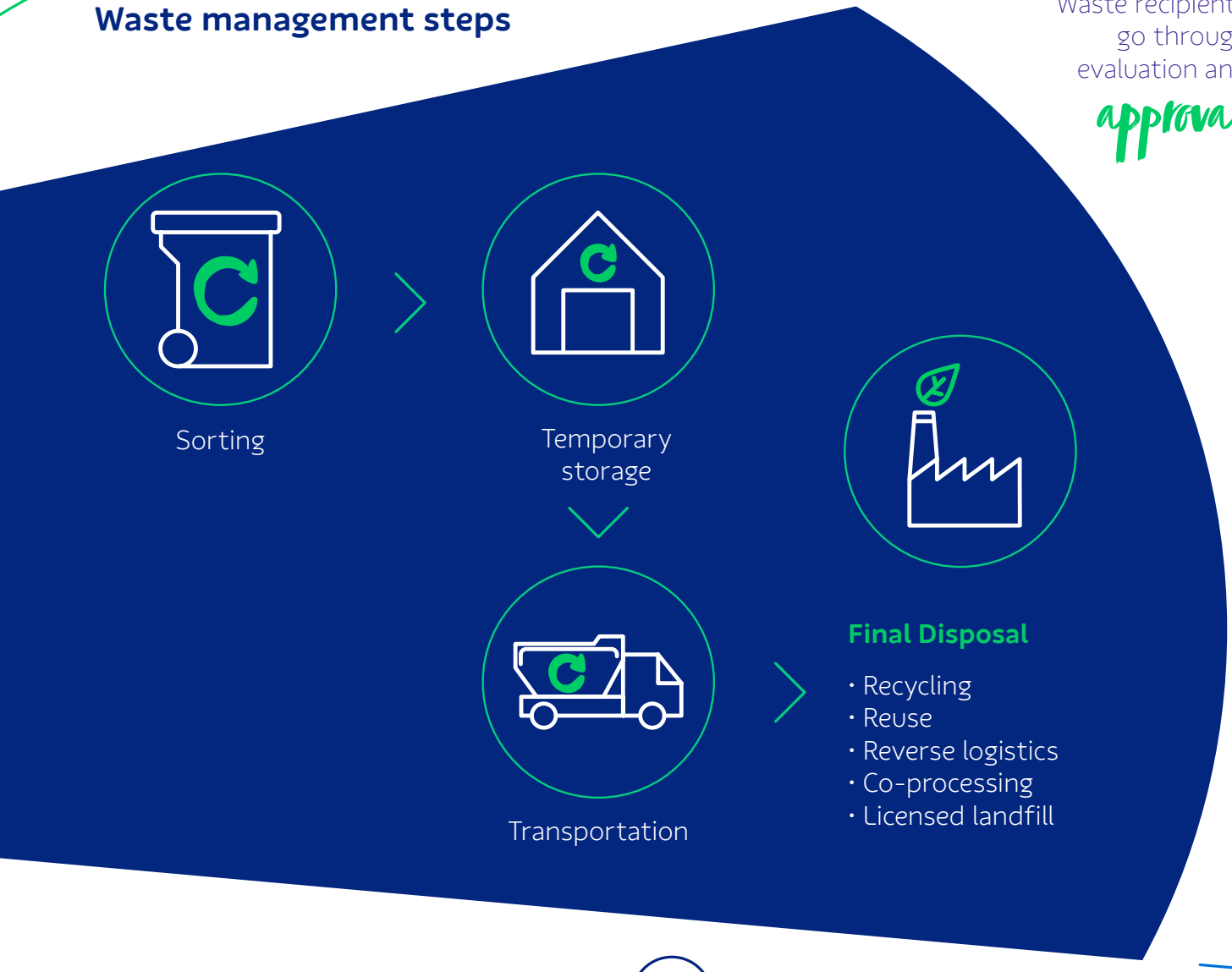
Suzano's Solid Waste Management procedure adopts practices to classify, separate, store, collect, transport, and dispose of waste produced in forestry operations and activities, aiming to:

- 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

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 / DNA - "De Olho na Área")* 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.

Safety performance of FBU-MA forestry operations

Safety indicators	2020
Safety Management Indicator (IGS)	89%
Safety Quality Indicator (IQS)	95%
Safety Indicator (IS)	92%
Frequency rate	0.54
Severity rate	8

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.

