palmasplac

Public Summary of the Forest Management Plan

2023/2024

ABOUT THE PUBLIC SUMMARY

Every year, Palmasplac writes a Public Summary of the Forest Management Plan for the certified areas where it operates. The plan covers the period from November 2023 to October 2024 and takes into account the control and monitoring results and any important changes to the forestry activities, such as socio-economic or environmental responsibilities and conditions. This summary shows an overview of the forestry information in compliance with the principles and criteria set by the Forest Stewardship Council®, with a commitment to long-term adherence.

At Palmasplac, our focus goes beyond forest stewardship: we are a group of people committed to the social progress of both our employees and the community. We work to foster environmental, social, and economic responsibility, always looking for sustainable development.

The Forest Management Units fall within the Forest Certification scope under the following Certification Code: SCS-FM/COC-005239; and Trademark Code: FSC® C125340. Their certificate includes an additional location for Indústria de Compensados Guararapes Ltda under certificate number: SCS-FM/COC-005239-B.

In this Public Summary, the version sent by email is directed at the general society, government authorities, stakeholders, and communities. In addition, we make a hard-copy version available that is delivered to neighbors and other stakeholders throughout the year, during the activities of the Forest Management Units (FMUs).

CONTENTS

ABOUT PALMASPLAC

The Forest Management Units of Palmasplac Agropastoril Ltda are located in the Brazilian states of Paraná and Santa Catarina. The company was started in 2020 after a spin-off from Indústria de Compensados Guararapes and incorporated several farms into its structure.

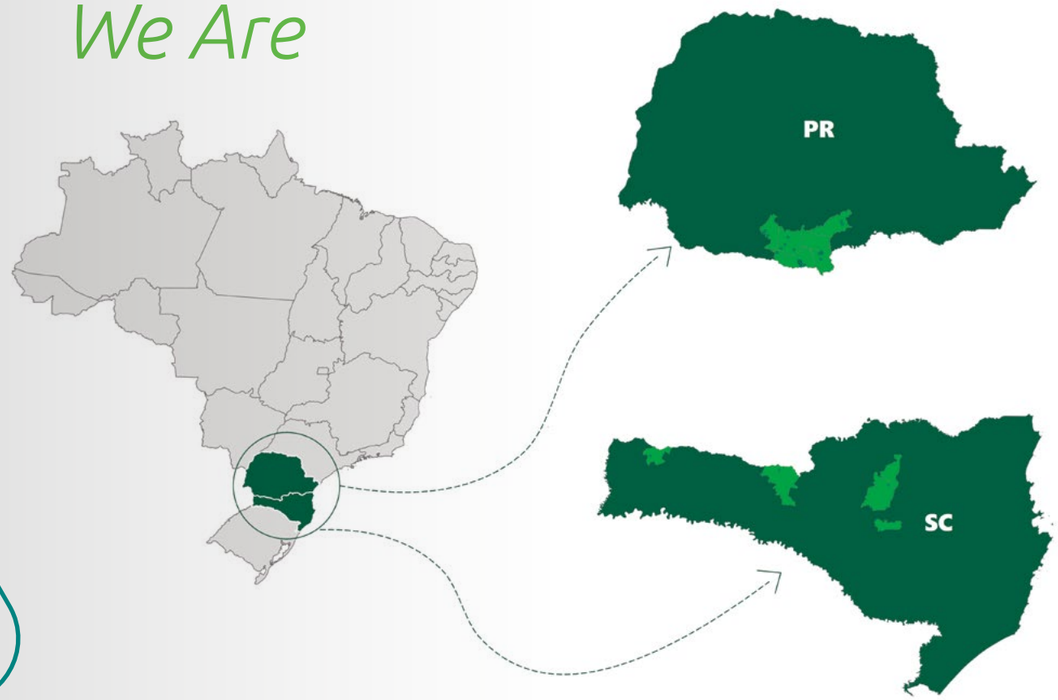
Palmasplac pursues the primary purpose of supplying raw materials with a focus on selling tree logs sent to Guararapes. Its forest exploitation seeks to maximize log production for the veneer production, which is crucial for manufacturing plywood boards, and it has an integrated production agreement with Indústria de Compensados Guararapes Ltda.

The company invests in technology to enhance its forestry activities in partnership with research institutions. Its harvesting operations are conducted with a focus on operation efficiency, increased productivity, and guaranteed safety, always aiming to reduce as much as possible the environmental impacts and respect the communities where it keeps its forests.

With a strong emphasis on continuous improvement and sustainability, Palmasplac ensures the economic feasibility of its operations through a solid commitment to socio-environmental responsibility. Currently, the company owns approximately 12,305 hectares of FSC®-certified forests through certification company SysFlor, as detailed further below in this Public Summary.

Moreover, a portion of the corporate team from the Guararapes Group is directly involved in Palmasplac's forest management operations, and the company also relies on outsourced labor to expand its reforestation areas.

Where We Are



Our office is located in the city of Palmas-PR, and the farms are distributed across the states of Paraná and Santa Catarina, totaling 32 properties that are part of Palmasplac's Forest Management certification scope.

Community mapping

Through maps and databases, we have conducted a mapping of the communities located within a radius of 10 kilometers from the Forest Management Units (FMUs). The highest concentration of these communities is in the city of Cruz Machado.

Indigenous reservations in the company's radius of influence

The Kaingang indigenous reservation was found to be present within a radius of 10 kilometers from some Forest Management Units (FMUs). None of our certified areas is located inside the indigenous reservation, as they only border on it.

Our policy

Environmental Policy and Forest Policy

Palmasplac bases its actions on environmental preservation, acknowledging that conserving nature is key to the sustainable development of our activities, products, and services. As a result, we make commitments to ensure sustainability to our businesses in the long run.

GOALS OF FOREST MANAGEMENT

The goal of forest management is to foster a responsible and sustainable stewardship of forests, making sure that the natural resources are exploited in an environmentally conscious, socially fair, and economically feasible manner.

In pursuing these goals, Palmasplac embraces in its scope a commitment to a responsible use of the forest resources. This entails optimizing the production potential, always preserving the sustainability of our operations. We place environmental conservation and the socio-economic development of the communities where we are present in a prominent position.

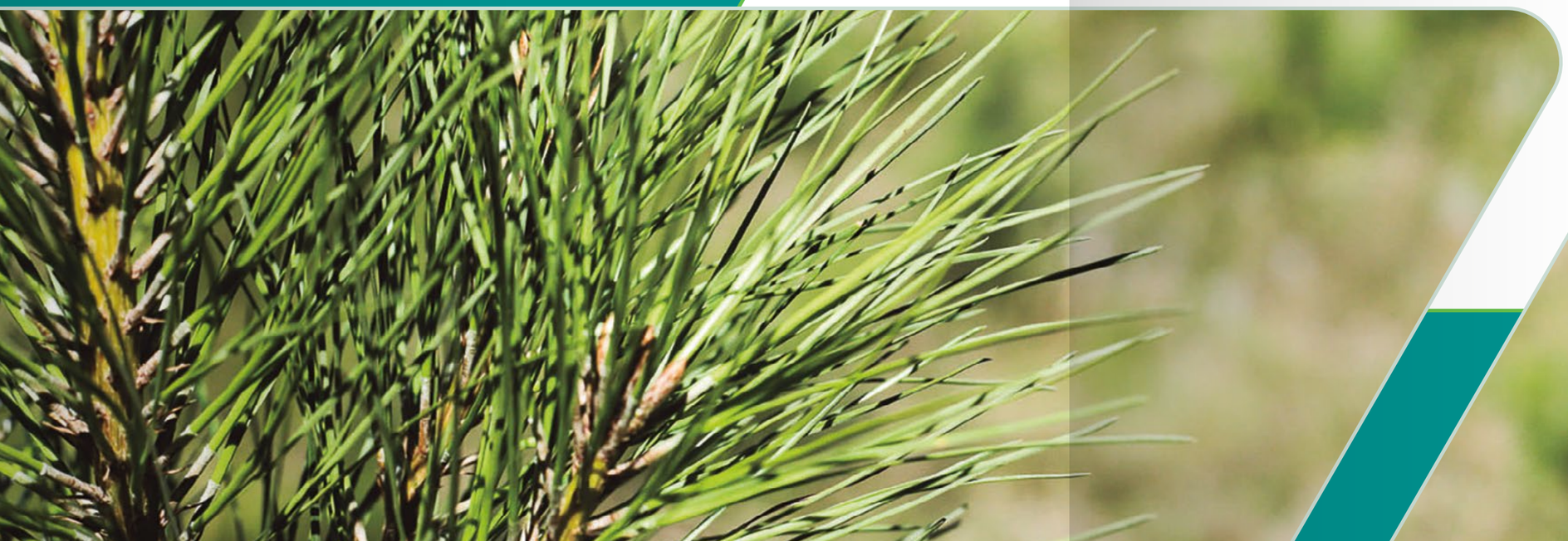
Palmasplac's forest management aims to

- *Comply with the environmental laws and environment-related obligations in our operations, products, and services, incorporating the principles and criteria of our forest management certification.*
- *Plan a sustainable tree planting to ensure business continuity through multiple uses of the forest resources.*
- *Meet the needs of stakeholders and cultivate long-term relationships.*
- *Prevent environmental contamination and incidents in our operations.*
- *Ensure workplace safety and responsibility to all of our employees and third parties with a focus on continuously improving our environmental management system.*
- *Make sure that Palmasplac is economically feasible, while incorporating socio-environmental responsibility in all of our long-term activities.*

Forest purchase and sale policy

Palmasplac puts an effort to implement practices to foster responsible forest stewardship by purchasing raw materials coming from appropriate and sustainable sources, as it does not purchase wood:

- From illegal exploitation;
- The exploitation of which creates a violation of civil and traditional rights;
- From high-conservation value areas;
- From genetically modified forests.



FOREST CERTIFICATION

Palmasplac states its formal commitment to adhere to the Principles and Criteria of the National Forest Certification System and the Forest Stewardship Council® — FSC® C125340. This evidences its commitment to the long-term sustainability of its businesses, continuous improvements in its activities and performance, and the employment of environmentally responsible and socially adequate practices.

For that purpose, the company has integrated the environmental, social, and economic dimensions into the fundamental guidelines of its commitment to the forest management principles, which are the following:

All the wood coming from Pinus and Eucalyptus plantations in certified areas is completely traceable, which secures its sourcing from its planting to its transportation up to the manufacturing plant. This process makes sure that it will not be mixed with logs from non-certified areas and establishes a strict tracking control system.

COMPROMISSO COM OS PRÍNCIPIOS DO FSC

A **PALMASPLAC AGROPASTORIL LTDA**. declara sua aderência formal aos padrões do FSC manejo florestal em suas plantações, comprometendo-se a:

1. Obedecer todas as normas e critérios ditos pelo FSC e seguir todos os indicadores articulados pela sua certificadora;
2. Levar em consideração no Plano de Manejo as comunidades locais, os diferentes produtos oriundos da floresta, os trabalhadores envolvidos na exploração da UMF e as FAVC;
3. Respeitar os direitos e a tradição dos povos indígenas e das comunidades, de modo a manter e valorizar suas terras e seus recursos;
4. Manter e identificar Florestas de Alto Valor de Conservação, adotando medidas de prevenção da mesma quando for realizada qualquer atividade dentro da UMF;
5. Monitorar todas as atividades realizadas na UMF, com objetivo de reduzir qualquer impacto decorrente da extração final da madeira, do manejo da floresta e da preparação do solo;
6. Planejar e executar as plantações de modo a promover o manejo sustentável;

Palmas (PR), 29 de Março de 2021.

PALMASPLAC AGROPASTORIL LTDA.
João Carlos Ribeiro Pedroso
Diretor Presidente

palmasplac www.guaraiapes.com.br guaraiapes guaraiapes guaraiapesmdf

FOREST MANAGEMENT UNITS AND THEIR LOCATIONS AND AREA DISTRIBUTIONS

Palmasplac's forestry operation is present is nine cities located in the states of Santa Catarina and Paraná, with plantations kept both in company-owned areas and in others under leasing contracts and partnerships.

Our production process is supported by renewable Pinus and Eucalyptus forests that are intended to meet the demand of Indústria de Compensados Guararapes. Guararapes' industrial plant operates in accordance with strict environmental standards, using technologies to monitor emissions, as well as controls air and water quality and conducts adequate management of the generated waste.

The seedlings used are supplied through third-party nurseries and have high genetic quality, focused on producing wood for plywood products. The harvesting process is adapted to the area's conditions and employs modern equipment to ensure a safe and ecologically sustainable operation.

To ensure success to all stages of this process, Palmasplac invests in partnerships with research companies, technology, and professional training. The company also prioritizes hiring local professionals, as long as they meet the necessary requirements, which gives them equal opportunities with other candidates.

Annual exploitation rates and exploitation techniques

Due to the raw material stocks in the areas where the industrial units of its primary client Guararapes are located, Palmasplac's annual exploitation rate is directly linked to the market conditions for the products manufactured by Guararapes.

Palmasplac seeks to optimize its log production for veneer production by using thinning and clear-cutting, adjusting its forest management operations according to the needs of the manufacturing plant.

