



# 7ª Conferência Internacional sobre Incêndios Florestais



Outubro 2019

# The brazilian planted tree industry - IBA

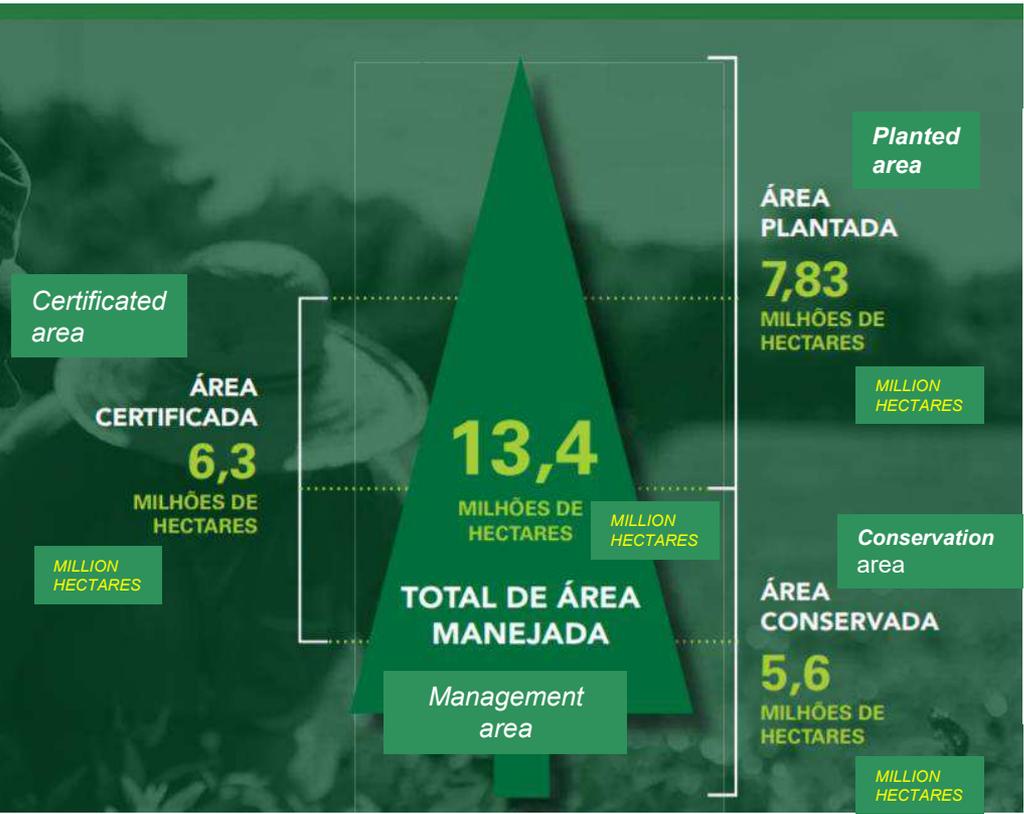
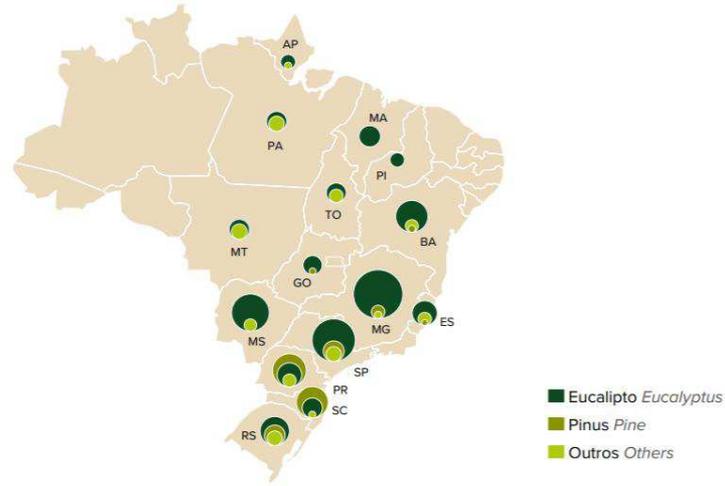
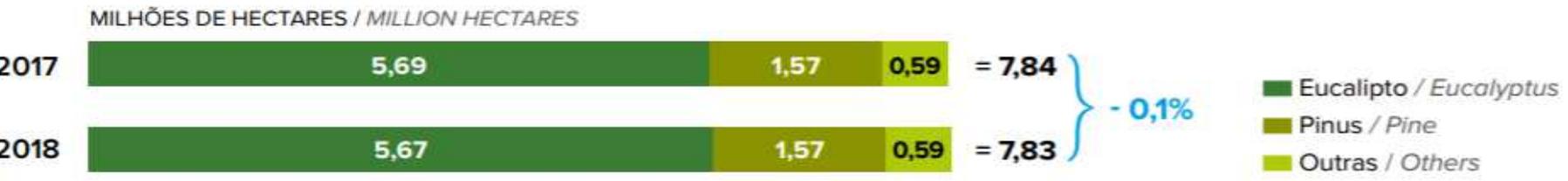


FIGURA 14 / FIGURE 14  
 ÁREAS DE ÁRVORES PLANTADAS NO BRASIL POR ESTADO E POR GÊNERO, 2018  
 AREA OF PLANTED TREES IN BRAZIL IN 2018, BY STATE AND BY SPECIES



FONTE: IBÁ E PÖYRY (2018) SOURCE: IBÁ AND PÖYRY (2018)

## ÁREA DE ÁRVORES PLANTADAS / AREA OF PLANTED TREES



FONTE: IBÁ E PÖYRY (2018) SOURCE: IBÁ AND PÖYRY (2018)

# Melhoramentos history

129 years  
of history



A horizontal timeline with a central orange line and white circular markers. Various historical images and logos are placed above and below the line, corresponding to specific years.

Year	Image/Event
1890	Black and white photograph of a group of people sitting together.
1905	Black and white photograph of a town or city.
1915	Yellow poster titled 'O PATINHO FEIO'.
1920	Black and white photograph of a building.
1922	Black and white photograph of a car and a poster titled 'MIMOSO'.
1932	Yellow poster with a portrait of a man.
1946	Black and white photograph of a coastal town.
1959	Black and white photograph of a landscape with hills.
1964	Color photograph of a landscape with hills.
1969	Two bags of coffee with the 'Melhoramentos' logo.
1973	Black and white photograph of a landscape.
1974	Aerial photograph of a large plantation or farm.
1994	Aerial photograph of a town or city.
2010	Poster titled 'DOE SANGUE, SALVE VIDAS.' showing hands holding a red blood cell.
2011	FSC logo with text: 'FSC www.fsc.org FSC® C102403 A marca da gestão florestal responsável'.
2019	Logo for 'PROJETO CLARYUM'.

## Hoje nós estamos aqui

**MELHORAMENTOS**  
EDITORIA

*Publishing Company*

**MELHORAMENTOS**  
FLORESTAL

*Forest*

**MELHORAMENTOS**  
FIBRAS

*High Yield Pulp*

**MELHORAMENTOS**  
PATRIMONIAL

*Real State*

**CA SA**  
MELHORAMENTOS

**MELHORAMENTOS**

# Forest Management



FSC  
www.fsc.org  
100%  
Madeira proveniente de florestas bem geridas  
FSC® C102403

BRAGANÇA  
PTA - SP

CAMANDUCAIA - MG

CAIEIRAS - SP

<b>TOTAL AREA</b>	<b>= 16.167 ha</b>
<b>PLANTED AREA</b>	<b>= 7.157 ha 44%</b>
<b>CONSERVATION AREA</b>	<b>= 7.595 ha 56%</b>