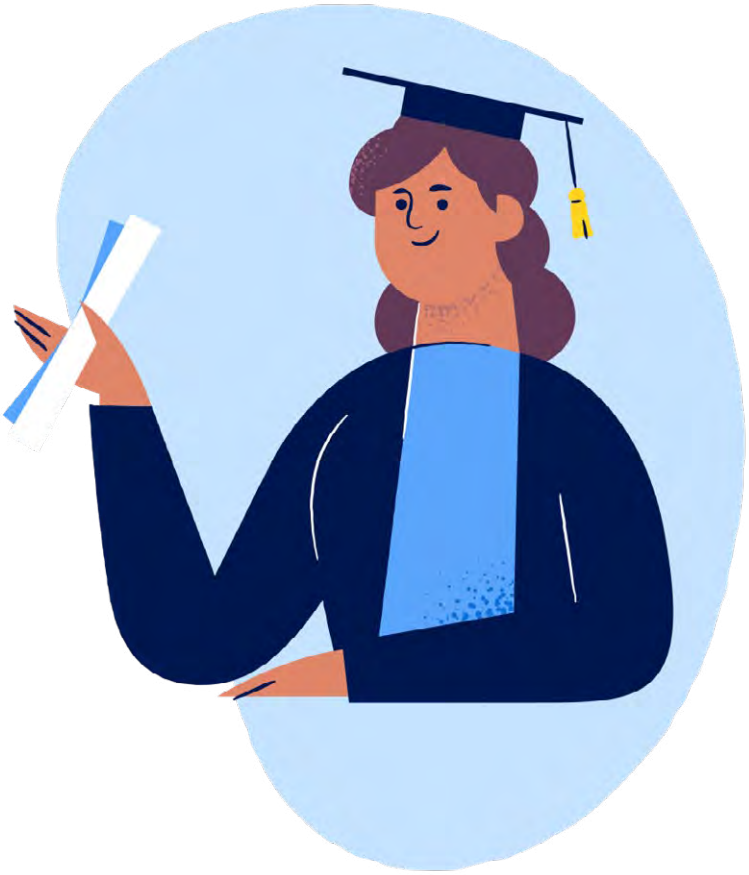
The company conducts a structured process of integration of new employees and permanent vendors that aims to facilitate their adaptation into the work environment, the organizational culture, concepts and drivers, environmental conservation, code of conduct, the management system and stakeholders relationship.

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 the FBU-MA

Own	711
Vendors*	2,378
Total	**3,089**

**Data from Dec/2020*



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 extractivism - Community KM1700

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.

Babassu coconut

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	• Use of products authorized by the environmental bodies • Signaling of the areas • Training of employees that apply the products • Maintenance of equipment use for application
Forest harvest	Increase in the risk of accidents	• Use of up-to-date equipment and trained and qualified teams • Signaling and guidance offered to the community to prevent people from approaching machinery during operation
Timber transportation	Change of landscape (visual) and loss of reference	Placement of warning signs
	Increase in the risk of accidents	• Reduced and controlled velocity • Compulsory stops to check and tighten the load • Safe driving voluntary campaigns
	Dust	Reduction of dust with moistening of the roads (tank trucks)
	Damage of the road network	• Road maintenance during operations • Monitoring and control of load weight of the timber trucks
	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 2020
Social	Impacts on the Communities	Investment in the Community (GRI EC1)	Socioenvironmental investments	R$ 2,380,441.41
			Share of donations to socioenvironmental investments	R$ 4,073,068.48
			Rural community on PDRT	10
		Operational dialog	Operational Dialog reach	1,820 people
			Rate of fulfillment of operational demands	548
			Rate of effectiveness of mitigation actions	83%
		Reclamações de danos causados pelo manejo	Number of complaints received	72
			Average time to address a complaint	173 days*

** The high amount of days to attend complaints is due to the alteration in the registry and follow-up system.*

PDRT project - Trecho Seco community

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).

Feirinha Delivery

Fighting COVID-19

In 2020, COVID-19 pandemic pulled the company into reinventing itself. Focusing on preventing the disease and boosting local social organizations by supporting the local economy, three emergency actions were developed in the operation areas of FBU-MA.

Production of masks

This program benefited 26 seamstresses in the state of Para and 35 in the state of Maranhão. All 31,520 masks were donated to Suzano's collaborators and families residing in priority areas.

Project Masks + Income

In partnership with USAID (US Agency for International Development), Plataforma Parceiros pela Amazônia (Platform Partners for the Amazon), and Vale Foundation, this initiative has benefited 100 seamstresses, including indigenous women, in the state of Maranhão, Para and Tocantins. Roughly 70 thousand masks were produced by seamstresses recommended by Suzano and donated to protect local communities. In an unprecedented effort with its partners, Suzano not only aided families on its priority areas, but also distributed enough masks to protect the entire adult indigenous population of Maranhão with the help of the State Secretariat for Human Rights.