Land situation of Palmasplac's Forest Management Units

LAND SITUATION OF PALMASPLAC'S FOREST MANAGEMENT UNITS	
State	**Main economic activities**
Palmasplac's certified properties have the "Land Situation" of each FMU analyzed. The following checks are conducted:	*Dispute and Conflict Analysis.* *Property ownership (Registrations/Contracts)* *CAR — Farm Environmental Registry* *Georeferencing* *Debt Clearance Certificates (CND)* *ITR — Tax on Rural Territories* *CCIR — Certificate of Rural Property Registration* *Area Conversion Study*

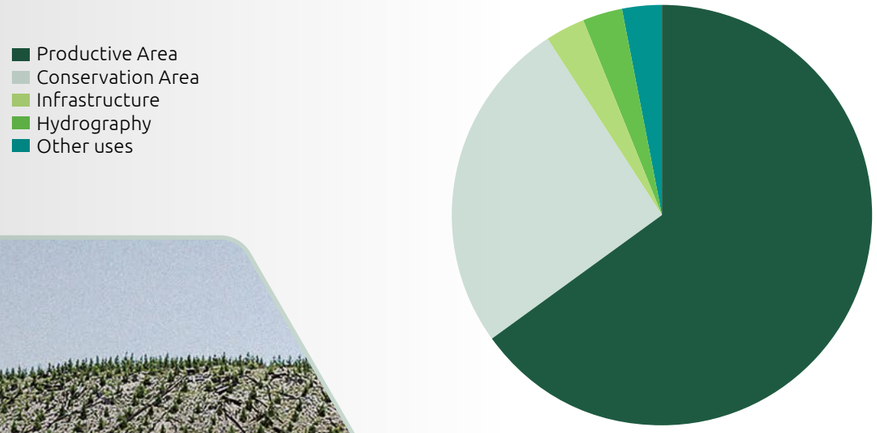
Summarized percentage of existing FMU areas per state belonging to the scope of certification.

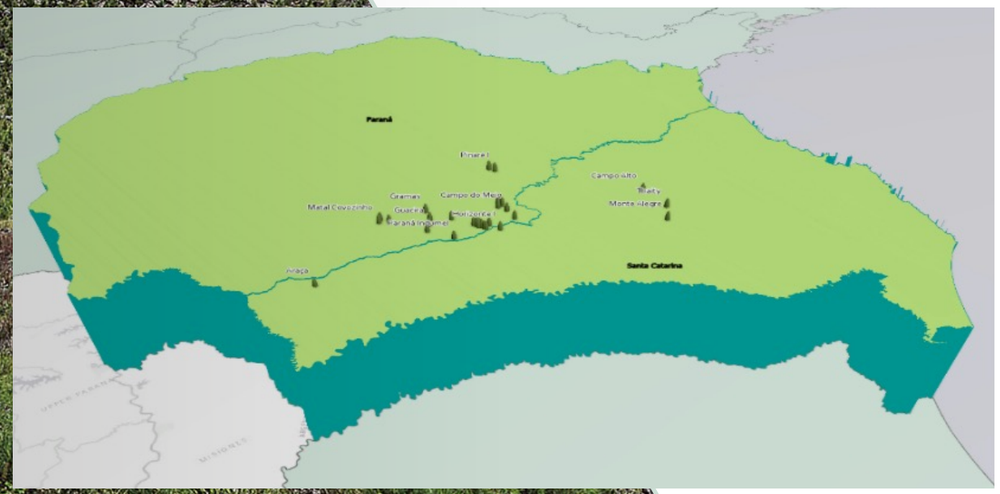
State	CITY	No. of FMUs	Total area managed by the Group	% of Management Unit area per state	% Total
SC	Água Doce	1	345,39 ha	17%	16%
	Campo Erê	1	238,23 ha	12%	
	Santa Cecília	2	1.246,947 ha	62%	
	São Cristovão do Sul	1	171,48 ha	9%	
	Sub-Total	**5**	**2.002,04 ha**	**100%**	
PR	Cel. Dom. Soares	4	1.231,81 ha	12%	84%
	Cruz Machado	2	1.732,21 ha	17%	
	General Carneiro	5	3.890,11 ha	38%	
	Mangueirinha	3	814,79 ha	8%	
	Palmas	13	2.634,87 ha	26%	
	Sub-Total	**27**	**10303,79**	**100%**	
	Overall Total	**32**	**12.305,83 ha**		**100%**

Soil use percentage and certified area

SOIL USE AND CERTIFIED AREA OF PALMASPLAC — SYSFLOR		
Soil use	FSC® Certified (ha)	FSC® Certified (ha)
Productive Area	8021,27	65%
Conservation Area	3183,52	26%
Infrastructure	346,01	3%
Hydrography	424,33	3%
Other uses	330,70	z3%
Total:	12305,83	100%

FSC® Sysflor Certified (ha)

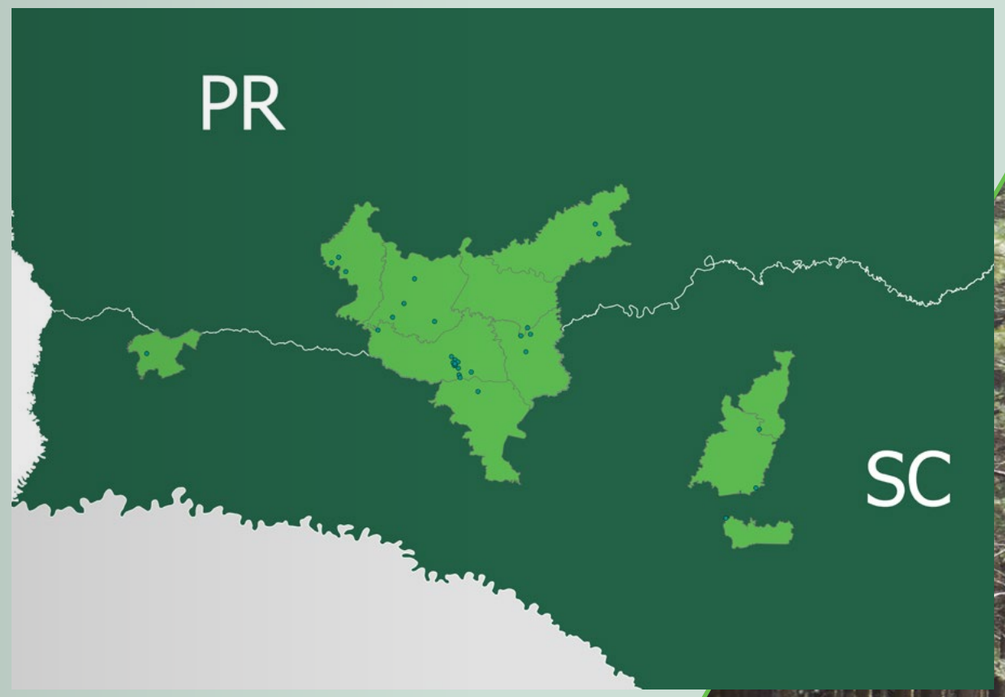




FOREST MANAGEMENT UNITS BELONGING TO THE SCOPE OF CERTIFICATION											LAND SITUATION		
FMU	State	Management Unit	Conservation Area (ha)	Infraestrutura (ha)	Hidrografia (ha)		Planted area (ha)	Conservation Area (ha)	Other uses (ha)	Scope Total (ha)	Documentation	Farm Environmental Registry - CAR	Georeferencing
Araça	SC	Palmasplac	74,14	13,40	0,35		148,31	74,14	2,03	89,92	The documentation and ownership situation of all 32 FMUs belonging to the scope of the certification is currently in accordance with the laws.	With regard to CAR, all 32 FMUs belonging to the scope of the certification are currently registered with the CAR system.	"Relatively to the georeferencing of the 32 FMUs, 100% of the properties are currently certified by INCRA (Brazil's National Institute for Colonization and Land Reform)".
Campo Alto	SC	Palmasplac	46,68	2,98	3,59		68,53	46,68	0,00	53,25			
Campo do Meio	PR	Palmasplac	65,22	22,76	0,59		209,69	65,22	7,31	95,88			
Chopin I	PR	Palmasplac	86,40	10,02	0,37		152,38	86,40	7,51	104,30			
Cruz Machado	PR	Ind. Compensados Guararapes	559,15	36,52	52,98		879,16	559,15	69,10	717,75			
Gramas Cacumbangue	PR	Palmasplac	98,59	6,48	0,83		93,56	98,59	4,53	110,43			
Guacira	PR	Palmasplac	0,00	0,00	0,00		464,28	0,00	0,00	0,00			
Horizonte I	SC	Palmasplac	81,57	3,43	4,98		236,84	81,57	18,57	108,55			
Invernada São Luiz - Parceria Leroy	PR	Palmasplac	0,00	0,00	0,00		29,41	0,00	0,00	0,00			
Matal Covozinho	PR	Palmasplac	42,09	10,60	0,86		155,32	42,09	6,68	60,23			
Matal Machado	PR	Palmasplac	20,80	28,80	0,21		446,05	20,80	15,59	65,40			
Matal São Bento (Sede)	PR	Palmasplac	18,93	10,85	1,80		47,88	18,93	8,33	39,91			
Monte Alegre	PR	Palmasplac	33,31	3,84	17,30		113,77	33,31	3,26	57,71			
Palmital II	PR	Palmasplac	1008,82	89,99	52,92		390,69	1008,82	100,35	1252,08			
Paraná	PR	Palmasplac	199,92	14,90	21,85		305,23	199,92	21,73	258,40			
Pinaré I	PR	Palmasplac	27,22	4,23	0,14		101,53	27,22	2,18	33,77			
Rodeio Novo	PR	Palmasplac	23,21	4,21	0,15		57,12	23,21	11,61	39,18			
Rondon D -Arrendo	PR	Ind. Compensados Guararapes	0,00	0,00	0,00		869,67	0,00	0,00	0,00			
Rondon E-Arrendo	PR	Ind. Compensados Guararapes	0,00	0,00	0,00		269,27	0,00	0,00	0,00			
Santa Bárbara - Arrendo Leroy	PR	Palmasplac	0,00	0,00	0,00		747,37	0,00	0,00	0,00			
Santa Bárbara - Parceria Leroy	PR	Palmasplac	0,00	0,00	0,00		80,87	0,00	0,00	0,00			
Santa Bárbara I	PR	Palmasplac	5,65	1,55	1,80		39,38	5,65	0,02	9,02			
Santa Bárbara II	PR	Palmasplac	19,19	4,12	8,37		88,37	19,19	0,95	32,63			
Santa Cecília I	PR	Palmasplac	58,07	12,02	18,79		331,93	58,07	1,63	90,51			
Santa Cecília II	PR	Palmasplac	0,38	1,57	1,88		30,88	0,38	0,39	4,22			
São Geraldo	PR	Palmasplac	71,67	6,46	14,11		121,37	71,67	1,28	93,52			
São Joaquim	PR	Palmasplac	80,83	8,33	3,03		123,31	80,83	23,70	115,89			
São Pedro - Tito Mello I	PR	Palmasplac	0,00	0,00	0,00		426,41	0,00	0,00	0,00			
Sincol	PR	Palmasplac	122,55	17,16	2,57		323,95	122,55	1,01	143,29			
Taipinha I	PR	Palmasplac	26,40	5,40	12,30		136,08	26,40	1,52	45,62			
Taipinha II	PR	Palmasplac	1,58	1,97	7,76		57,39	1,58	1,90	13,21			
Thaity	SC	Palmasplac	411,15	24,42	194,80		475,27	411,15	19,52	649,89			
OVERALL TOTAL			3.183,52	346,01	424,33				330,70	4.284,56			

General information is provided below about the cities where the FMUs are present.

State	City	No. of FMUs	Total area managed by the Group	Mesoregion (2012 IBGE census)	Microregion (2012 IBGE census)	Area of the City	No. of inhabitants	Population Density
SC	Água Doce	1	345,39 ha	Oeste Catarinense	Joaçaba	1.319,14 Km²	6508	4,93 hab./km²
	Campo Erê	1	238,23 ha	Oeste Catarinense	Chapecó	479,16 Km²	9623	20,08 hab./km²
	São Cristovão do Sul	1	171,48 ha	Serrana	Curitibanos	345,90 Km²	6084	17,59 hab./km²
	Santa Cecília	2	1.246,94 ha	Serrana	Curitibanos	1.145,85 Km²	15546	13,57 hab./km²
	Sub-Total	**5**	**2.002,04 ha**					
PR	Cruz Machado	2	1.732,21 ha	Sudeste Paranaense	União da Vitória	1.478,35 Km²	15978	10,81 hab./km²
	General Carneiro	5	3.890,11 ha	Sudeste Paranaense	União da Vitória	1.071,18 Km²	11062	10,33 hab./km²
	Cel. Dom. Soares	4	1.231,81 ha	Centro Sul Paranaense	Palmas	1.556,19 Km²	5.649	3,63 hab./km²
	Mangueirinha	3	814,79 ha	Centro Sul Paranaense	Palmas	1.055,46 Km²	16603	15,73 hab./km²
	Palmas	13	2.634,87 ha	Centro Sul Paranaense	Palmas	1.557,90 Km²	48247	30,97 hab./km²
	Sub-total	**27**	**10.303,79 ha**					
Overall Total		**32**	**12.305,83 ha**					



ENVIRONMENTAL CHARACTERISTICS

Soil, climate, altitude, vegetation, and hydrography characteristics of the areas of the FMUs.

ENVIRONMENTAL CHARACTERISTICS IN THE AREAS OF THE FMUS.	
Factors	**Characteristics**
Altitude	The averages in the cities included vary from 820 to 1139 meters. The overall average altitude across all cities that are part of the Forest Management Units (FMUs) within the scope of certification is 962 meters.
Soils	The process of weathering transformation and degradation of rocks into organic and mineral particles, varying according to climate, time, and other factors. The prevailing soils in Palmasplac's areas are Cambisols and their associations, usually with low thicknesses due to their B Horizon in an early formation stage. The area of the Forest Management Units (FMUs) predominantly includes Cambisols, Latosols, Entisols, and Nitisols with characteristics of high acidity, medium fertility, and wide relief variation
Hydrography	Palmasplac's Management Units are scattered across several river basins and most of them are located in the Iguaçu River Basin
Vegetation	The Forest Management Units are located in the Atlantic Forest Biome, where the prevailing vegetation is Araucaria Moist Forests and Natural Fields. In the Araucaria Moist Forests, we can commonly find the Brazilian araucaria (Araucaria angustifolia).