- Limite unidade Levantina
- Limite unidade Bragança
- Limite unidade Caieiras

# From the forest to the High Yield Pulp



**TGW**

ALVURA DE  
**50% ISO**



**BTGW**

ALVURA DE  
**66-70% ISO**



**NEOLUX**

ALVURA DE  
**≥75% ISO**

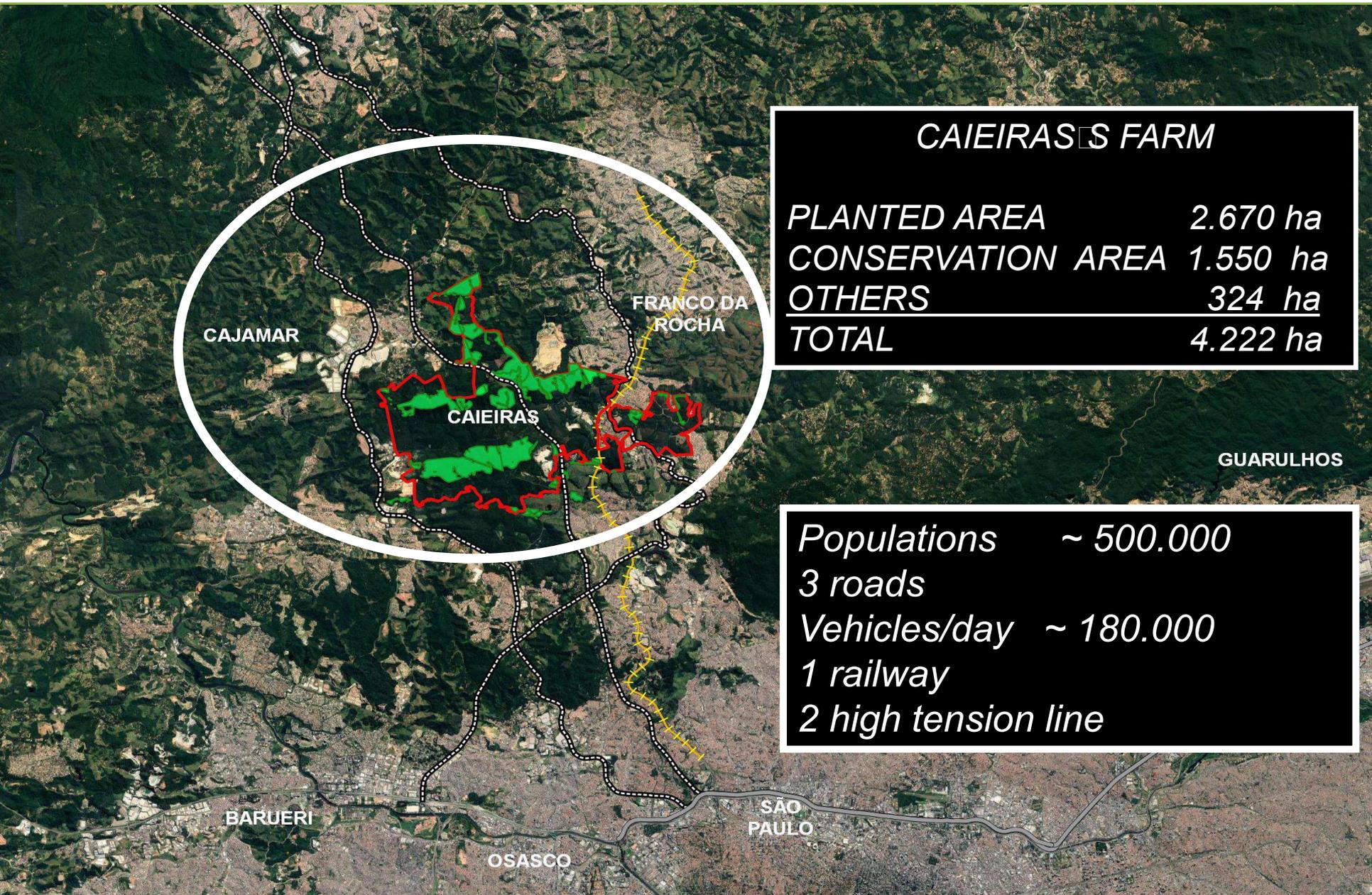


**CLARYUM**

ALVURA DE  
**≥80% ISO**



# Sites characteristic High flow - urban area



## CAIEIRAS FARM

PLANTED AREA	2.670 ha
CONSERVATION AREA	1.550 ha
OTHERS	324 ha
<b>TOTAL</b>	<b>4.222 ha</b>

Populations ~ 500.000  
3 roads  
Vehicles/day ~ 180.000  
1 railway  
2 high tension line

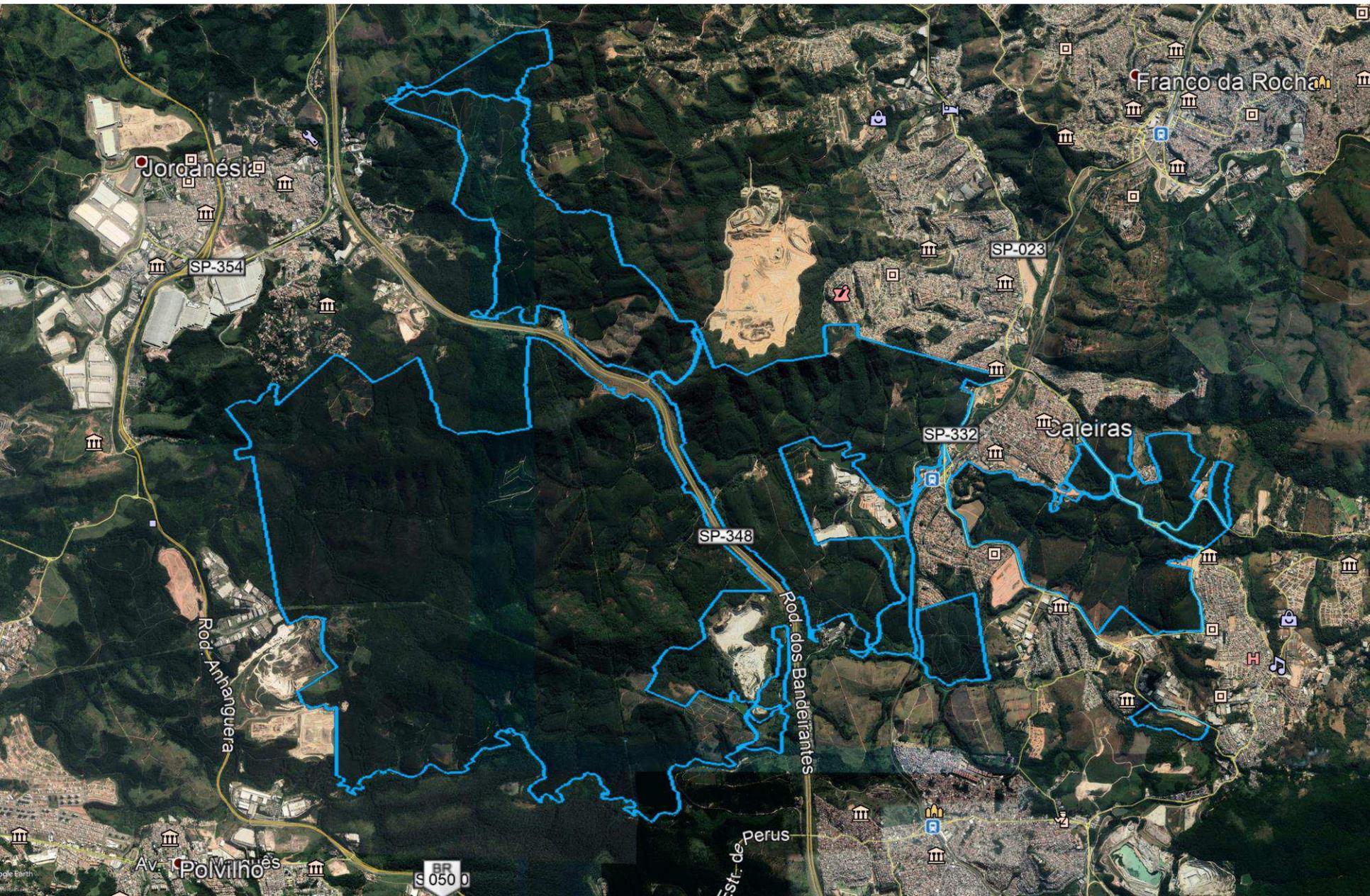
# Sites characteristic High flow urban area