Emergency tender

In partnership with the Brazilian Fund for Biodiversity (Funbio), Suzano launched an emergency tender for the development of projects in two topics: income generation and COVID-19 prevention. 34 initiatives were awarded in Maranhão and 12 in Para submitted by CSO (civil society organizations), MEI (individual microentrepreneurs) and associations/cooperatives, to promote job posts creation and resilience in the localities contemplated.

Socioenvironmental programs and projects

Line of action	Project/ program	Description	Municipality	Direct beneficiaries
Local development	PDRT	The Rural and Territorial Development Program (PDRT) is based on agroecology and on the promotion of autonomy of families and associations, strengthening the human and social capital, using agroecology fundamentals as a basis. Our role on the territory development is given through the dialog with the neighboring rural communities, strengthening organizations and networks with socioeconomic development programs, thus generating income and improving the quality of life in the communities where the company operates.	Imperatriz, Cidelândia, Buritirama, Vila Nova dos Martírios, São Pedro da Água Branca (MA, Ulianópolis (PA) and Darcinópolis (TO)	413 families
Local development	Beehives	The Beehives Program aims to contribute to income generation, improve quality of life and development of the population by means of opening new market opportunities for beekeeping. Also, it allows studies and research opportunities for the development and understanding of the behavior of bees, as well as pest and disease control. Suzano offers planting areas to beekeepers with the aim of boosting honey production in the regions where it operates. This partnership occurs at no charge for beekeepers and the project works in a very simple way: the beehives are installed in the areas of eucalyptus planting in the flowering period so that the bees can use the nectar to produce honey.	Açailândia (MA), Dom Eliseu (PA) and Angico (TO)	85
Local development	Sustainable Extractivism	The objective of Sustainable Extractivism is to support and strengthen plant extractive workers, such as Quebradeiras de Coco and communities that live off Açai products, by rescuing traditional practices. Collective and associative actions, particularly, the sustainable gathering of local raw materials such as babaçu and açai; grant free access to the açai field; try and develop new production models; benefit extractive communities with an extra source of income during off-season are also objectives of this program, as well as promoting partnerships between the company and the communities.	Cidelândia e Imperatriz (MA), Carrasco Bonito and Davinópolis,(TO)	221 families
Education	Suzano's Program of Education	In 2020, Suzano launched Suzano's Educational Program (PSE) that counts on the technical partner Cedac (Educational Community) that is formed by outstanding professionals of education. PSE aims to increase the quality in public education and acts by engaging education secretariats, schools, students, families and communities to face the challenges of education together and build collaborative solutions.	Imperatriz, Açailândia, Buriticupu, Bom Jesus das Selvas, São Francisco do Brejão, Vila Nova dos Martírios, Cidelândia, Itinga do Maranhão and São Pedro da Água Branca (MA)	71 direct and 96,896 indirect
Local development	Craftsmanship program	The Craftsmanship Program is composed of a set of projects inserted into the communities, particularly, the traditional communities with a relationship with Suzano. This program relies on specialized consulting and specific budget. The goal is to develop craftsmanship and the local culture using raw-material from Babassu nut and açai for commercialization, thus granting income generation during the off-season and dissemination of the sustainable extractivism culture.	Imperatriz and Cidelândia (MA)	68 families

Due to strategic definitions, the program Escola de Heróis (School of heroes), described in 2019, was terminated in 2020.

Project Library-school at the village - Morro Branco (MA)

Performance and key indicators of forest management

Aspect	Resp. Process	Monitoring	Indicators	Unit	Goal 2020	Actual 2020	Critical analysis	Actions	Systems/Database	Frequency
Social	Social Devolp.	Operational Dialog and onsite schedule	Number of participants from the communities affected - Dialog	#	Non-applicable	1,820	Due to the 2020 pandemic, some areas of Dialog were limited.	Due to the pandemic restrictions, contact in restricted areas of dialog took place remotely.	Indicators of the Socioenvironmental Management Portal	Annual
	SSQV	SSOMAR	Score obtained on SSOMAR assessment	%	90	92	Improvement and harmonization of safety procedures at the unit.	Audits on teams and companies and evaluation of compliance with legal requirements regarding safety in our operations.	SSQV Portal	Monthly
	SSQV	DNA	Termination of DNA deviations	%	100	71	Implementation of a New System, SDWeb, and evolution of learning curve on its use.	New reactive indicators management system and company's deviations - SDWeb.	SDWEB	Monthly
	SSQV	OPA	Score obtained in OPA - Positive Observation of Activity	%	90	91	Good management of Programed vs Performed of our teams and suppliers with follow up of SSQV team.	Definition of responsibility matrix for preventative tools for own team and suppliers.	SSQV Portal	Monthly
Environmental	Asset intelligence	Fire	Fire planting	ha	359	791	High temperatures and low relative humidity during the drought period resulted in an increase in fire outbreaks and difficulty in controlling them.	Firebreaks, living forest, trainings, hiring of brigade teams, synergy with other areas (forestry, harvest, roads, IP, market timber companies), shifts on weekends and free-days for support are the activities performed; participation in the Program Maranhão Sem Queimadas (Maranhão without woodfire) and awareness-raising on neighboring areas.	OWER BI and ZENITH	Monthly
	Asset intelligence	Fire	Incêndios preservação	ha	2007	1.881,33				Monthly