Geo-Climate and Biological Data of the cities of the FMUs

GEO-CLIMATE AND BIOLOGICAL DATA						
STATE	**CITY OF THE FMUS**	**AVG. ALTITUDE**	**CLIMAte**	**SOILS**	**RIVER BASIN**	**VEGETATION**
SC	Água Doce	969 m	High-altitude subtropical climate with cold winters and mild summers. The annual average temperature varies between 10°C and 22°C	Cambisols and Litholic Entisols associa-ted with wavy and mountainous relief	Iguaçu + Uruguai,	Floresta Ombrófila Mista + Campos Naturais
	Campo Erê	929 m	A predominantly moist subtropical climate with hot summers and mild winters. (CFa)	Latosols + Nitisols + Cambisols + Acrisols:	Uruguai, Várzea, Turvo, and others	Araucaria Moist Forest
	Santa Cecília	1139 m	The climate is a moist subtropical one with fresh summers and winters that can be cold, with frequent frosts (CFa)	Cambisols + Latosols + Nitisols + Gleysols	Canoas + Itajaí + Paraná, Iguaçu	Araucaria Moist Forest
PR	São Cristovão	1025 m	Moist subtropical climate with cold winters and mild summers. (CFa)	Cambisols + Latosols + Nitisols + Gleysols	Canoas + Marombas + Correntes	Araucaria Moist Forest + Natural Fields
	General Carneiro	896 m	Moist subtropical climate with cold winters and mild summers (CFa)	Cambisols + Nitisols + Entisols	Paraná, Iguaçu	Araucaria Moist Forest
	Cel. Dom. Soares	1123 m	A moist subtropical climate with mild summers and winters that can be cold, with average temperatures varying between 6°C in winter and 25°C in summer (CFa)	Nitisols + Cambisols:	Paraná, Iguaçu	Floresta Ombrófila Mista + Campos Campos Naturais
	Mangueirinha	849 m	Moist subtropical climate with cold winters and mild summers. The average temperatures vary between 10°C in winter and up to 28°C in summer (CFa)	Nitisols + Cambisols: + Latosols:	Paraná, Iguaçu	Araucaria Moist Forest
	Palmas	1115 m	Subtropical climate with cold winters and mild summers; the annual average temperatures vary between 8°C and 20°C (CFb)	Cambisols + Nitisols + Entisols	Paraná, Iguaçu	Araucaria Moist Forest + Natural Fields
Overall Average		**958 m**	*** Köppen-Geiger**			

Species managed

Palmasplac uses the Pinus sp. and Eucalyptus sp. species in its reforestation areas, chosen due to their adaptation to the area and satisfaction of the technical requirements for the company's industrial process, which makes sure that adequate species for the area are used.

Environmental Limitations

Environmental variable, activity, and its Environmental Limitations

ENVIRONMENTAL LIMITATIONS		
ENVIRONMENTAL VARIABLE	**ACTIVITY**	**ENVIRONMENTAL LIMITATIONS**
Climate	Choice of Species	Frosts are a limiting factor for the planting of a few species, and the FME chooses to use species adapted to the local climate conditions, including Pinus.spp. and Eucalyptus.spp.
	Planting and Replanting	The operations may take place all year long, regardless of the temperature and precipitation conditions.
	Ant Control	The operation may take place all over the year, but the control over leafcutter ants is more intensely performed in the spring and summer months.
	Herbicide Application	The operation must take place during warm, non-rainy periods.
	Mowing	Temperature is a restriction, and this activity is not conducted during winter, as low temperatures help control the competition with weeds.
	Harvesting	Rainy periods may be limiting for certain areas, so operation fronts may be directed at more favorable areas.
	Transportation	Rainy periods may be limiting for certain areas, so operation fronts may concentrate on more favorable areas.
	Roads	A atividade é interrompida em dias de chuva intensa e solo úmido. Em áreas suscetíveis à erosão, como Latossolos e terrenos com declividades acentuadas, são necessárias obras de infraestrutura, como saídas de água e bueiros, para o controle adequado
	(Construction/Maintenance)	No activity is conducted on days with heavy rains and wet soil. For areas more prone to erosion, such as Latosols and high-slope terrains, infrastructure work is required, such as water outlets sewers, for adequate control
Soils	Soil Preparation	Terrain topography is a limiting factor for agricultural operations. Areas with a low slope (below 20%) allow for semi-mechanized operations, while higher-slope areas (above 20%) require manual operations.
Relief	Harvesting	For areas with a slope as steep as 35%, the operation may be mechanized; for an area with a slope above 35%, a manual operation is usually performed.

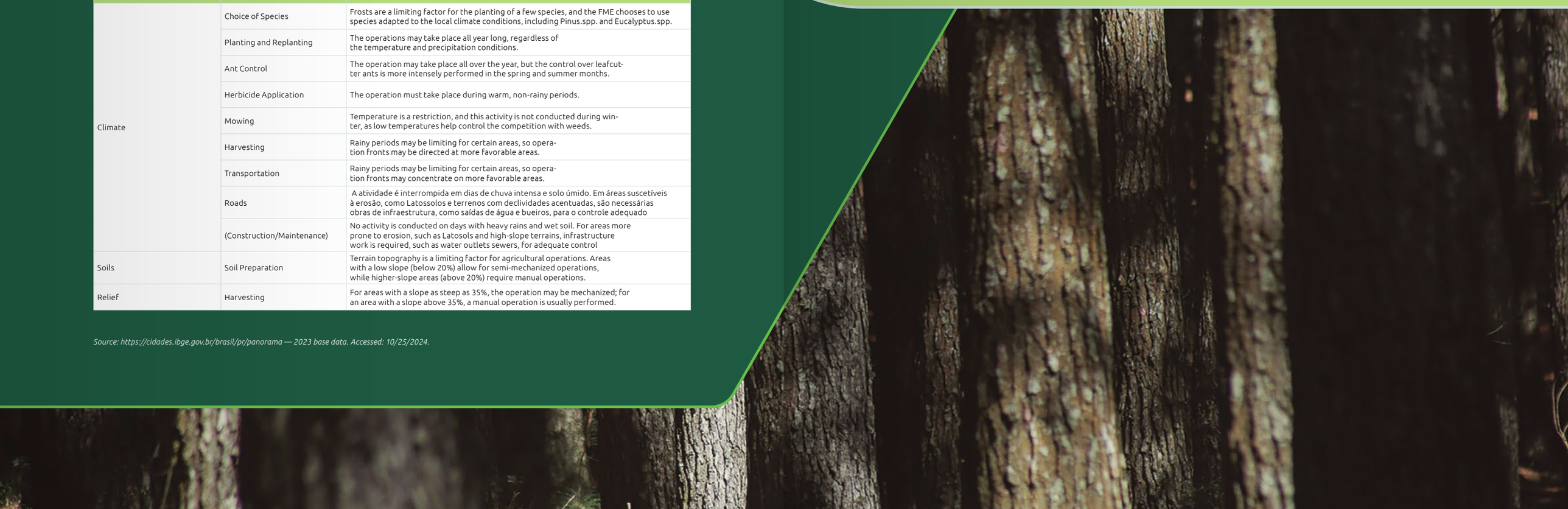
Source: https://cidades.ibge.gov.br/brasil/pr/panorama — 2023 base data. Accessed: 10/25/2024.

SOCIO-ECONOMIC CONTEXT

The Forest Management Units (FMUs) are located in an area that incorporates various economic, social, and cultural settings. The local economy is predominantly based on animal husbandry and agriculture, including milk production. In the last few years, Pinus and Eucalyptus planting has gained importance and promoted socio-economic transformations with manufacturing plants being established to focus on manufacturing plywood and MDF boards.

Despite this, traditional activities such as animal husbandry and agriculture continue to play a crucial role in the area's economic sustenance. On top of our out team of employees, Palmasplac establishes strategic partnerships with third-party service providers. These partnerships allow us to respond to the demands with agility and effectiveness, which ensures proper progress of the operations and achievement of our goals.

We deeply value our outsourced suppliers and acknowledge that they are key to the success of our businesses and the fulfillment of our responsibilities. We have kept a close collaboration with these teams, making sure that high standards of quality, safety, and compliance are followed across all stages of our processes.



Socio-Economic Data of the cities where the FMUs are established.

SOCIO-ECONOMIC DATA							
STATE	CITY	HDI	PER-CAPITA GDP	% CURRENT TRANSFERs	TOTAL REALIZED GROSS REVENUES	TOTAL DISBURSED GROSS EXPENSES	MAIN ECONOMIC ACTIVITIES
SC	Água Doce	0,698	R$ 90.930,69	82%	R$ 78.707.884,67	R$ 78.707.884,67	• Agriculture • Animal Husbandry • Forest production of planted forests
	Campo Erê	0,69	R$ 52.668,42	83%	R$ 65.917.839,49	R$ 55.607.162,43	• Agriculture (corn and soy) • Animal Husbandry • Manufacturing of farming inputs
	São Cristovão do Sul	0,665	R$ 38.928,81	72%	R$ 48.144.666,82	R$ 36.990.869,44	• Wood manufacturing
	Santa Cecília	0,7	R$ 38.931,54	80%	R$ 98.849.014,18	R$ 98.575.126,35	• Forest production of planted forests • Agriculture (corn, beans, soy, etc.) • Wood manufacturing and animal husbandry (bovine and swine)
PR	Cruz Machado	0,66	R$ 98.575.126,35	90%	R$ 105.426.204,80	R$ 89.871.777,10	• Yerba mate production • Forest production of planted forests • Animal husbandry (dairy production and pig raising)
	General Carneiro	0,652	R$ 32.611,06	89%	R$ 74.423.860,19	R$ 67.297.495,82	• Forest production of planted forests • Agriculture (corn, beans, and soy) • Animal husbandry (dairy production and beef cattle)
	Cel. Dom. Soares	0,6	R$ 42.947,64	90%	R$ 67.942.738,08	R$ 57.163.796,93	• Forest production of planted forests • Agriculture • Animal husbandry (dairy, bovine, swine, poultry, etc.)
	Mangueirihha	0,69	R$ 107.007,02	87,94%	R$ 161.490.952,14	R$ 139.845.034,00	• Agriculture (soy, corn, beans, wheat, etc.) • Animal husbandry (dairy, bovine, swine, poultry, etc.) • Forest production of planted forests
	Palmas	0,66	R$ 30.790,74	-	-	-	• Agriculture • Agribusiness and wood manufacturing • Animal Husbandry • Forest production of planted forests

FOREST STEWARDSHIP

Palmasplac has an expert team dedicated to the planning and stewardship of our forest operations, which cover the management and maintenance of the forests. Guararapes has its own wood harvesting and transportation modules, as well as manages third parties at the Forest Management Units. With its focus on sustainable production, the company seeks to bring environmental conservation and social and economic improvements together. This commitment is reflected in its management system, which defines targets and goals for continuous enhancement and development.

Forest Protection

The goal of forest protection is to ensure the health and sustainability of the forests by fostering a conservation of natural resources and biodiversity. Forest protection aims to:

- *Early identify sites of pests and diseases: this involves regularly monitoring the forests to detect signs of an infestation or disease before they become serious problems, allowing for immediate corrective actions.*
- *Assess plant competition: analyzing the competition between the actual planting and weeds is crucial in making sure that the desired species have adequate space and resources to grow, which impacts on the productivity and general health of the forest.*

Security

Palmasplac has employees that run through the areas to make records of any event.

Fire fighting and prevention

There are many ways to avoid forest fires, which entail both prevention actions and sustainable management practices. Here are a few effective strategies that the FME uses:

- *Building firebreaks;*
- *Training fire brigades;*
- *Handing out a folder on partner companies to raise the neighbors' awareness about fires.*
- *Holding farm foreman rounds in the FME's areas.*

FOREST MANAGEMENT

Origin of the forest operation

To establish its forest operation, the company currently uses leases, partnerships, and land acquisitions. The main criterion for choosing these lands is a preference for already established places, usually with a record of prior use for forestry activities.

Mapping

Palmasplac uses a Geographic Information System (GIS) to draw maps and integrate data in the Forest Management System (INFLOR) and in the GISAGRI system, making continuous updates on soil use and occupancy on its properties. In addition to record surveys, technologies are employed such as drones and satellite images that help provide a detailed mapping of the areas before any intervention. This process is key in planning the occupancy and use of the land.

The planning covers using the GIS system, controlling activities, and managing the areas, and the primary role of this department is to guarantee wood supply for log production, with minimized costs and in accordance with the operation limitations and socio-environmental guidelines. The goal is to ensure the long-term sustainability of the enterprise.

The planting and harvesting planning is directed at ensuring the supply for Guararapes' plant and covers the short, medium, and long terms so as to optimize natural resources and minimize possible impacts. Adequate forest management of planted forests not only elevates the production and quality of the planting, but also contributes toward preserving biodiversity.

Microplanning

Microplanning is conducted in a manner integrated with Guararapes' harvesting department, which makes sure that all activities are properly coordinated and carried out in accordance with technical and operation parameters. This planning entails preparing detailed maps that identify the tree lands to be cut, the optimal outgoing flow for the wood, and the topographic characteristics, such as the land slope. Moreover, an analysis is made of potential points of social-environmental impact, such as Permanent Preservation areas (APP areas), water bodies, and sensitive habitats, which guarantees that the operations are conducted in a sustainable manner and in compliance with the environmental laws.