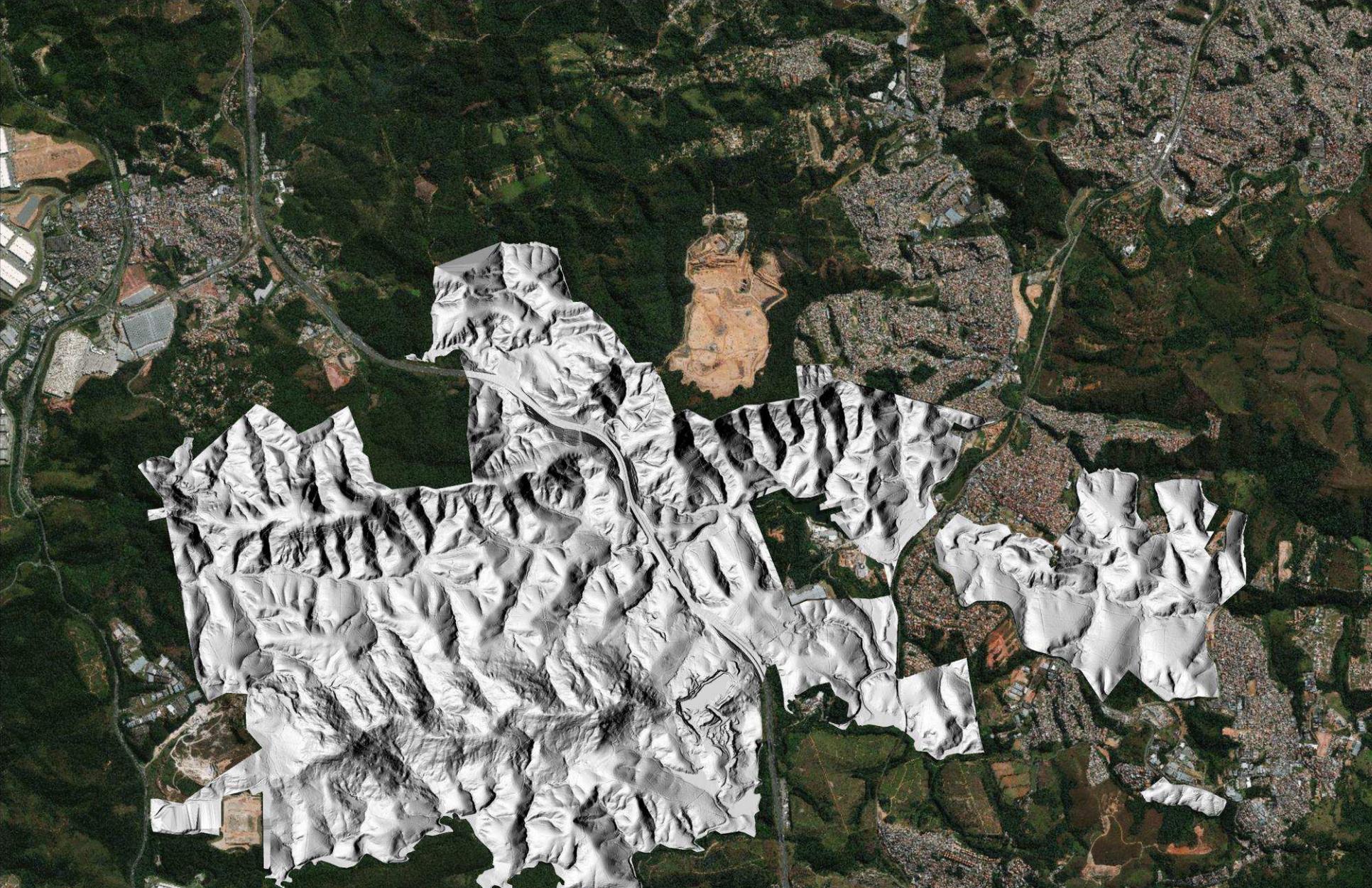
## **URBAN PRESSION**



# Sites characteristic Topography



# **Sites characteristic Topography**



# Sites characteristic Low flow - countryside area

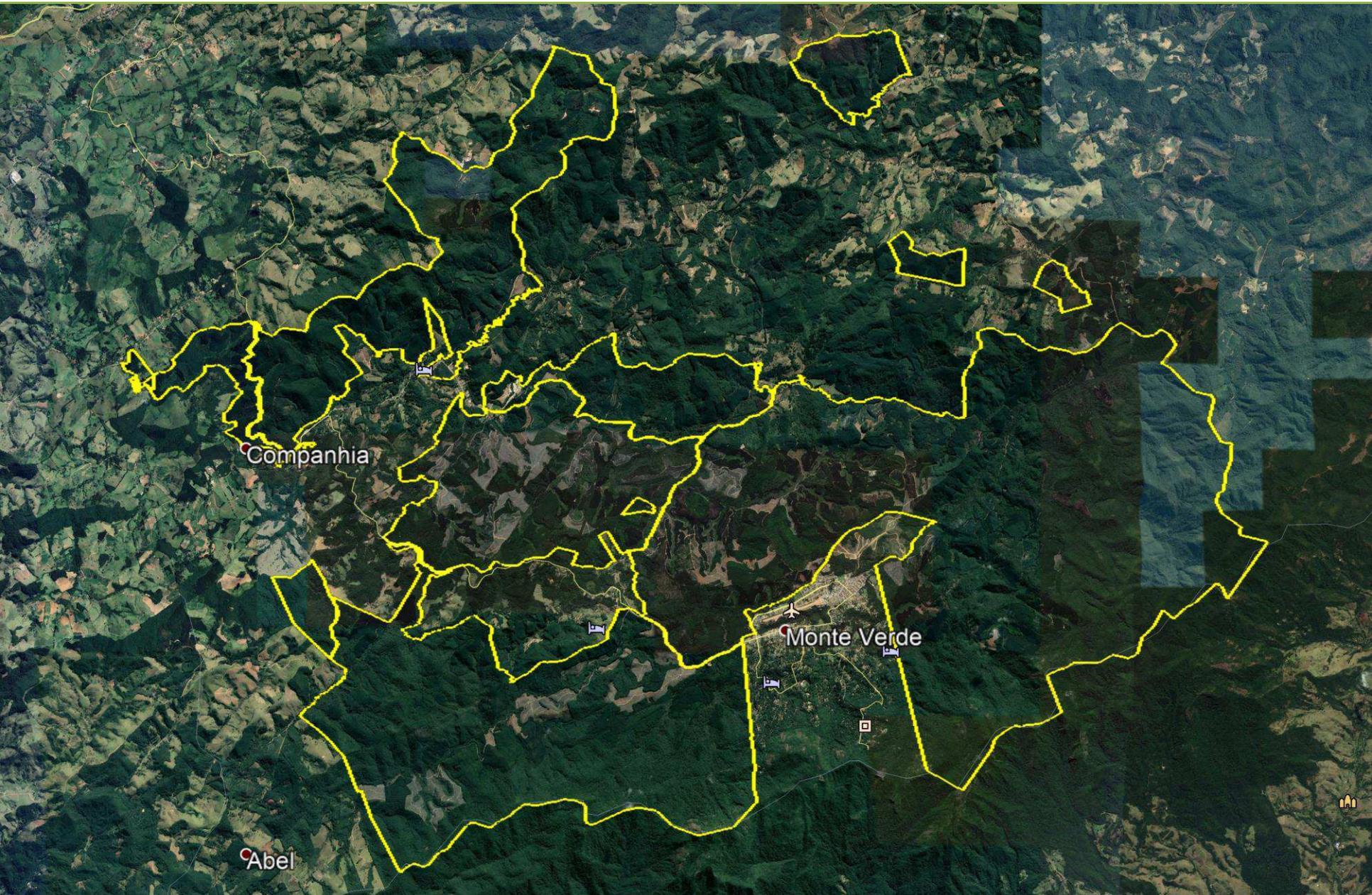
## CAMANDUCAIA'S FARM

PLANTED AREA	4.636 ha
CONSERVATION AREA	6.311 ha
OTHERS	348 ha
<b>TOTAL</b>	<b>11.295 ha</b>