Aspect	Resp. Process	Monitoring	Indicators	Unit	Goal 2020	Actual 2020	Critical analysis	Actions	Systems/Database	Frequency
Environmental	Environment	Environmental Education Program	Number of people who attended the Environmental Education Program (external)	Nº	N/A	7,179	In 2020, we worked in three fronts: 1. Living Forest and Forest Protection: the fire brigades conducted dialogs with the communities and neighbors as they moved to perform their activities; 2. Living Forest and Operational Dialog: socioenvironmental agents, responsible for the dialog with neighbors and communities before Suzano's operational activities, inserted the campaign into their scope; Living Forest and Social Programs: associations benefited by social programs developed by Suzano have become partners in the dissemination of topics addressed by the campaign. Thus, we were able to reach a larger number of people.	Operational Dialogs, contact through social programs and projects and campaigns.	Excel/ Socioenvironmental management portal	Annual
	Environment	Environmental Education Program	Number of people who attended the Environmental Education Program (internal)	total hours	N/A	810	Along 2020, a diagnostic was obtained and all trainings to be offered on the unit were mapped. From this, an annual planning for 2021 was produced.	To implement the annual trainings plan along 2021.	Excel/Sharepoint	Annual
	Forestry	Forestry controls	Ant bait consumption	kg/ha	1.49	1.18	In 2020, we used more than one type of ant bait with waterproof baits among them. The amount of bait used varies according to the size and number of anthills. During field evaluations, it was assessed that the amount of bait necessary given the size of anthills was smaller than the amount planned. Thus, we were able to further reduce the amount of bait used relative to the goal stipulated.	Field checks and assessment, dosage according to the technical recommendation based on the field assessments and diversification of ant bait types.	BPC/SAP	Monthly
Economic	Logistic	Distance	Average radius	Average radius	293	262	We constantly seek to reduce the average radius in our unit, starting by structuring a forest basis with a shorter radius. Our tactics were changed with the interruption of Brejinho de Nazaré (TO) municipality and the routing project that allowed a reduction on the average radius.	Routing project (analysis of shorter routes between farm and factory).	Excel, Power BI	Daily

Aspect	Resp. Process	Monitoring	Indicators	Unit	Goal 2020	Actual 2020	Critical analysis	Actions	Systems/Database	Frequency
Economic	Nursery	Seedling production	Seedlings shipped	thousands	44,600	41,833	Due to the evolution in the amount of seedlings and increase in the conduction area, we were able to reach the planting goal for the year.	Follow up/monitoring of quality.	SAP and Excel	Monthly
		Seedlings production	Seedling usage	%	90	95	Our suppliers were engaged, evolving in terms of quantity of seedlings delivered as per result.		Excel and Power BI	Monthly
	Harvest	Productivity of transportation	Productivity of FWs	m³/h	56.01	55.06	FW productivity in line with annual goal.	Training of operators with excellence technicians.	Simova/SAP/ Spreadsheets	Monthly
		Productivity of harvest	Productivity of harvesters	m³/h	17.17	20.29	Productivity above the predicted curve for VMIs (Average Individual Volume) and improvement of VMI along 2020.		Simova/SAP/ Spreadsheets	Monthly

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

Corporate social midia, Intranet, Printed and Digital newsletters, walls, Forest Podcast, Corporate TV, Manuals and Educational guides.

External Audience

Press Relations, Website, Social midia, Visitation programs, Annual reports, Management plan summary. In addition to those, the company maintains other communication channels, as described below.

Communication with specific audiences

Suzano Answers

0800 022 1727
or 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/

Instagram
www.instagram.com/suzano_oficial/

Youtube
www.youtube.com/user/Suzanovideos

LinkedIn
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

Website
https://ouvidoriaexterna-suzano.com.br/

www.suzano.com.br