The maps generated during the microplanning process are key in organizing and carrying out field activities and are directly handed to the employees in charge of the harvesting fronts. These maps work as visual and operation guides, allowing employees to accurately follow the guidelines on wood cutting and movement, which minimizes errors and increases the efficiency of our operations.

For tree thinning, which is a forestry practice performed to improve the quality and growth of the remaining tree lands, the maps are provided to the employees in charge of outlining the areas to be thinned. These professionals use the information from the maps to determine exactly where and how the intervention will take place, making sure that the thinning operation is conducted in an efficient and planned way, which contributes toward increased forest productivity and planting sustainability.

Forest Inventory

Understanding the qualitative and quantitative characteristics of a forest stand is crucial in predicting production and optimizing the use of forests. In forest management, this is done by means of forest inventory taking. At Palmasplac, we use the Continuous Forest Inventory (CFI) from the seventh year of growth of the forests, with five-year intervals, or earlier, if necessary. The primary purpose is to measure the volume of wood available in the planted areas over time, helping determine the strategies for managing and monitoring the forest's growth and dynamic.

Quality Management

At the certified Forest Management Units (FMUs), it is imperative to ensure quality to all field operations and forestry activities. Palmasplac conducts this monitoring through checklists that cover forestry safety, harvesting, transportation, environmental matters, the NR31 standard, and social aspects. All the activities conducted in these areas are monitored. These checklists are entered in the iAuditor software program, which makes management more efficient for control and compliance with the Operating Procedures. The goal is to make sure that all stages are monitored using this platform, allowing the department in charge to treat and finish every observation in an adequate manner.

Forest protection against fires

Palmasplac, in partnership with Guararapes, relies on in-house fire fighters who monitor the plant and are ready to act on fire fighting on the farms. We use water tankers, drip torches, blowers, knapsack firefighters, and fire flappers, in addition to rounds to identify sites of fire all along the FMUs. We also provide support to neighbor farms, when necessary.

Forestry

The frestry operations cover from seedling acquisition from certified nurseries to soil preparation, planting with planned spacings, and maintenance. The goal is to achieve high standards of quality, productivity, and efficiency, keeping a steady commitment to environmental conservation and social responsibility.

A controlled burn is allowed only upon approval from the competent authority.

Seedling acquisition and species managed

Palmasplac does not own a nursery, so the seedlings used for its planting are bought from commercial nurseries of the area. The species planted, Pinus sp. and Eucalyptus sp., are well adapted to the weather in Southern Brazil and resistant to frosts. The management prioritizes both an increase in productivity and optimal adaptation to the local environmental conditions.

Area cleaning

Area cleaning aims to standardize the planting. In areas with a first reforestation or renovation cycle, the procedure varies according to the slope:

- *Steep areas: The harvest residues may be distributed uniformly. If this is not viable, especially in old forests, the material is stacked on furrows near the tree lands, away from the vegetation. A controlled burn is requested to the competent environmental authority and performed only after approved.*
- *b) Flat areas: spiked closing wheels are used to clear the row spaces after the clear-cutting in the previous cycle. When using the spiked closing wheels is not viable, a hydraulic excavator is used with an input for crushing stumps and residues.*

Soil Preparation

The slope of the area is a key factor for planning the soil preparation, where:

- *Mechanical harvesting areas: a "ripper" is used. Ripper is a farming machine used for soil preparation, especially under conditions of compact or hardened soil. This tool is equipped with vertical teeth or rods that penetrate deeply in the soil, decompacting it and promoting better aeration and water infiltration. The ripper works at higher depths and usually causes reduced surface turnover, which is beneficial in keeping the soil structure, and reducing erosion helps with the rooting depth of the seedlings that will be planted.*
- *Non-mechanical harvesting areas: The soil is prepared along the planting row through implementation, alignment, and leveling mowing. This is followed by clearing of the plant surroundings using hoes (approximately 1-meter diameter). Afterwards, pit digging is performed using a piece of equipment called "two-way hoe" and an "earth auger".*

Planting

The FME uses two planting systems:

Semi-mechanized: using a ripper in areas with a maximum 25% slope.

Manual: it entails making openings with a two-way hoe, alignment with the aid of guide posts, and a rope to keep homogeneous, good-quality planting.

Spacing

Determined by the forest management professional to obtain the type of logs that will be used in the end product. Spacings are conditioned upon the type of relief; the FME uses several spacings, according to the purpose of the planting as defined during planning.

Replanting

Replanting is conducted 90 days after planting by replacing seedlings that have been attacked, damaged, and/or dead, regardless of the survival rate. It will follow the same precautions and procedures as performed for the initial planting.

Forest Maintenance

Forest maintenance at Palmasplac covers around three years, depending on the tree spacing and growth. It encompasses from soil preparation (forestry), manual or mechanical mowing, plant competition control, and ant control in the pre-planting period (30 days earlier), during, and after the planting. Pest and disease control and monitoring are also carried out all along this period.

Fertilization — Eucalyptus sp.

The FME employs two fertilizations only for the Eucalyptus crop, using N-P-K.

- *First Fertilization: performed jointly with the planting;*
- *Second Fertilization: approximately 90 days after planting.*

Ant management

Ant management involves distributing ant control baits that contain active ingredients authorized by the FSC® (Forest Stewardship Council). These baits can be manually or mechanically applied to control the ant population in an effective manner. Before the application, communication is made with the neighbors to notify the type of bait and the period of application. Water samples are taken to check whether the quality of the water complies with the standards, without contaminations.

Invasive Plant Control

Weed control is performed through herbicides or mowing (manual or mechanical). The agrochemicals used for pest and weed control follow the guidelines of the FSC® and are approved by MAPA (Brazil's Ministry of Agriculture and Animal Husbandry) for Pinus and Eucalyptus crops. The weed control starts approximately three months after the planting and continues until the third year for Pinus and until the second year for Eucalyptus.

Agrochemical use monitoring

Palmasplac uses an Environmental and Social Risk Assessment (ESRA) for all the products at the certified FMUs. The FSC® has defined a pesticide policy that regulates the use of chemicals to control pest and diseases in certified natural and planted forests. We conduct regular monitoring of the vegetation, wildlife, and water resources, which helps implement actions to minimize the potential impacts from the application of agrochemicals.

Forest processing and transfer

The "cut-to-length" logging technique is used by processing the trees in the very tree land using the harvester, which performs tree felling, debarking, branch removal, and cutting according to a sorting process. The forwarder carries the logs to the road margins, organizing them to make them easier to transport up to the plant. Third-party companies follow the same procedures, under Guararapes' supervision.

Forest harvesting

Harvesting in Palmasplac's certified areas is predominantly mechanical, but it can also be performed in a semi-mechanized manner using chainsaws and is conducted by either Guararapes or outsourced companies.

Tree felling

Na derrubada mecanizada, utiliza-se o equipamento harvester, que realiza o processamento e desgalhamento das toras. Em todas as operações de colheita, são respeitadas as áreas de vegetação nativa.

Semi-mechanized cutting

For semi-mechanized cutting, tree felling and log processing are carried out using chainsaws. Harvested trees are carried up to the edge of the tree lands using tractors, equipped with either tires or a winch, in the case of non-mechanical harvesting areas.

Pruning/Lopping

Pruning is performed manually from April to August by using the pole pruner or electric scissors. The FME employs two pruning interventions:

First Pruning

- When the trees reach a height of 3 to 4 meters.
- Branches are removed for around 50% of the total height;
- All the trees in the tree land are pruned.

Second Pruning

- When the trees reach a height of 6 to 7 meters.
- Branches are removed for approximately 50% of the total height;
- Around 70% of the initial forest stand are pruned.

Thinning

Row thinning: It consists in removing trees with no prior assessment, whereby all the individuals in the seventh row of the plantation are removed.

Selective thinning: It consists in removing previously established trees. For this, trees that exhibit inferior characteristics (dominated, defective, broken, and others) are chosen for removal, with larger trees in diameter being left.

• 1st Thinning: This stage is performed near the 8 years of age of the forest stand, when approximately 39% of the total number of individuals are removed.

• 2nd Thinning: Performed near the 12 years of age of the forest stand, taking place only through selective thinning.

• 3rd Thinning: The last thinning operation takes place at the age of 16.

Clear-Cutting

Clear-cutting will be performed for the remaining trees using the mechanized harvesting mode, at around the age of 20 of the forest stand, for the purpose of producing plywood boards. For older forests with logs of such a diameter that the harvester is unable to cut, the semi-mechanized method is used, according to the harvest coordinator and supervisor.

Forest transportation

This is the process of moving tree logs from a harvesting site to a final destination (log yard), in which it needs to be ensured that the logs are transported efficiently, safely, and having their quality and the driver's safety preserved.

Road maintenance

The forest roads are managed by the head of Logistics, with support from the Forest Department, and serve a primary purpose of making it easier to transport the production. The goal is to keep the roads in good maintenance order even during unfavorable periods.

•**Timely Repairs:** correcting any problems identified; this may include filling holes and rebuilding sections, and these actions are conducted during the daily practices.

•**Infrastructure Improvements:** When necessary, improvements are made to the road infrastructure at the FMUs in order to increase their capacity to support traffic, security, and durability.

•**Damage Repair:** damage on the road bed is repaired, such as holes, cracks, and depressions. This may entail filling holes with gravel or similar materials.

Continuous Monitoring: continuously monitoring the road bed conditions to identify any new problems that may arise and take corrective actions as necessary.

I. Daily cargo transportation checklist (when entering the truck)

II. Tax invoice for the cargo handed to the driver

III.Wood loading

IV. Cargo transportation document (shipping list) filled out. For service providers, a CTE (electronic bill of lading) is requested.

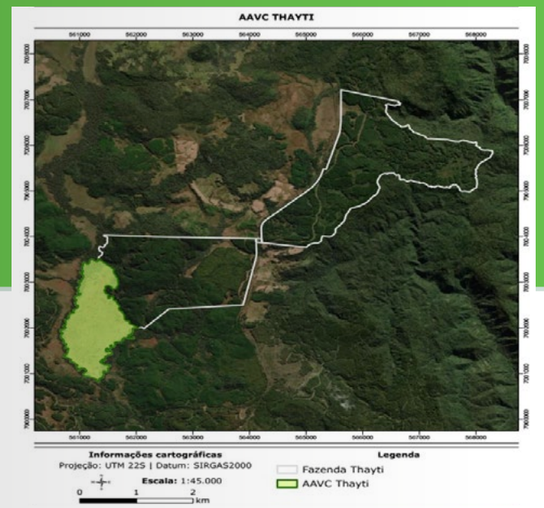
V. At the truck scale, the driver must hand the cargo transportation checklist, the shipping list, the tax invoice, and when applicable the CTE.

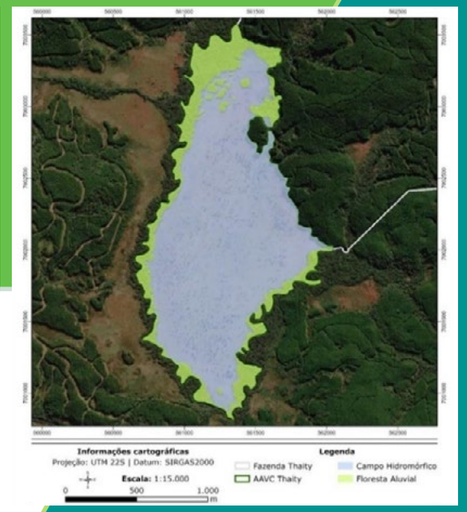
ENVIRONMENTAL MANAGEMENT

High-Conservation Value Areas — HCVA

The Thaity farm has a significant area of hydromorphic field, which turns this farm into an High-Conservation Value Areas — HCVA, called the Thaity Farm HCVA. The farm's plant coverage can be characterized as forest fragments in different succession stages, occurrence of pioneer and generalist species, and the presence of threatened species. However, the presence of a significant area of hydromorphic fields and their environmental services constitutes and justifies defining this area as an HCVA.

TYPE	AREA (HA)	%
Hydromorphic Field	153.38	80.54
Alluvial Forest	37.06	19.46
Total	190.44	100





Whenever new areas are included, Palmasplac requests specialists to conduct a study for an HCVA assessment in these areas. The public consultation is conducted with the stakeholders taking into account the HCVA identification criteria with a view to mapping threats and mitigation and conservation actions in case it is classified as an HCVA.