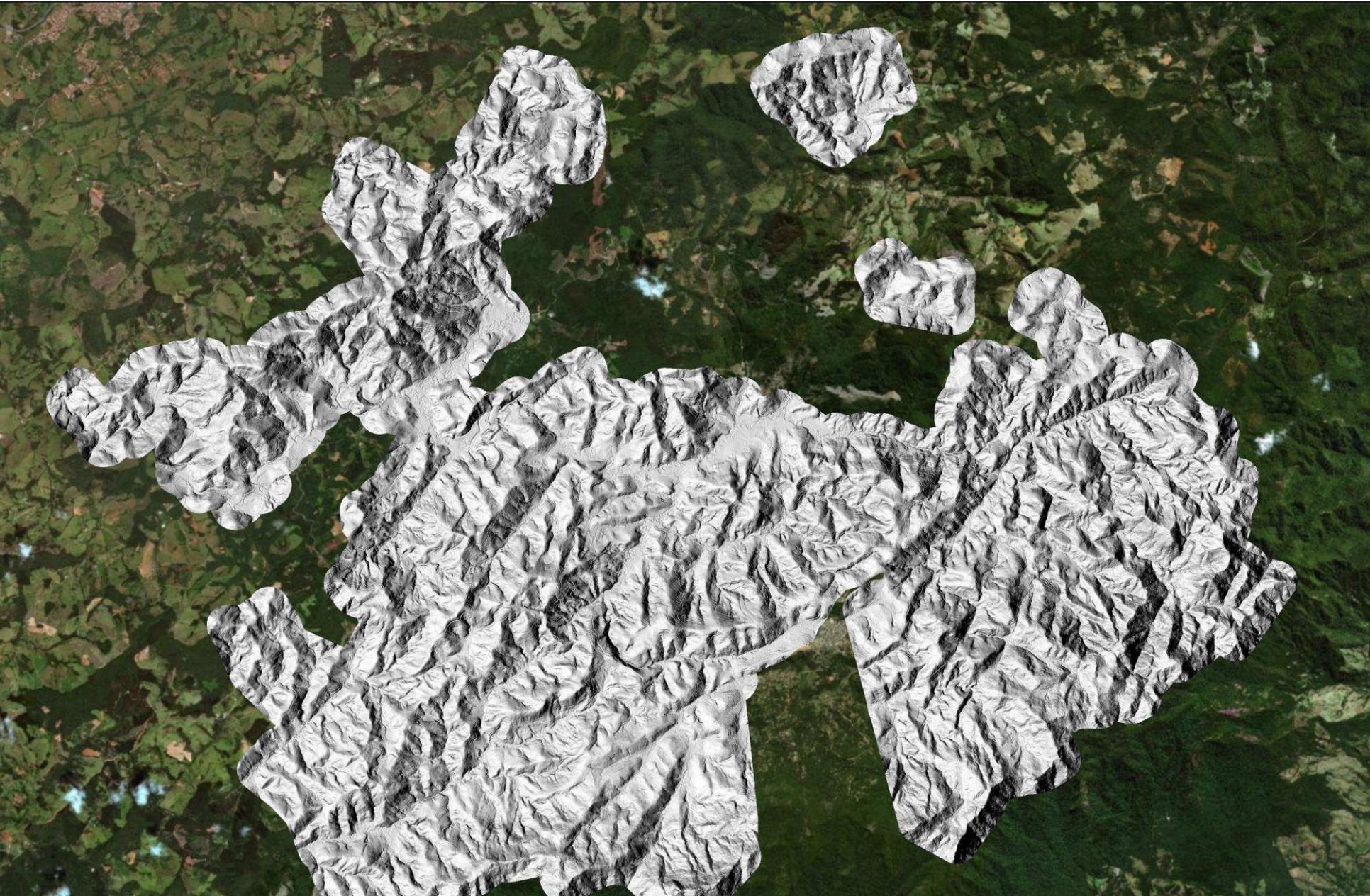
**1 road**  
**Touristic region**  
**High flow of people in the winter**  
**Protection area - APA Fernão Dias**

MONTE  
VERDE

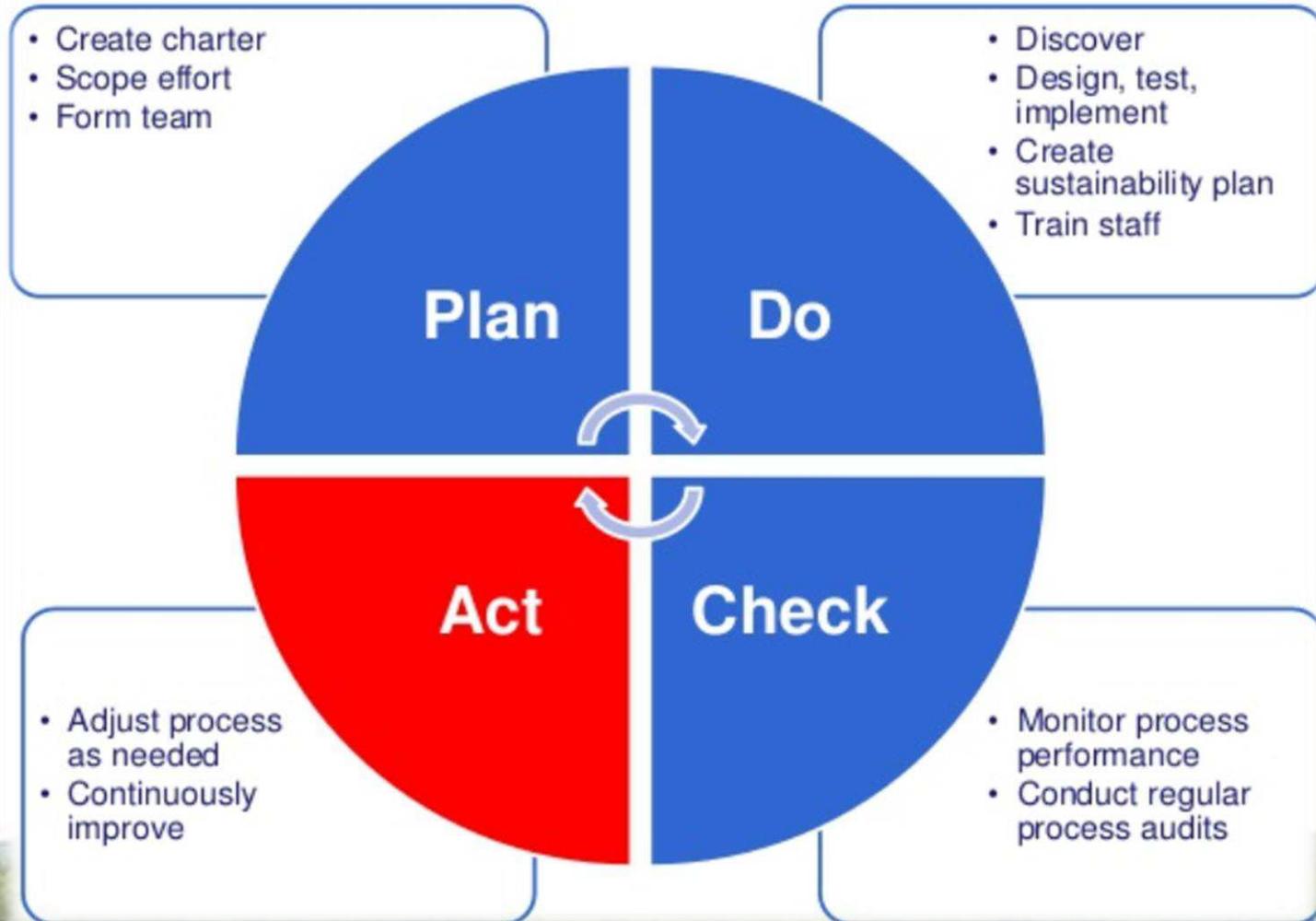
# Sites characteristic Topography



# Sites characteristic Topography



## Improvement via PDCA Cycle



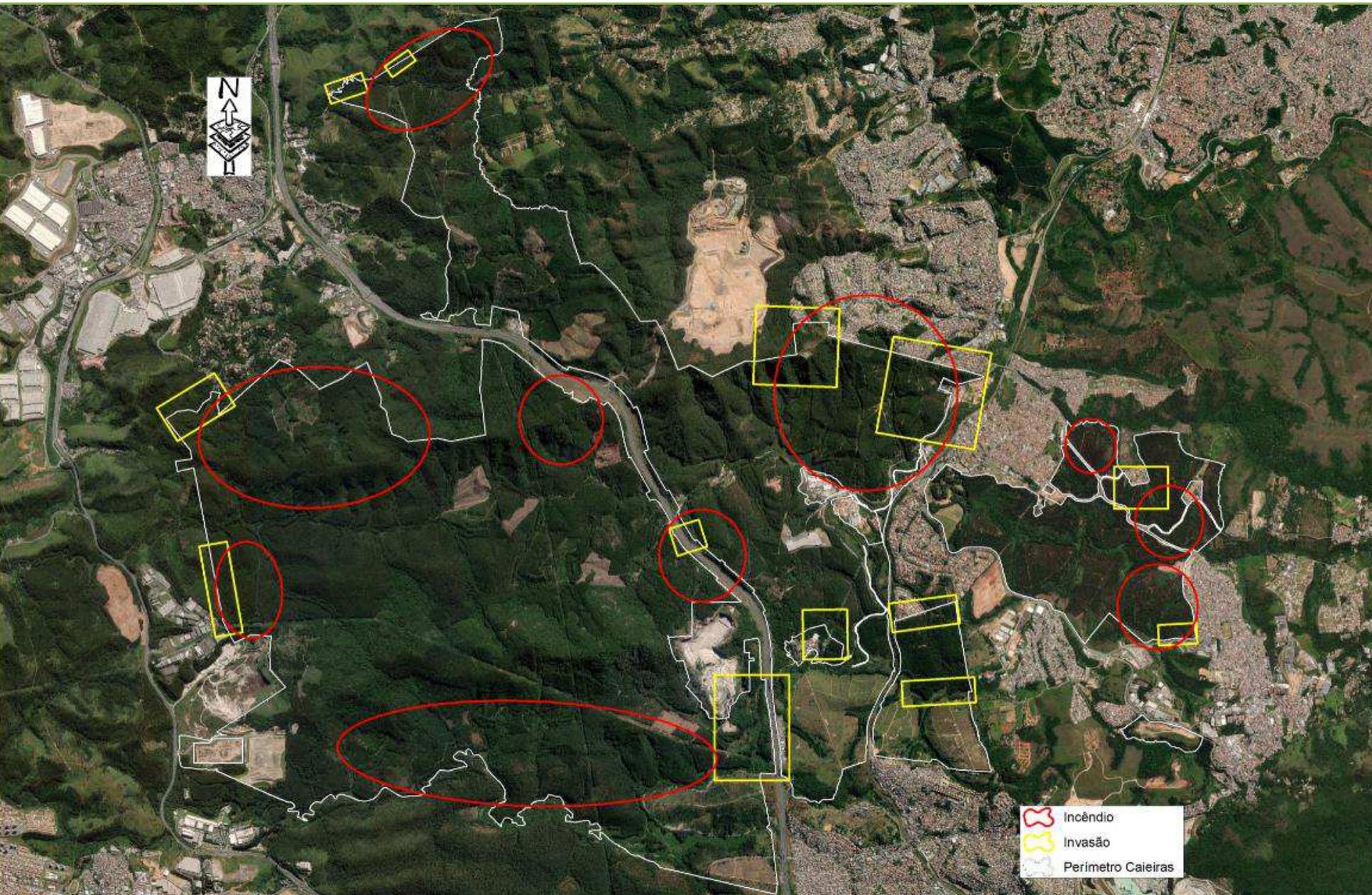
# Forest protection system

## Team building – training - procedures



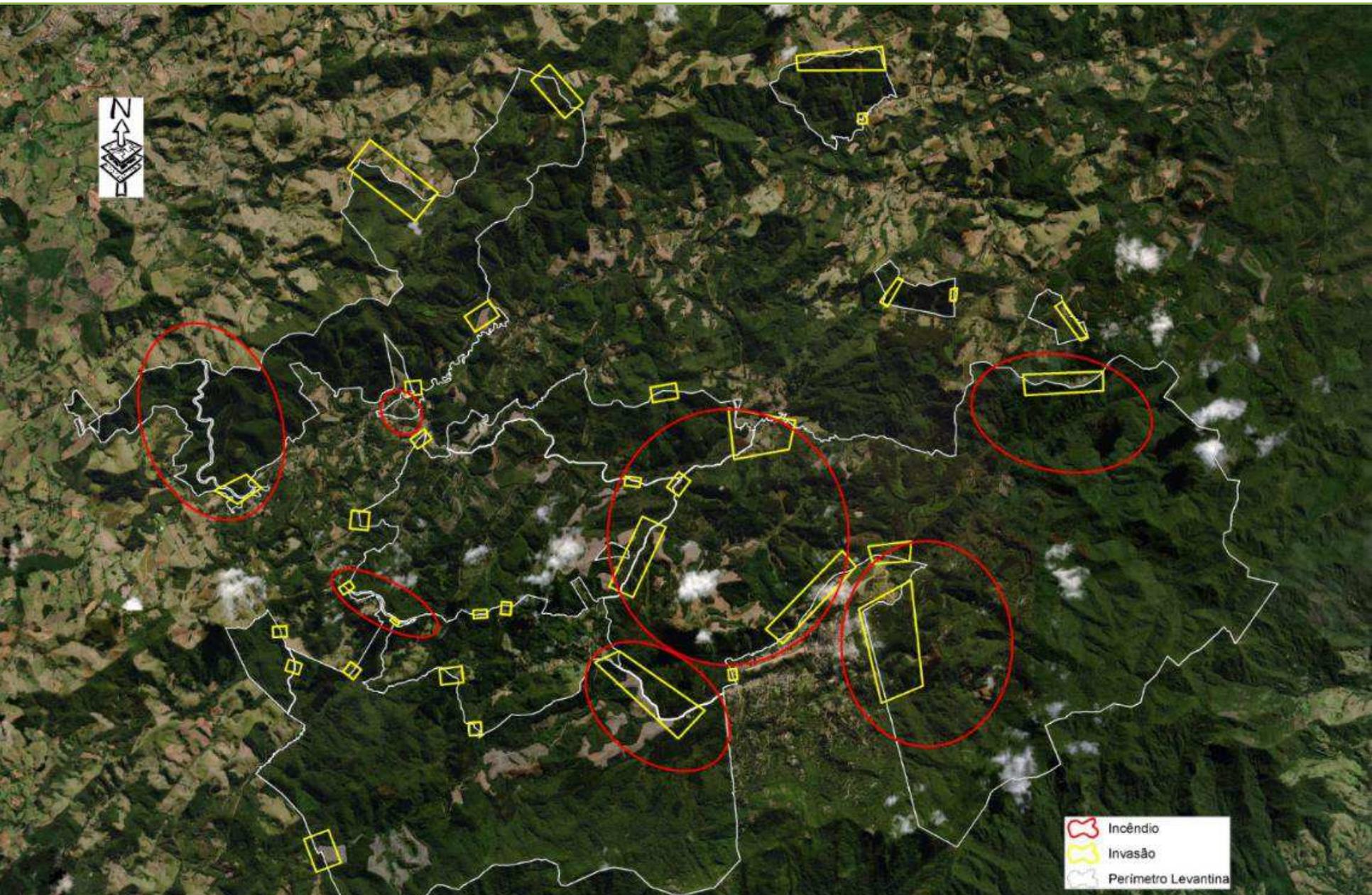
# Forest protection system

## Map of risks



# Forest protection system

## Map of risks



# Forest protection system Communication

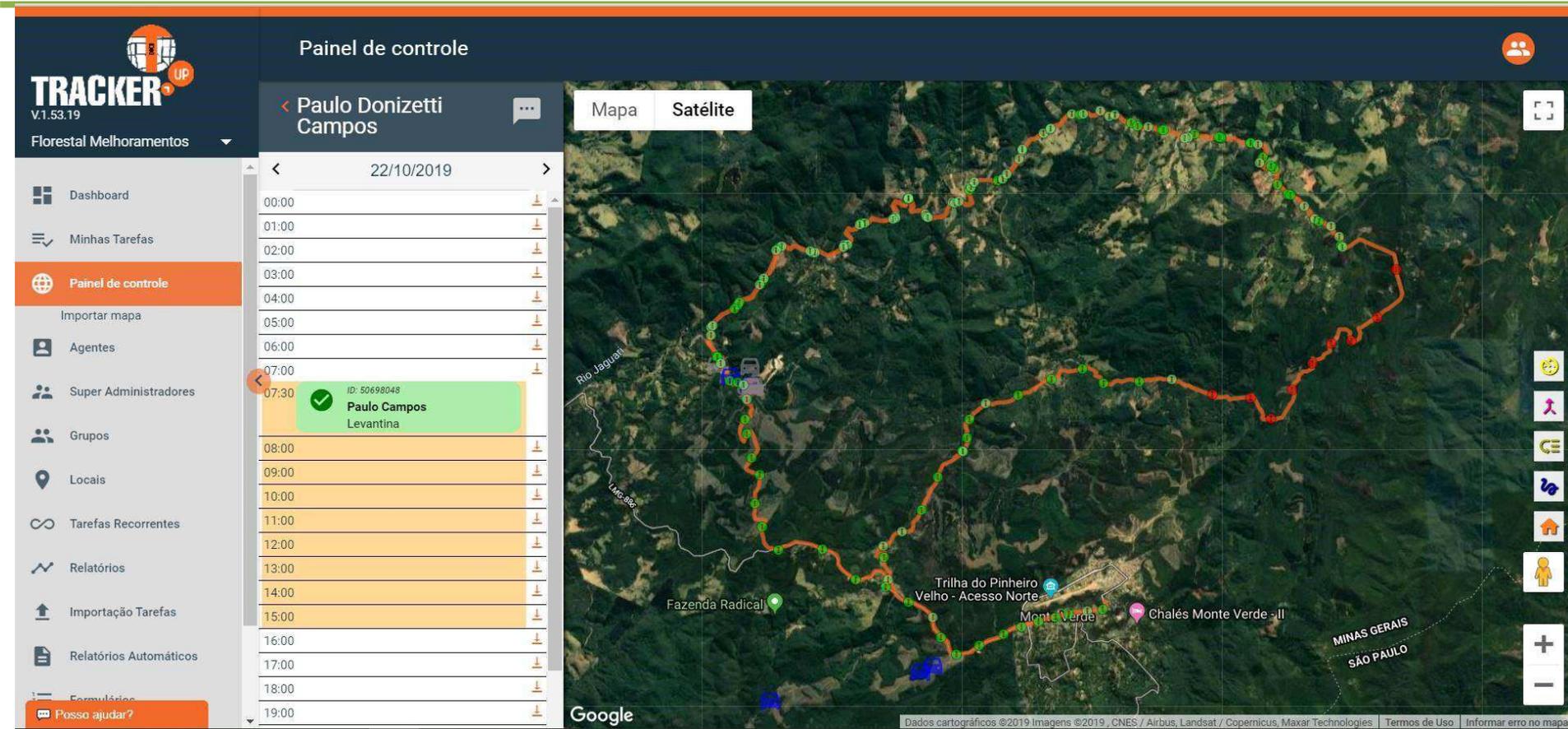
## External public



## Monitoring team



# Forest protection system Monitoring



**TRACKER** V1.53.19  
Forestal Melhoramentos

Painel de controle

Paulo Donizetti Campos

22/10/2019

00:00	
01:00	
02:00	
03:00	
04:00	
05:00	
06:00	
07:00	
07:30	✓ ID: 50698048 Paulo Campos Levantina
08:00	
09:00	
10:00	
11:00	
12:00	
13:00	
14:00	
15:00	
16:00	
17:00	
18:00	
19:00	

Mapa Satélite

Rio Jaguari

Umg-868

Fazenda Radical

Trilha do Pinheiro Velho - Acesso Norte

Monte Verde

Chalés Monte Verde - III

MINAS GERAIS  
SÃO PAULO

Google

Dados cartográficos ©2019 Imagens ©2019 CNES / Airbus, Landsat / Copernicus, Maxar Technologies. Termos de Uso Informar erro no mapa