The Thayti farm constitutes an HCVA because:

- *It has species diversity: It has threatened, endemic, and critical-use vegetation and wildlife species;*
- *It has a considerable remnant of a hydromorphic field in terms of length;*
- *Its hydromorphic field remnant has great importance in terms of groundwater discharge;;*

HCVA of the Fazenda Thayti-SC farm

HCVA and its attributes

A interpretação dos resultados dos dados biológicos, primários e secundários, em relação aos Atributos de Alto Valor de Conservação da Fazenda Thayti:

- *HCV 1: Species diversity*
- *HCV 2: Landscape-scale ecosystems and mosaics*
- *HCV 3: Ecosystems and habitats*
- *HCV 4: Ecosystemic services*

HCV 1. AREAS CONTAINING A SIGNIFICANT CONCENTRATION OF BIODIVERSITY VALUES ON A GLOBAL, REGIONAL, OR NATIONAL LEVEL		
VALUE	**ATTRIBUTE**	**RATIONALE**
HCV1.2 — threatened species	YES	"Existence of endangered species of fauna and flora"
HCV1.3 — endemic species	YES	"Concentration of species endemic to the Atlantic Forest biome"
HCV1.4 — critical temporal use	YES	"Possible concentration of migratory species especially in wetland areas"
HCV2. Long areas on a landscape level of global, regional, or national significance	**0,7**	**32217,95**
"HCV2.1 — Landscape-scale forest"	YES	"The remnants exhibit small lengths, though for hydromorphic fields the area is significant"
HCV3. Areas that are in or contain rare, threatened, or endangered ecosystems		
"HCV3. Areas that are in or contain rare, threatened, or endangered ecosystems."	YES	Although the AMF is threatened by fragmentation, the area includes fragments of higher sizes and in better conservation order. However, the hydromorphic fields can be regarded as rare and threatened environments.
HCV4. Areas that provide basic services of nature in extremely important situations		
"HCV4.1 Critical forests for basin protection"	YES	There is an important region for groundwater recharge inside the farm

HCV APPROACHED	HCV APPROACHED	MITIGATION ACTIONS	MONITORING	FREQUENCY	"MONITORING EVIDENCE AS OF 10/2024"
"HCV 1: Species diversity"	Invasion by exotic species	Control of individuals	Occurrence of new individuals	Yearly	Locations with exotic plants were monitored and exotic plant regeneration controls were effected at the HCVA
"HCV 3: Ecosystems and habitats HCV 4: Ecosystemic services"	Sediment transportation	Road drainage system	"Site identification via Inflor system or images"	Yearly	Improvements were made to roads
HCV 1: Species diversity HCV 2: Landscape-scale ecosystems and mosaics"	Forest fires	Forest fires	Fire prevention actions	Yearly	The Monte Alegre Spreadsheet was used and firebreaks were maintained
"HCV 1: Species diversity HCV 3: Ecosystems and habitats"	Loss of plant species	Forest fire prevention and vegetation clearance	Floristic studies	"Triennial monitoring campaign — Vegetation"	In 2024, a vegetation study was conducted (triennial campaign)
"HCV 1: Species diversity HCV 3: Ecosystems and habitats HCV 4: Ecosystemic services"	"Hunting and loss of wildlife species"	Surveillance and control over the hunting activity	Wildlife studies	"Triennial monitoring campaign — wildlife"	In 2024, a wildlife study was conducted at the HCVA
"HCV 1: Species diversity HCV 2: Landscape-scale ecosystems and mosaics HCV 3: Ecosystems and habitats HCV 4: Ecosystemic services"	Loss of habitat	"Control over invasions by exotic species and potential forestry advances"	"Space-time analysis checking for the area quantities in the HCVA"	Every two years	Space-time analysis conducted — (Every two years)
HCV 4: Ecosystemic services	"HCV 4: Ecosystemic services"	"Proper use of agrochemicals"	"Water analysis (chemical parameters)"	Yearly	Even though the area was not operational, water quality samples were taken.

Vegetation of the HCVA:

Floristic Study — Wetlands

The study conducted in 2024 based on the floristic composition, prepared through sampling walks and samples recorded in the plots, indicated 53 species present, distributed across 31 flower families. The Asteraceae family was the richest one (10 species), followed by Myrtaceae (4 species each), and Cyperacea (3 species). A noteworthy species was the species Austroeupatorium rosmarinaceum (Cabrera & Vittet) R.M.King & H.Rob., a grassland bush endemic to high-altitude fields in Southern and Southwestern Brazil. That species appears as a "vulnerable species" on the Santa Catarina State Official List of Threatened Species (CONSEMA Resolution No. 51, dated December 05, 2014) and Brazil's National List of Threatened Species (MMA Ordinance No. 148, dated June 7, 2022).

Phytosociological Study

A collection of phytosociological data from 20 plots indicated 20 species present. Some species have a higher physiognomic importance, since they are distributed over larger lengths and have higher expressiveness. These species especially include Xyridadaceae (Xyris capensis), one Poaceae (Saccharum asperum), one Iridaceae (Carex brasiliensis), and two ferns (Osmunda spectabilis and Telmatoblechnum serrulatum).

In structural terms, in spite of a change to some values, the phytophysiognomic aspects have not changed, with these five species corresponding to 64% of the relative importance. That is, more than half of the physiognomic expression is represented by these five species.

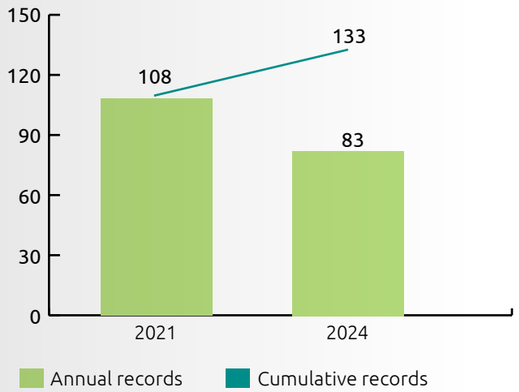
Comparative parameters between the sampling years

YEAR	RICHNESS	SHANNON DIVERSITY INDEX	PIELOU EVENNESS INDEX
Monitoring			
2022	20	2,46	0,8
2024	21	2,71	0,82

WILDLIFE

Bird species

The sampling efforts made to assess the bird species on the Fazenda Thaity farm during this assessment resulted in 82 species being recorded, distributed into 35 families and 16 orders. Relatively to the 2021 campaign, reduced richness has been observed, as 108 species were observed in said year. However, 25 new species have been recorded for the area, which causes the farm's overall richness to increase to 133 bird species. Below is the history of records, number of species in each year, and cumulative number between two years of monitoring.



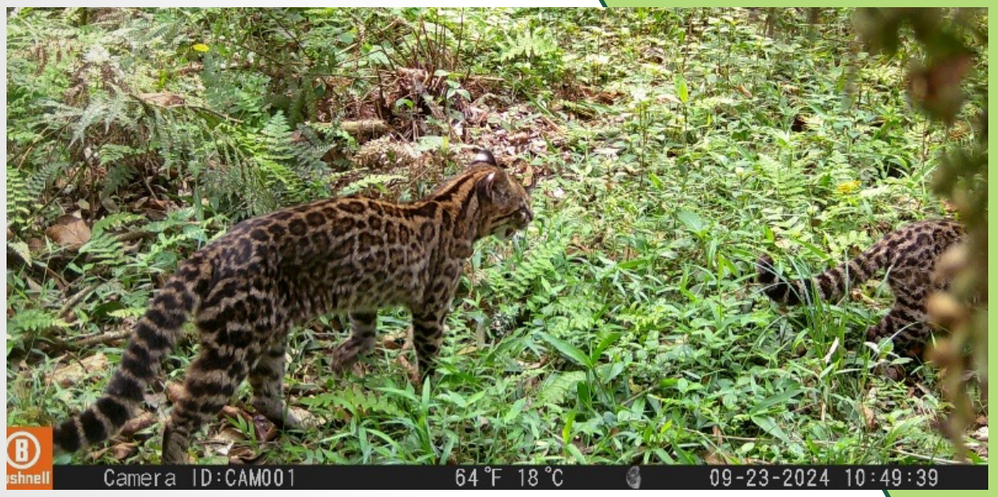
Relative frequency

The results obtained by applying the MacKinnon lists technique highlighted the golden-crowned warbler (Basileuterus culicivorus) and the white-rimmed warbler (Myiothlypis leucoblephara), which was also a species with IFL value in 2022. They are followed by the rufous-browed peppershrike (Cyclarhis gujanensis) and the rufous-collared sparrow (Zonotrichia capensis), as higher-frequency species. It has been possible to observe that a few species were the most frequent ones in 2021 and are once again appearing in 2024. The species recorded on the Fazenda Thaity farm include four that are formally classified as threatened species.

Below is a list of threatened and nearly threated bird species recorded on the Fazenda Thaity farm. Threat status: endangered (EN); vulnerable (VU). Source: IUCN, 2021; MMA, 2022; SANTA CATARINA 2011.

TYPE	COMMON NAME	IUCN	ICMBIO	SC
Amazona vinacea	vinaceous-breasted Amazon	EN	VU	EN
Spizaetus melanoleucus	Black-and-white hawk-eagle	-	-	EN
Scytalopus iraiensis	marsh tapaculo	EN	EN	EN
Phylloscartes difficilis	Serra do Mar tyrannulet	-	-	EN

Colaptes melanochloros (green-barred woodpecker)



Mammal species

Richness

During the assessment of the Fazenda Thaity area, 18 identified species were confirmed.

Three taxa were identified on genus level. The mammals identified in the field on the Fazenda Thaity farm are distributed in to 6 orders and 11 families. The Felidae family was the one with the highest absolute abundance, with five records. The farm's cumulative richness was 22 species.

Below is the history of records, number of species in each year, and cumulative number between two years of monitoring.

Consolidated richness

Based on the data compiled, a potential occurrence has been estimated as 40 species of large and midsize mammals for the region. On the farm sampled during the wildlife assessment, we recorded at least 18 species, a value that corresponds to 45% of the potential richness for the region.

Below is a list of the species of mammals likely to occur in the region and a list of species recorded through a survey of primary data (RP — primary record) on the Fazenda Thaity farm. Their taxonomic classification and common name are provided.

TAXON NAME	COMMON NAME	2021	2022
Didelphidae			
Didelphis albiventris Lund, 1840	white-eared opossum		
Didelphis aurita Wied-Neuwied, 1826	big-eared opossum	X	X
Philander quica (Temminck, 1824)	southern four-eyed opossum	X	X
Dasypodidae			
Dasypus sp	armadillo	X	X
Dasypus novemcinctus Linnaeus, 1758	nine-banded armadillo		X
Dasypus septemcinctus Linnaeus, 1758	seven-banded armadillo		
Chlamyphoridae			
Euphractus sexcinctus (Linnaeus, 1758)	six-banded armadillo	X	
Cabassous tatouay (Desmarest, 1804)	greater naked-tailed armadillo		
Myrmecophagidae			
Tamandua tetradactyla (Linnaeus, 1758)	southern tamandua		
Atelidae			
Alouatta guariba (Humboldt, 1812)	brown howler		
Cebidae			
Sapajus nigritus (Goldfuss, 1809)	black capuchin		
Leporidae			
Lepus europaeus Pallas, 1778	brown hare	X	X
Caviidae			
Cavia aperea Erxleben, 1777	Brazilian guinea pig	X	
Hydrochoerus hydrochaeris (Linnaeus, 1766)	capybara	X	X
Cuniculidae			
Cuniculus paca (Linnaeus, 1766)	lowland paca		
Dasyproctidae			
Dasyprocta azarae Lichtenstein, 1823	Azara's agouti		
Erethizontidae			
Coendou prehensilis (Linnaeus, 1758)	Brazilian porcupine		
Canidae			
Cerdocyon thous (Linnaeus, 1766)	crab-eating fox	X	X
Lycalopex gymnocercus (Fischer, 1814)	Pampas fox		
Canis lupus familiaris Linnaeus, 1758	dog		
Mephitidae			
Conepatus chinga (Molina, 1782)	Andes skunk		
Mustelidae			
Eira barbara (Linnaeus, 1758)	tayra		X
Galictis cuja (Molina, 1782)	lesser grison		
Lontra longicaudis (Olfers, 1818)	neotropical otter		
Procyonidae			
Nasua nasua (Linnaeus, 1766)	South American coati	X	
Procyon cancrivorus Cuvier, 1798	South American raccoon	X	
Felidae			
Herpailurus yagouaroundi (É. Geoffroy Saint-Hilaire, 1803)	jaguarundi		X
Leopardus guttulus (Hensel, 1872)	southern tiger cat	X	X
Leopardus pardalis (Linnaeus, 1758)	ocelot	X	X
Leopardus wiedii (Schinz, 1821)	margay		X
Leopardus sp	small wild cat	X	X
Puma concolor (Linnaeus, 1771)	cougar	X	X
Tapiridae			
Tapirus terrestris (Linnaeus, 1758)	South American tapir		
Cervidae			
Mazama americana (Erxleben, 1777)	red brocket		
Mazama gouazoubira (Fischer, 1814)	gray brocket	X	X
Mazama nana (Hensel, 1872)	pygmy brocket		
Mazama sp	brocket	X	X
Tayassuidae			
Dicotyles tajacu (Linnaeus, 1758)	collared peccary	X	X
Tayassu pecari (Link, 1795)	white-lipped peccary		
Suidae			
Sus scrofa Linnaeus, 1758	wild boar	X	X

Palmasplac uses trap cameras with long periods in the field. Even though not comparable, the records will be presented and may be regarded as supplementary to the biotic study. All the species recorded using this method had been recorded by the wildlife team in the annual monitoring processes. Yet, it is important to note the high abundance of a species with synergistic value.

Below is a list of the trap camera records on the Thaity farm.

TAXON NAME	COMMON NAME	NO. OF RECORDS
Dasypodidae		
Dasypus sp	armadillo	1
Dasypus novemcinctus Linnaeus, 1758	nine-banded armadillo	1
Canidae		
Cerdocyon thous (Linnaeus, 1766)	crab-eating fox	1
Lycalopex gymnocercus (Fischer, 1814)	Pampas fox	
Canis lupus familiaris Linnaeus, 1758	dog	1
Mustelidae		
Eira barbara (Linnaeus, 1758)	tayra	2
Procyonidae		
Procyon cancrivorus Cuvier, 1798	South American raccoon	1
Felidae		
Herpailurus yagouaroundi (É. Geoffroy Saint-Hilaire, 1803)	jaguarundi	1
Leopardus pardalis (Linnaeus, 1758)	ocelot	2
Cervidae		
Mazama gouazoubira (Fischer, 1814)	gray brocket	13
Mazama sp	brocket	1
Suidae		
Sus scrofa Linnaeus, 1758	wild boar	3
TOTAL RECORDS		**17**

Poospiza thoracica

Below is a list of threatened mammal species recorded on the Fazenda Thaity farm. Threat status: endangered (EN); vulnerable (VU). Source: MMA, 2022; SANTA CATARINA 2011.

TYPE	COMMON NAME	IUCN	MMA	SC
Herpailurus yagouaroundi	jaguarundi	-	VU	-
Leopardus guttulus	southern tiger cat	VU	VU	-
Puma concolor	cougar	-	VU	EN
Leopardus pardalis	ocelot	-	-	EN
Leopardus wiedii	margay	-	VU	-
Dicotyles tajacu	collared peccary	-	-	VU

Actions conducted to prevent possible impacts on the Thaity HCVA

MITIGATION ACTIONS	FIELD ACTIONS
control over individuals — exotic species	A broad effort has been made for cutting pine trees in the HCVA area
Road drainage system	Work has been done to prevent erosion by resizing drainage channels.
	Quality analyses have been made for the water running through the plantations and drained up to the HCVA.
Forest fire prevention	Prevention work has been done by building firebreaks in order to avoid a possible entry of any starting fires. Monte Alegre Spreadsheet used to check the hazard level.
Vegetation clearance	The company has conducted vegetation studies in the wet areas of the HCVA.
Awareness campaign using informative signs on the farms concerning the prohibition of illegal practices	The company uses trap cameras with long permanence in the areas, has conducted wildlife studies, and has installed identification signs.
Control over invasions by exotic species and potential forestry advances	The space-time analysis has not indicated changes over the planting limits, with the integrity of the HCVA maintained.

Footprints of Leopardus guttulus (Southern tiger cat)

Some of Palmasplac's initiatives to ensure protection to the HCVA include:

- *Installation of signage and warning signs: Placing signs in the HCVA areas with specific messages warning about illegal practices on the site.*
- *Property surveillance rounds: Employees perform frequent rounds to make sure that illegal activities such as hunting, fishing, and native wood extraction will not take place.*
- *Wildlife monitoring: Using annual camera traps and monitoring campaigns conducted every three years to monitor wildlife at the HCVA.*
- *Vegetation study: Conducting triennial campaigns to survey and analyze the plant species present at the HCVA.*

Considerations on the environmental impacts of forest management on Palmasplac's activities.

The company engages in keeping sustainability in its operations, by putting management strategies and tools in place to raise the environmental quality of its forestry activities. By controlling and assessing the environmental impacts, including checklists used to monitor actions and consultation with the neighborhood, the FME seeks to minimize potential negative effects associated with its operations.

A continuous assessment of these environmental impacts and aspects is essential for forest stewardship to be enhanced, making sure that forests will continue to play a crucial role in biodiversity preservation and supply of core resources. Thus, an effective integration of socio-environmental safeguards and ongoing review of forest processes become fundamental in order to balance exploitation and conservation.

The processes put in place by Palmasplac include:

- *Compliance with the laws in force;*
- *Adherence to voluntary certifications;*
- *Implementation of operating procedures.*

Identifying the environmental impacts and aspects is the starting point for mitigation, control, and monitoring actions that are key in promoting sustainability and protecting the environment in any department or organization.

BIODIVERSITY MANAGEMENT AND ENVIRONMENTAL SAFEGUARDS

At Palmasplac, biodiversity monitoring refers to continuously observing the growth and changes to the elements and criteria of the landscape, as well as the populations of the vegetation, wildlife, water resources, and soils. The goal is to assess the impacts of forest management on the environment. The company puts in place actions for conservation, preservation, and rehabilitation, as needed, with particular attention to Legal Reserve areas, Native Forests, and Permanent Preservation Areas (APPs). Most of the properties are located in Araucaria Moist Forests and Natural Fields.

Palmasplac performs mapping of the natural areas of higher relevance to biodiversity conservation in full agreement with the certification guidelines, while monitoring those that are legally protected, such as Permanent Preservation Area (APPs) and Legal Reserves (RLs). Training courses are held with employees to address environmental matters.

Vegetation Fields

The whole set of 32 farms included in the scope of the certification in 2024 have been considered and are present in the assessment. These farms include the state of Paraná and the Santa Catarina State town of Água Doce and Campo Erê and the Santa Cecília area, in the Planalto Central Catarinense region. Some areas are for plantations under a productive area lease; as a result, the forest fragments of these farms have not been included. All the farms are included in the domains of the Atlantic Forest biome. The vegetation physiognomic types include the forest type, with the Araucaria Moist Forest (forest with araucaria trees), and the grassland type, with a Grassy-Woody Steppe (fields).

The analysis of the phytosociological structure was performed using the plot method (MUELLER-DOMBOIS & ELLENBERG, 1974), where 20 plots were installed, distributed into transects across the walk, seeking to include all the heterogeneity. The sampling in wetland areas of the Fazenda Thaity farm indicated that coverage and relevance have not changed from one year to the other, that is, the same species occupy the same phytosociological positions. A positive aspect is that the threatened species Austroeupatorium rosma-rinaceum (Cabrera & Vittet / R.M.King & H.Rob) has remained in the area; even though he vegetation has changed some coverage indexes, the species seems well adapted to this wet soil condition.

Forest fragments

Native vegetation remnants where there was a forest fragment forming were elected as eligible; so, the phytosociological study was conducted by allocating and using randomly distributed, fixed-area plots that had their central coordinates recorded using the equipment Garmin GPSMap 64S. The sampling units were allocated in the field with a rectangular shape of 10 m x 10 m, totaling 100 sqm.

During the sampling work on the four farms, 34 tree species were found, distributed into 23 plant families. The Cruz Machado farm was the richest one, largely due to the fragment near the farmhouse that is in good conservation order. On the other hand, the Rondon D and Rondon E farms are the poorest ones as a result of a historical use of native tree areas, especially in the APPs.

Below is the richness of vegetation with some degree of threat for Palmasplac's farms, states of Paraná and Santa Catarina.

TYPE	COMMON NAME	IUCN	MMA	PR	SC
Araucaria angustifolia	Paraná pine	CR	EN	rare	CR
Dicksonia sellowiana	Xaxim	-	EN	endangered	CR
Podocarpus lamberttii	*Pinheiro-bravo*	VU	-		EN
Cedrela fissilis	Argentine cedar	-	VU		-
Ocotea porosa	Brazilian walnut			vulnerable	

Observed dynamic changes to the vegetation over the years

FARMS	PRA	S	IND	G	PRA	S	IND	G	GAIN
G	2022 e 2023				2024				
Thaity	20				20	49	132	-	-
Monte Alegre	5	11	64	2,9944 m²	5	11	64	3,0017 m²	0,0073 m²
Cruz Machado	5	20	45	2,4387 m²	5	19	43	2,4458 m²	0,0071 m²
Rondon D	5	14	26	2,4308 m²	5	14	26	2,4460 m²	0,0152 m²
Rondon E	5	8	41	1,7235 m²	5	7	41	1,7432 m²	0,0197 m²

Procedure to Protect Vegetation:

Palmasplac has a commitment to protect the vegetation and employs operating procedures in its activities to ensure that preservation, such as:

Conducting its planting intercalating with natural ecosystems, thus stimulating interaction and the circulation of wildlife and vegetation;

- *During the thinning operation, the trees are felled in a direction opposite to that of the vegetation in order to reduce impacts;*
- *Firebreaks are maintained on the farms for effective fire contro;*
- *Protecting and monitoring reserved areas for conservation, such as Legal Reserves and Permanent Preservation Areas, including through ongoing mapping and identification.*

REGENERATION CONTROL FOR EXOTIC SPECIES

To control the elimination of natural regeneration of exotic species, Palmasplac conducts annual monitoring at its FMUs through the forestry department, which controls those that are inside a Legal Reserve or APP; priority is given to eliminating them during the farm's certification, according to the department's demands.

Beginning in September 2024, the FME uses a checklist for the monitoring and control based on the size of the area in hectares or locations where the control was effected.

	NATURAL REGENERATION CONTROL FOR EXOTIC SPECIES												
	2014	2015	2016	2017	2018		2019	2020	2021	2022	2023	2024
FMU	MATAL	CAMPO ALTO	ARAÇA	CAMPO ALTO	ARAÇA		CAMPO ALTO	ARAÇA	TAIPINHA I	CRUZ MACHADO	CRUZ MACHADO	CRUZ MACHADO
	SINCOL	STA BÁRBARA	CAMPO DO MEIO	GUACIRA	CAMPO DO MEIO		GRAMAS	CHOPIN I	TAIPINHA II	PALMITAL II	PALMITAL II	HORIZONTE I
		THAITY	CHOPIN I	MATAL	CHOPIN I		GUACIRA	GUACIRA	PINARÉ I	RONDON D	RONDON D	IVERNADA SÃO LUIZ-PARCERIA
		TITO MELO I	GRAMAS	SINCOL	GUACIRA		HORIZONTE I	HORIZONTE I	THAITY	PINARÉ I	PINARÉ I	PALMITAL II
			GUACIRA	STA BÁRBARA	HORIZONTE I		MATAL	MATAL	CHOPIN I	THAITY	THAITY	PINARÉ I
			HORIZONTE I	TITO MELO I	PALMITAL II		SINCOL	PALMITAL II	PALMITAL II	"SANTA BÁRBARA-ARRENDO"	"SANTA BÁRBARA-ARRENDO"	RONDON D - E - ARRENDO
			PALMITAL II		PINARÉ I		STA BÁRBARA	RODEIO NOVO	SÃO GERALDO	GRAMAS	GRAMAS	THAYTI
			PINARÉ I		RODEIO NOVO		THAITY	STA BÁRBARA	"SANTA BÁRBARA-ARRENDO"	RONDON E	RONDON E	SANTA BÁRBARA-ARRENDO
			RODEIO NOVO		THAITY		TITO MELO I	THAITY		TAIPINHA II	TAIPINHA I E II	SANTA BÁRBARA I
										TITO MELO I	HORIZONTE I	SANTA BÁRBARA II
											SANTA BÁRBARA I	SÃO GERALDO
											SANTA BÁRBARA II	SÃO JOAQUIM
											"SANTA BÁRBARA - PARCERIA"	SÃO PEDRO TITO MELO I
											SANTA CECÍLIA I	TAIPINHA I
											SANTA CECÍLIA II	SANTA CECÍLIA
											SÃO LUIZ -PARCERIA	SANTA BÁRBARA-PARCERIA
											TITO MELO I	SANTA CECÍLIA II
"CONTROLLED LOCATIONS / CONTROLLED AREA"	4	13	9	15	9		19	20	15	29	82	24,9 Hectares
TOTAL FMUS MONITORED	4	17	26	26	26		26	26	26	30	26	17

CONNECTIVITY STUDY

Wildlife records from the camera traps at the certified FMUs.

The FSC® prioritizes the protection of natural areas and assesses how plantations affect the wildlife and vegetation. The quality of the natural remnants is measured taking into account the size, isolation, connectivity, and status of the vegetation relatively to the regional landscape and the FMU. Palmasplac has conducted a review of the connectivity study on the farms and their surroundings in the year 2024 with experts and has concluded that there are no cases of fragmentation and lack of connectivity.

The vast water network with vegetation areas (APP), jointly with considerable remnants (RL) and less fragmented landscapes in the surroundings, fosters an effective connection between fragments, making it easier for the fauna and flora to move.

Wildlife

The wildlife is monitored at Palmasplac's FMUs based on trap cameras installed; an animal sighting sheet is also handed out for recording wildlife in the place close to the activities. Nine species have been sighted by the employees. From November 2023 to October 2024, 24 species and 246 individuals were identified in total through the camera traps. With the field campaigns conducted by company Arauka, all in all, 355 individuals and 109 species were recorded.

- *The farms have warning signs on the hunting and fishing prohibition.*
- *Employees carry out rounds on the farms to detect illegal activities such as hunting and fishing or wood extraction;*
- *A monthly control is kept over the illegal activities checklist at the FMU.*

Identification and warning signs at the entrance gate to the farms

FAMILY	TYPE	COMMON NAME	RECORDS		THREAT STATUS			
						Brasil	Paraná	Santa Catarina
Canidae	Canis lupus familiaris Linnaeus, 1758	Domestic dog	4	1,6%				
Canidae	Cerdocyon thous (Linnaeus, 1766)	wood fox	11	4,5%				
Canidae	Chrysocyon brachyurus (Illiger, 1815)	maned wolf	1	0,4%		VU	EN	
Canidae	Lycalopex gymnocercus (Fischer, 1814)	Pampas fox	1	0,4%				
Caviidae	Hydrochoerus hydrochaeris (Linnaeus, 1766)	capybara	5	2,0%				
Cervidae	Mazama americana (Erxleben, 1777)	red brocket	10	4,1%				
Cervidae	Mazama gouazoubira (Fischer, 1814)	gray brocket	80	32,5%				
Cervidae	Mazama sp.	brocket	11	4,5%				
Dasypodidae	Dasypus novemcinctus Linnaeus, 1758	nine-banded armadillo	38	15,4%				
Dasypodidae	Dasypus sp.	armadillo	5	2,0%				
Dasyproctidae	Dasyprocta azarae Lichtenstein, 1823	Azara's agouti	6	2,4%				
Didelphidae	Didelphis aurita Wied-Neuwied, 1826	big-eared opossum	1	0,4%				
Felidae	Herpailurus yagouaroundi (É. Geoffroy Saint-Hilaire, 1803)	jaguarundi	7	2,8%		VU		
Felidae	Leopardus guttulus (Hensel, 1872)	southern tiger cat	4	1,6%	VU	VU	VU	
Felidae	Leopardus pardalis (Linnaeus, 1758)	ocelot	12	4,9%			VU	EN
Felidae	Leopardus sp.	feline	5	2,0%				
Felidae	Leopardus wiedii (Schinz, 1821)	margay	3	1,2%		VU	VU	
Felidae	Puma concolor (Linnaeus, 1771)	cougar	2	0,8%		VU	VU	EN
Mustelidae	Eira barbara (Linnaeus, 1758)	tayra	9	3,7%				
Mustelidae	Galictis cuja (Molina, 1782)	lesser grison	1	0,4%				
Myrmecophagidae	Tamandua tetradactyla (Linnaeus, 1758)	southern tamandua	1	0,4%				
Procyonidae	Nasua nasua (Linnaeus, 1766)	South American coati	15	6,1%				
Procyonidae	Procyon cancrivorus Cuvier, 1798	South American raccoon	7	2,8%				
Suidae	Sus scrofa Linnaeus, 1758	wild boar	7	2,8%				
Total records			**246**					

Management of Water Resources and Soils

Water and soil impacts are minimized through planning and maps prepared with information on soil use and occupancy, permanent preservation areas (APP), legal reserves, native vegetation, and hydrography. The employees and service companies working at the Fores Management Units (UMF) are instructed to employ good conservation practices in the activities that they perform.