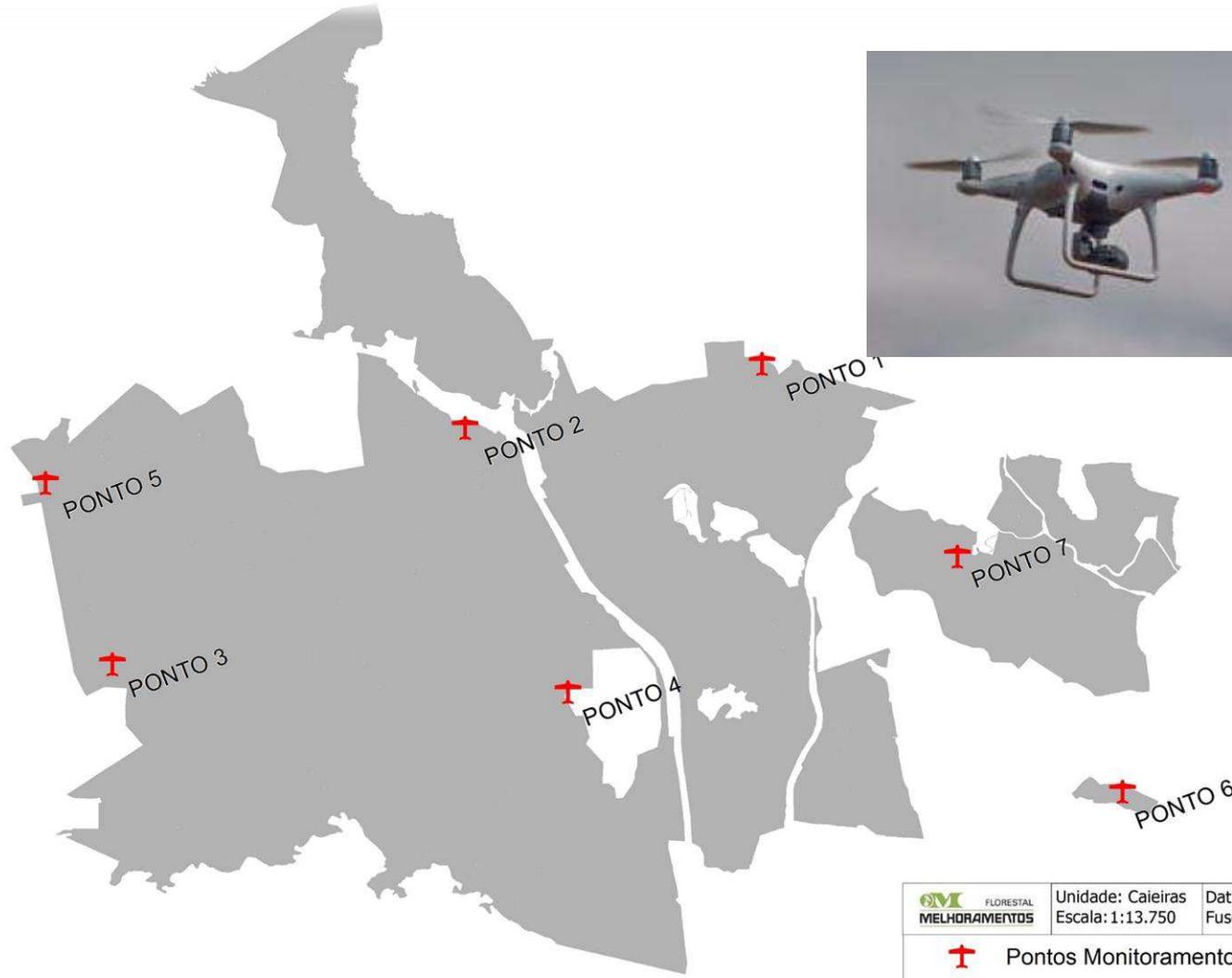


# *Forest protection system Tower*



# Forest protection system

## Drone flight planing



 FLORESTAL MELHORAMENTOS	Unidade: Caieiras	Datum: SIRGAS 2000
	Escala: 1:13.750	Fuso: 23
	Pontos Monitoramento	
	Perímetro Caieiras	