Water monitoring

We give particular attention to water resources and conduct specific monitoring of the areas where activities are maintained. In 2024, 20 samples have been taken to monitor the water resources at the FMUs that were operational by October 2024; the analyses have revealed no contamination.

PARAMETERS ANALYZED: DISSOLVED O2, PH, O.M., TURBIDITY, AND OTHERS.				
CERTIFIED FARMS				
FARMS	WATER COLLECTED	DATE COLLECTED	QTY	CONTAMINATION
Cruz Machado	YES	29/08/2024	2	0
Gramas	YES	18/07/2024	2	0
Horizonte I	YES	10/07/2024	2	0
Indumel Paraná	YES	11/07/2024	2	0
Pinaré I	YES	29/08/2024	2	0
Sincol	YES	18/07/2024	2	0
Taipinha I	YES	11/07/2024	2	0
Thayti	YES	23/08/2024	2	0
Monte Alegre	YES	01/11/2024	2	*Under post-harvesting analysis
Horizonte I	YES	04/11/2024	2	*Under post-harvesting analysis
Total			**20**	**0**

Soil monitoring

For soil protection, the employees in the activities are instructed to avoid rills and erosion and compaction processes when removing wood with the machines. Soil monitoring aims to identify and solve erosive processes. Roads and tree lands are monitored in order to identify erosion sites. In 2024, the road department has monitored 21 erosion sites through checklists and controlled nine of them. The remaining ones are in the department's schedule to be corrected later.

FARM	CITY	"NO. OF CRITICAL SITES"	"NO. OF CONTROLLED SITES"
Matal Machado	Mangueirinha	1	-
Matal (Farmhouse)	Mangueirinha	1	-
Sincol	Cor. Dom. Soares	3	3
Santa Cecília I	Palmas	1	-
Taipinha I e II	Palmas	2	-
Campo do Meio	General Carneiro	1	-
Chopin I	Palmas	1	-
Guacira	Cor. Dom. Soares	1	-
Gramas	Cor. Dom. Soares	1	1
Horizonte I	Água doce	4	4
Palmital II	General Carneiro	1	-
Rondon D	General Carneiro	1	-
Rondon E	General Carneiro	1	-
Cruz Machado	Cruz Machado	1	1
Rodeio Novo	Cor. Dom. Soares	1	0
TOTAL:		**21**	**9**

Fire Prevention

Palmasplac relies on the support of Guararapes' fire brigade, who specializes in fighting forest fires, and owns the following pieces of equipment to act on these situations:

- Blowers, fire flappers, and fire truck;
- Firebreaks and roads are maintained to prevent fires;
- A controlled burn is performed only upon prior authorization from the competent environmental authority;
- The fire hazard degree is estimated;
- Monitoring done using the Monte Alegre spreadsheet.

Forest Occupational Safety

The safety department has been working continuously and thoroughly to meet all the FSC® principles, ensuring health and physical and mental integrity to all those involved. Our goal is to provide the maximum possible comfort to field workers. We conduct monthly visits to inspect the activities and hold safety talks and raids.

Our work goes beyond surveillance. We also seek to share knowledge, answer questions, and hold talks in an easy and relaxed way, thus avoiding safety being seen as something boring or unpleasant to employees.

At Palmasplac, we keep an excellent relationship between the safety department and the operations department. We work together to make sure that our activities are in compliance with all applicable standards and laws, fully meeting the required principles.

Forest Pest Monitoring

To control forest pests and diseases, Palmasplac has an ESRA (Environmental and Social Risk Assessment) on all products used at the certified FMUs. The use of ant control insecticides and herbicides is stated below for the period between November 2023 and October 2024.

Woodwasp

In 2024, three trees have been inoculated, located on the Taipinha I and II farms. This demonstrates that all the forest is being controlled.

Monkey attack

A monkey species has been found to be present in some areas; monitoring is performed in these areas, based on checklists. The attacks in some areas are controlled through tree thinning.

HERBICIDES	ACTIVE INGREDIENT	PRODUCT (KG)	AREA APPLIED (HA)	KG/HA
	Flumioxazin	10	104	0,1
	Saflufenacil	15	235	0,08
	Glyphosate	254	129	1,97
	ACTIVE INGREDIENT	PRODUCT (LITERS)	AREA APPLIED (HA)	LITERS/HA
	Imazapyr	116	73	1,59
	Indaziflam	31	224	0,14
	"Glyphosate and ammonium salt"	534	226	2,01
	Glyphosate	446	367	1,27
ANT CONTROL INSECTICIDES	ACTIVE INGREDIENT	PRODUCT (KG)	AREA APPLIED (HA)	KG/HA
	Sulfluramid	49	78	0,63
	Deltamethrin	12	93	0,13
	Sulfluramid	527	567	0,93
	Fipronil	26	428	0,06

Management of contaminant and non-contaminant waste

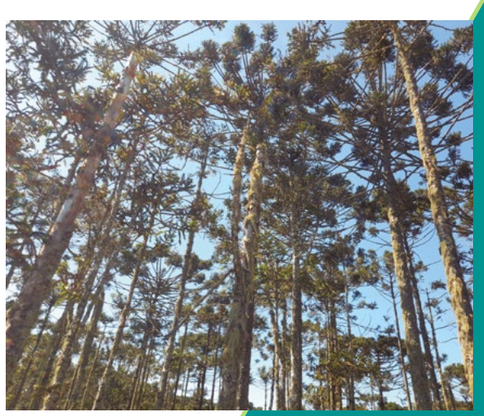
Palmasplac has an operating procedure to manage contaminated and non-contaminated solid waste according to the laws in force and uses practices to sort, segregate, store, collect, transport, and dispose of the waste generated in its forestry activities and operations, aiming to ensure the workers' safety and health, a responsible management of natural resources, and environmental protection.

Hazardous or class-I waste I

All the waste characterized as reactive, corrosive, toxic, pathogenic, radioactive, or flammable. Examples: Packaging of herbicides, ant control insecticides, and waste that has been in contact with oil/fats and fuels.

The packaging of the agrochemicals used in the forestry activities undergoes a reverse logistics system and is sent to properly licensed receipt units for empty agrochemical packaging.

Waste that is contaminated with fats, oils, and other residues is sent to the manufacturing plant to be collected by a third-party company.



Nonhazardous or class-II waste

This type of waste is classified as non-inert or class-II-A or class-II-B inert waste; it is stored in appropriate places and can be sent for recycling or to licensed landfills.

Contaminant waste returns are carried out by controlling and recording MTRs (waste transportation manifests) as well as the tax invoices for product returns in the case of agrochemical packaging. This procedure is permanent; below is a table showing a summary of waste deliveries to treatment plants.

For non-contaminant waste such as plastics, metal, glass, and cardboard, the fronts are instructed to dispose of them at indicated places (classified trash bins) near the FMUs in the cities, collected by city trucks that pass by or near the FMUs.

I.INITIAL SEPARATION

II.TEMPORARY STORAGE (IF NECESSARY)

III.ADEQUATE DISPOSAL

IV.TRANSPORTATION TO THE MANUFACTURING PLANT

V.FINAL DISPOSAL

RETURNS OF NON-CONTAMINANT WASTE — OVERALL

TYPE OF WASTE	2019		2020		2021		2022		2023		oct/24	
	QTY. RETURNED	NO. RETURNS	QTY. RETURNED	NO. RETURNS	QTY. RETURNED	NO. RETURNS	QTY. RETURNED	NO. RETURNS	QTY. RETURNED	NO. RETURNS	QTY. RETURNED	NO. RETURNS
Paper and cardboard	86,09 Kg	28	46,70 Kg	30	21,45 Kg	12	12,00 Kg	8	6,10 Kg	3	5,00 Kg	1
Plastic	39,60 Kg		33,63 Kg		18,99 Kg		9,50 Kg		4,60 Kg		1,00 Kg	
Metal	63,16 Kg		59,89 Kg		31,86 Kg		22,50 Kg		2,10 Kg			
Glass	25,85 Kg		24,00 Un									
Polystyrene	5,60 Kg											
Rigid, Cellulose Based	-											
Wood	-											
Iron	-											
TOTAL	220,29 Kg	150.72 Kg / 24 Units			72,30 Kg		44,00 Kg		12,80 Kg		6,00 Kg	

RETURNS OF CONTAMINANT WASTE — OVERALL

TYPE OF WASTE	2019		2020		2021		2022		2023		oct/24	
	QTY. RETURNED	NO. RETURNS	QTY. RETURNED	NO. RETURNS	QTY. RETURNED	NO. RETURNS	QTY. RETURNED	NO. RETURNS	RETURNED	NO. RETURNS	RETURNED	NO. RETURNS
Agrochemical packages	98 pack.	5 pack.	168 pack.	6 pack.	67 pack.	10 pack.	339 pack.	1 pack.	48 liters	1	Pots and Gallons: 852 Units Gallons: 852 Units	61
									"Non-washable materials / cardboard boxes (ant control insecticides)"		"Flexible Plastic (packages): 134.2 kg"	
											Lids: 14.3 kg	
"Materiais não lávaies caixas de papelão (formicidas)"									229 kg	1	487.2 kg	
Materiais contaminados	24,36 Kg	10	79,48 Kg	19	6,00 Kg	1	4,00 Kg	1			61,50 Kg	9
TOTAL		15		25		11				2		70

Pollution monitoring

For machine monitoring, an analysis is performed regarding the smoke emitted by the operating machines. The methodology applied is the Ringelmann chart, which measures the level of smoke collected as per the parameters of the scale.

AIR POLLUTION ANALYSIS — SMOKE LEVEL					
OPERATING FARMS	DATE ANALYZED	"OPERATING MACHINES/VEHICLES"	"MACHINES/VEHICLES ANALYZED"	"NONCOMPLIANT MACHINES/VEHICLES"	ANALYSIS METHOD
CRUZ MACHADO	12/12/2023	2	2	0	RINGELMANN CHART
CRUZ MACHADO	12/12/2023	1	1	0	RINGELMANN CHART
CRUZ MACHADO	09/01/2024	3	3	0	RINGELMANN CHART
CRUZ MACHADO	12/12/2024	3	3	0	RINGELMANN CHART
CRUZ MACHADO	08/11/2023	3	3	0	RINGELMANN CHART
CRUZ MACHADO	09/11/2023	2	2	0	RINGELMANN CHART
HORIZONTE I	19/02/2024	2	2	0	RINGELMANN CHART
HORIZONTE I	19/12/2024	2	2	0	RINGELMANN CHART
HORIZONTE I	15/12/2024	1	1	0	RINGELMANN CHART
HORIZONTE I	19/07/2024	1	1	0	RINGELMANN CHART
HORIZONTE I	27/05/2024	2	2	0	RINGELMANN CHART
HORIZONTE I	19/02/2024	2	2	0	RINGELMANN CHART
HORIZONTE I	13/03/2024	2	2	0	RINGELMANN CHART
MONTE ALEGRE	13/08/2024	3	3	0	RINGELMANN CHART
PALMITAL II	01/02/2024	2	2	0	RINGELMANN CHART
PARANÁ	03/07/2024	1	1	0	RINGELMANN CHART
PARANÁ	03/07/2024	1	1	0	RINGELMANN CHART
SINCOL	06/11/2024	2	2	0	RINGELMANN CHART
TOTAL		35	35	0	RINGELMANN CHART

Machines and equipment monitoring

Machine monitoring is performed on a monthly basis at all the certified FMUs. The checklists followed to matters of safety, documentation, signage, machine maintenance, and employee transportation and cargo transportation vehicles. When some nonconformity is pointed out, it is sent to the competent department for the required action.

SOCIAL MANAGEMENT

Management of company employees

Palmasplac and Guararapes together have 96 employees working directly in activities of the forest management areas and in the forests. The company currently provides the following benefits to its employees: cafeteria, uniform, life insurance, food basket, occupational physician, dentist, and profit sharing.

Ações Sociais Realizadas

Palmasplac directs its operations so as to create a positive impact on society, based on local development with social responsibility as one of the core pillars of the organization. The company fosters a culture that values authentic partnerships and keeps a transparent and close relationship with all stakeholders.

Committed to establishing solid and long-lasting bonds, Palmasplac seeks to understand the needs and concerns of its partners. This collaborative approach allows the company to not only fulfill its social responsibilities, but also expand its positive impact on the community.

Social Responsibility

The company encourages and supports social actions and projects in collaboration with Guararapes involving family members and the community with a view to fostering new behaviors and strengthening ethical responsibility and social commitment. As far as environmental practices are concerned, the focus is on preserving the natural resources.

- Women's Day: Lectures.
- Easter: chocolate kits are handed out.
- Workers' Day: umbrellas are handed out.
- Tree Day: a mug is handed out along with Cassia Fistula seeds.
- Pink October: Awareness lecture and coffee break.
- Children's Christmas: party for the children with sweet basket and toy handouts

Pink October — lecture and coffee break with female employees

Tree Day: Mugs and seed cards

Training Courses

Palmasplac promotes the ongoing development of its team by employing a structured training program focused on education and re-qualification. This commitment makes sure that our employees are ready to face challenges and contribute toward the company's success with excellence and engagement. In 2024, several training courses have been held at the certified Forest Management Units (FMUs), totaling 56 hours of training for employees and subcontractors. Moreover, monthly meetings are held with the forest team to align goals and approach core topics from all departments with a focus on forest certification and strengthening a culture of continuous learning.

Meeting of the forest team

Training in HR and forest management certification

Safety Talk

The goal of the Safety Talk is to reinforce the workers' awareness about safe practices, answer questions regarding specific procedures, and discuss potential risks in the workplace. It fosters a space for open communication in the team, helping identify and mitigate dangers as well as promote safe behaviors and accident prevention, thus contributing toward the safety and health of all. By October 2024, 11:30 hours of safety talks had been held.

Safety Raids

We have performed a safety raid focused on the drivers of the forest transportation department for the purpose of reinforcing occupational safety and health practices, in addition to ensuring compliance with the operation requisites. During the raid, a complete integration was performed to reinforce the safety and conduct rules. The drivers underwent health exams, including, blood sugar, blood pressure, and heart and respiratory rate tests, in order to make sure that they were fit for work.

Furthermore, a strict check was run for the drivers' licenses (CNHs) and the trucks' documents to ensure that all of them were in compliance with the laws. Finally, we ran through a detailed safety checklist on the trucks, checking key items such as brakes, lights, tires, and other critical components, to guarantee that the vehicles were in perfect order for transportation. This action contributes toward safety in the operations, which promotes a safer and more efficient workplace.

Stakeholders

Palmasplac's social management lays out guidelines and strategies to instruct the company's actions relatively to social matters, as well as its interactions with the communities neighboring our management units. We hold these communities as fundamental partners in our journey for social and environmental responsibility.

Ongoing Dialogue

We keep an open communication channel with the communities using the WhatsApp platform, perform monitoring of the social impacts during our forest management activities, make the Public Summary available, use our communication channel, and disclose that the signs at the FMUs contain contact information.

Road improvements within the radius of the FMUs

Rural roads connect the planting areas and allow for secure transportation of the harvest, as well as make it easier to access the workplace and contribute toward the safety of employees and the community. The company works on mitigating the environmental impacts of these pathways by making improvements to the municipal roads, when necessary.

Support for fighting forest fires on properties owned by third parties within the area of operation

Palmasplac, jointly with Guararapes' Fire Brigade, provides support for fighting forest fires on properties owned by third parties within our area of operation, which strengthens our commitment to safety and environmental protection in the area and helps neighbor residents.o

COMMUNITY IDENTIFICATION AND MAPPING

Community identification and mapping

Our social management with the neighbor communities is conducted by visiting the areas directly affected by the Forest Management activities. During these visits, consultations are held to identify potential social impacts; in case some impact is identified, it is notified to the competent department for all proper actions and later feedback to the requesting party. The instructions indicated that any requests must be filed using the communication platform (WhatsApp), where the contact and the actions taken are documented and recorded.

The Forest Management enterprise has a spreadsheet called "Request Filing" to record and monitor complaints, which ensures a proper reply. The actions relating to the Social Impacts checklists are forwarded directly on the platform to the competent department. The team monitors the progress of the actions resulting from these interactions, which fosters effective communication, community integration, and quick issue resolution. These communication channels are crucial in keeping a continuous and collaborative dialogue, making sure that the voices of the communities are heard and considered in the management process.

Traditional and indigenous communities and settlements:

Palmasplac has conducted a mapping task with a view to identifying traditional and/or indigenous communities present in the areas of influence of the company's plantations. The study, conducted by using the shape file from INCRA and the areas of the certified FMUs, has identified that there are no records of indigenous peoples or traditional communities overlaying with the areas of the certified farms.

PERFORMANCE INDICATORS

Palmasplac monitors its forestry activities by using indicators that reflect the primary operating, environmental, and social performances. It is thus possible to monitor the evolution of monitored areas and determine those needing improvements. These indicators ensure ongoing fulfillment of the commitments made to the FSC®.

SUMMARIZED MONITORING RESULTS

Monitoring	Indicator	Unit	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Oct/24
FOREST OPERATION	**CERTIFIED AREA:**												
	Total	Ha	1309,06	5110,58	8918,75	8918,75	8918,75	8603,49	8603,49	8603,93	11439,12	12170,61	12305,83
	Planted		1015,90	3740,17	5733,35	5733,35	5733,35	5587,06	5587,06	5521,32	7651,12	7942,60	8021,27
	Conservation		234,04	1223,11	2864,91	2864,91	2864,91	2226,29	2226,29	2226,29	2890,59	3162,57	3607,85
	Other		59,12	146,83	319,55	319,55	319,55	790,19	790,19	856,32	897,41	1065,44	676,71
GROWTH OF FORESTS	**INVENTORY:**												
	Inventoried area	Ha	892,43	1742,79	1986,94	856,88	-	12283,17	-	-	7206,64	-	-
	Average Annual Increase (AAI)	m³/há	32,07	30,45	29,66	25,48	-	25,12	-	-	26,53	-	-
FOREST PROTECTION	**FOREST FIRES:**												
	Events	Nº	1	1	2	3	1	0	4	2	0	0	1
	Burnt Area	Ha	3,50	0,20	6,00	7,50	1,50	0,00	19,06	27,14	0,00	0,00	14,00
	EVENTS RECORDED												
	Thefts/Robbery	Nº	-	3	0	0	2	1	2	1	0	1	1
	Unauthorized people		-	2	0	1	0	1	0	0	1	0	1
WILDLIFE	**WILDLIFE SIGHTING:**												
	Total individuals	Nº	12	36	48	31	100	141	216	63	199	131	355
	Total species		5	11	10	13	14	23	30	18	25	18	109
	Threatened or vulnerable species — IUCN List		2	6	5	5	4	2	2	1	2	0	3
VEGETATION	**PHYTOSOCIOLOGICAL SURVEY:**												
	Sampled plots	Nº	12	10	21	-	-	16	10	24	20	15	40
	Total individuals		188	114	249	-	-	187	114	294	127	176	629
	Total species		30	24	45	-	-	59	37	94	22	53	80
	Threatened or vulnerable species — IUCN List		7	5	16	-	-	3	3	5	1	4	1
HIGH-CONSERVATION VALUE AREAS	**HCVAs:**												
	Areas where HCVA identification studies were performed	Nº	4	13	9	-	-	-	-	1	1	5	32
	HCVAs identified		0	0	0	-	-	-	-	0	1	0	0

SUMMARIZED MONITORING RESULTS

Monitoring	Indicator	Unit	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
WATER RESOURCES	**WATER ANALYSIS:**												
	Samples analyzed	Nº	10	14	15	8	15	8	10	6	26	26	20
	Irregular samples		0	0	0	0	0	0	0	0	0	0	0
SOILS	**EROSION AND COMPACTION**												
	Critical erosion sites	Nº	3	6	16	3	5	18	5	10	18	11	21
	Average annual level of compaction at the FMUs	cm	-	-	-	-	-	8,20	7,48	6,90	9,16	12,17	-
SMOKE LEVEL	**SMOKE DENSITY:**												
	Machines/ Vehicles analyzed	Nº	9	5	15	-	21	18	6	7	21	22	35
	Noncompliant Machines / Vehicles		0	0	0	-	0	0	0	0	0	0	0
PESTS AND DISEASES	**WOODWASP:**												
	Inspected traps	Nº	65	80	88	66	61	61	61	61	60	60	60
	Trees attacked		74	84	117	76	13	6	5	13	5	0	0
	Trees inoculated		74	84	117	76	13	6	1	13	5	1	3
	ANT:												
	Mirex insecticide (Sulfluramid) — FMU Scope	kg/ha	-	-	-	0,97	0,39	0,37	0,14	0,00	0,43	0,52	0,63
	K-Othrine insecticide (Deltamethrin) — FMU Scope	kg/ha	-	-	-	0,12	0,10	0,00	0,04	0,00	0,11	0,15	0,13
	Tuit insecticide (Fipronil)	kg/ha											0,06
	Dinagro S insecticide (Sulfluramid) — FMU Scope	kg/ha	-	-	-	-	-	-	-	-	-	-	0,93
	HERBICIDES:												
	Chopper Florestal (imazapyr)	liters/ ha	-	-	-	-	-	-	-	-	-	-	1,59
	Esplanade (Indaziflam)	liters/ ha	-	-	-	-	-	-	-	-	-	-	0,14
	Sugain XTRA (Flumioxazin)	kg/ha	-	-	-	-	-	-	-	-	-	-	0,10
	Scout	liters/ ha	-	-	-	-	-	-	-	-	-	-	2,01
	(Glyphosate — Ammonium Salt)	liters/ ha	-	-	-	-	-	-	-	-	-	2,28	1,27
	Herbicides — Xeque Mate	kg/ha	-	-	-	-	-	-	-	-	-	-	0,08
	Valeos (saflufenacil)	kg/ha	-	-	-	-	-	-	-	-	-	-	1,97

SUMMARIZED MONITORING RESULTS

Monitoring	Indicator	Unit	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
PINUS REGENERATION ELIMINATION	**PINUS REGENERATION CONTROL:**												
	Monitored areas	Nº	4	17	26	26	26	26	26	26	30	82	24,9
	Controlled areas		4	13	9	15	9	19	20	15	25	26	17
WASTE	**RETURNS OF NON-CONTAMINANT PACKAGING — GENERAL FMUS:**												
	Paper and cardboard	Kg	165,00	15,00	51,80	71,32	113,49	86,09	43,90	21,45	12,00	6,10	5,00
	Plastic		134,00	170,00	27,20	48,13	48,43	39,60	32,63	18,99	9,50	4,60	1,00
	Metal		144,00	118,00	0,90	119,92	144,04	63,16	50,19	31,86	22,50	2,10	-
	Glass		12,00	47,00	-	30,51	10,60	25,85	24 Un	-	-		-
	Polystyrene		-	-	-	-	-	5,60	-	-	-		-
	Cotton Waste		-	87,00	-	-	41,73	-	-	-	-	-	-
	Rubber		-	-	-	62,80	17,66	-	-	-	-		-
	Wood		-	-	-	38,97	-	-	-	-	-		-
	Iron		-	-	-	23,24	24,37	-	-	-	-		-
	RETURNS OF CONTAMINANT WASTE — GENERAL FMUS:												
	Agrochemical packages	Nº	-	-	-	35	114	71	168	67	339	310	852
	Contaminated Materials (cotton waste/ used PPE, etc.)	Kg	-	-	-	-	68,44	21,89	79,48	6,00	4,00	8,00	61,50
	TRAINING COURSES IN ENVIRONMENTAL AND SOCIAL ASPECTS AND GENERAL MATTERS OF FOREST MANAGEMENT												
	Total Training Hours		18h	9h	9h30	18h	21h30	21h20	14h20	8h30	13h	187h33	56h09
	TRAINING COURSES FOR ONBOARDING, CERTIFICATION, AND APPLICABLE ENVIRONMENTAL, SAFETY, AND HEALTH LAWS												
	Total Training Hours		180h	124h	248h	54h	204h	182h	71h30	280h	250h	83h39	171h30
LOCAL COMMUNITY	**COMMUNITY IDENTIFICATION:**												
	Questionnaires administered	Nº	42	25	20	-	-	-	2	17	18	75	94
	CONSULTATION WITH NEIGHBORS/AFFECTED PARTIES:												
	Questionnaires administered	Nº	-	-	-	8	139	55	9	10	25	48	114
SOCIAL RESPONS. Palmasplac/ Guararapes	**SUPPORT AND DONATIONS**												
	Donations through Cash Disbursements	R$	-	-	-	255.398,00	983.497,00	947.115,00	594.805,13	-	2.875.776,86	-	78.338,48
	Donations under incentive laws		-	-	-	46.087,00	932.126,00	943.617,29	920.669,81	-	1.913.031,29	139.009,78	28.000,00

COMMUNICATION CHANNELS

Palmasplac provides communication channels to the community, namely:

- *Conversations with employees in the communities surrounding the FMUs where the operations take place.*
- *We always stress that, at any time, the reports filed by the community with the company are recorded in a spreadsheet and they all are given a time for the relevant actions to be taken until the reporting party is given a reply;*
- *The company keeps an open communication channel with the community on the WhatsApp platform at the telephone number (46) 3214-1384;*
- *The contact telephone numbers are shown on the signs at the entrance gate to the Forest Management Unit;*
- *Folders and the Public Summary are handed out with our telephone numbers and contact information to neighbors and the community, which is a way of keeping our dialogue channels always open.*
- *E-mail: contato@palmasplac.com.br*
- *WhatsApp communication channel: (46) 3214-1384. Service hours: Occupational Safety and Health department (SESMT) — (46) 3263-8358 or Forest department — (46) 3263-8317*
  Outside service hours: (46) 99972-2435
- *www.palmasplac.com.br*

Contact

Service hours
SESMT - (46) 3263 - 8358 ou Florestal - (46) 3214-1384

Outside service hours
(46) 99972 - 2435

contato@palmasplac.com.br
www.palmasplac.com.br

palmasplac