0 1.350 2.700 5.400  
m

# Forest protection system

## *Drone flight planing*



# ***Forest protection system Drones***

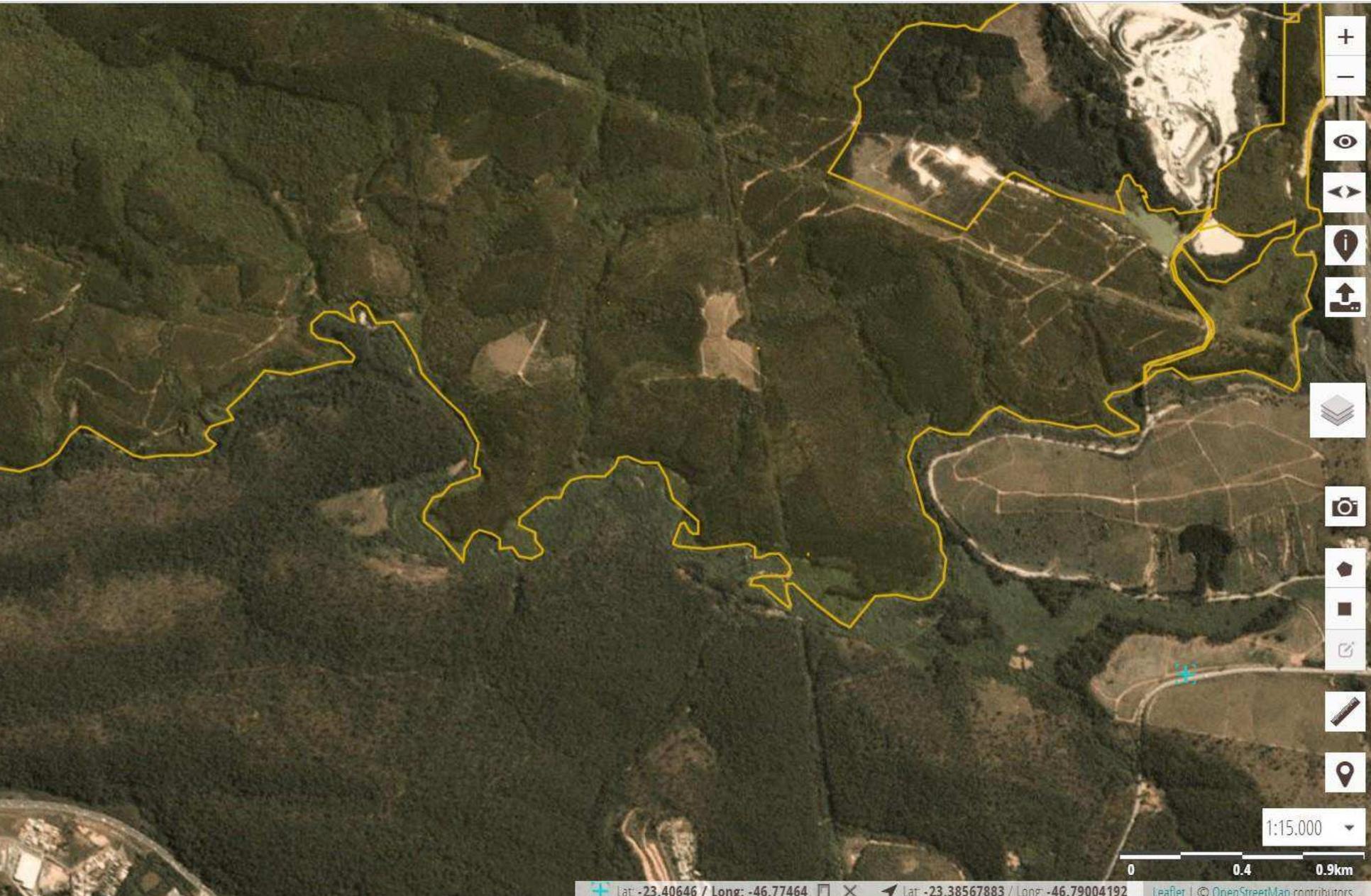


# ***Forest protection system***

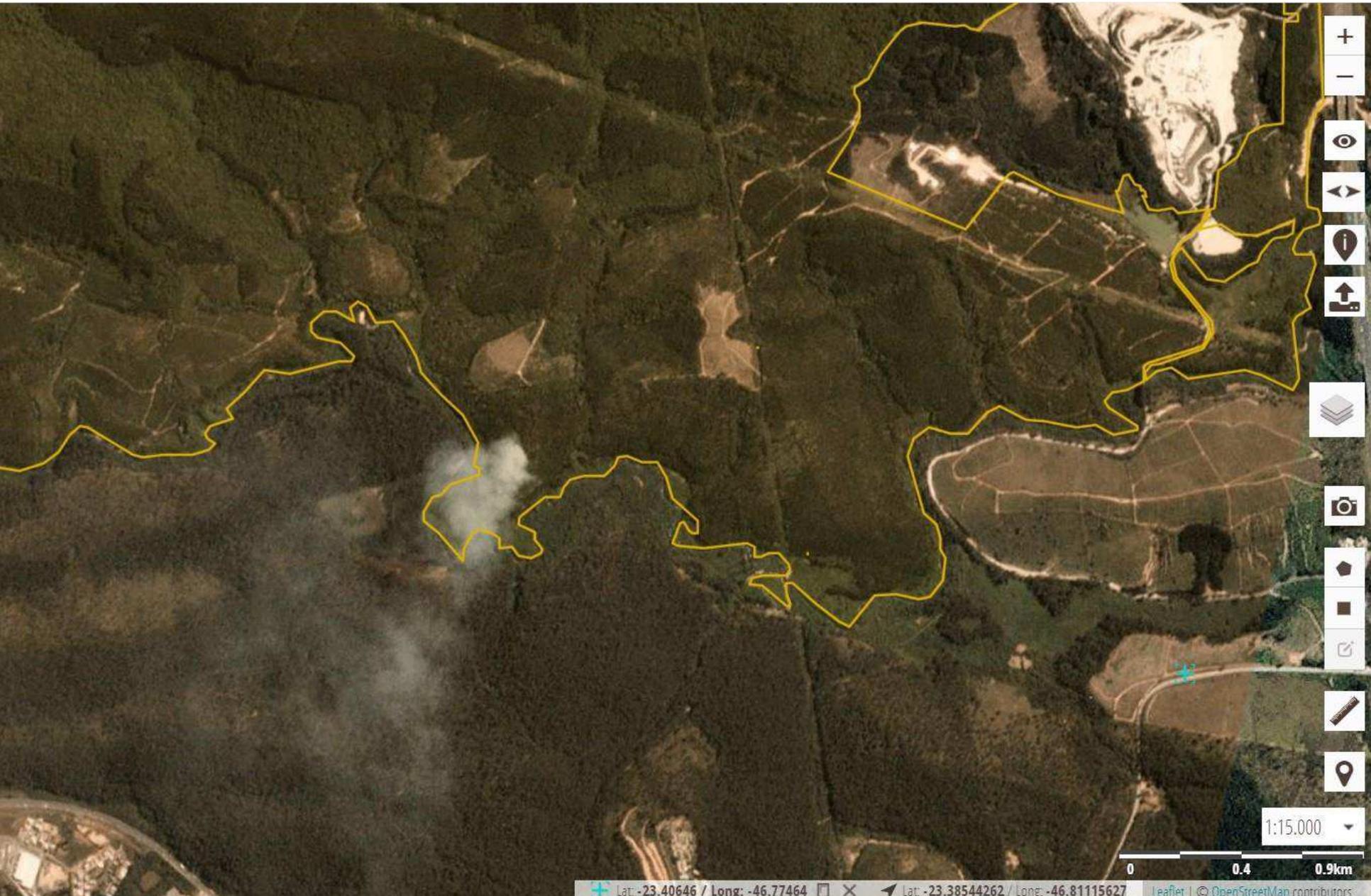
## ***Drones***



# Forest protection system PLANET images



# Forest protection system PLANET images



# Forest protection system Equipaments



# Forest protection system Equipaments



# Forest protection system Equipaments



# Forest protection system Equipaments



- ✓ Faster combat
- ✓ Lower water consumption
- ✓ Time reduction of about 60%
- ✓ Safety

# Forest protection system

## External support network

Sisema

Sistema Estadual de Meio Ambiente  
e Recursos Hídricos

## Prevenção de Incêndios Florestais



feam

FUNDAÇÃO ESTADUAL  
DO MEIO AMBIENTE

IEF

INSTRUMENTO DE GESTÃO  
DO FUMOSO

Igam

INSTITUTO GERAL  
DE GESTÃO AMBIENTAL

Secretaria de Estado de  
Meio Ambiente e  
Desenvolvimento Sustentável



# Forest protection system

## Volunteers



# Main causes of forest fires

## Balloons



# Main causes of forest fires

## Religious offerings



# ***Main causes of forest fires***

## ***Burned in nearby uncontrolled areas***



# Main causes of forest fires

## Hunters



# Main causes of forest fires

## Hunters



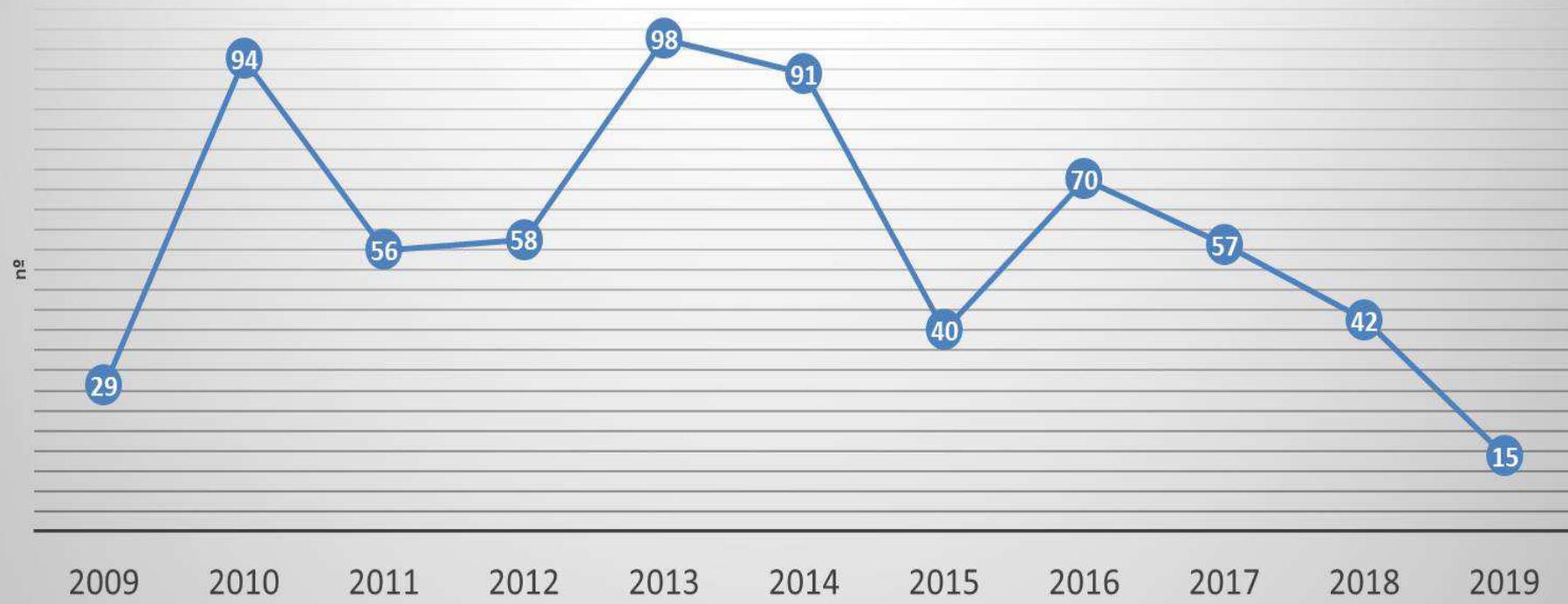
# Main causes of forest fires

## Hunters



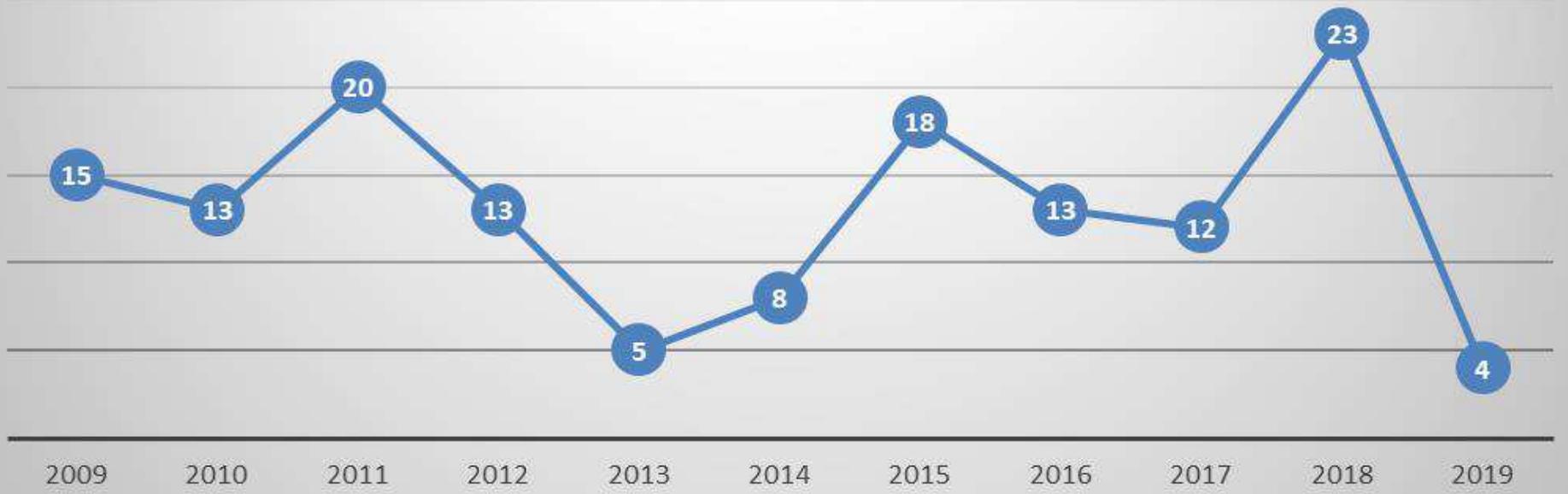
### CAIEIRAS'S FARM

Numbers of fire occurrences - inside of farm

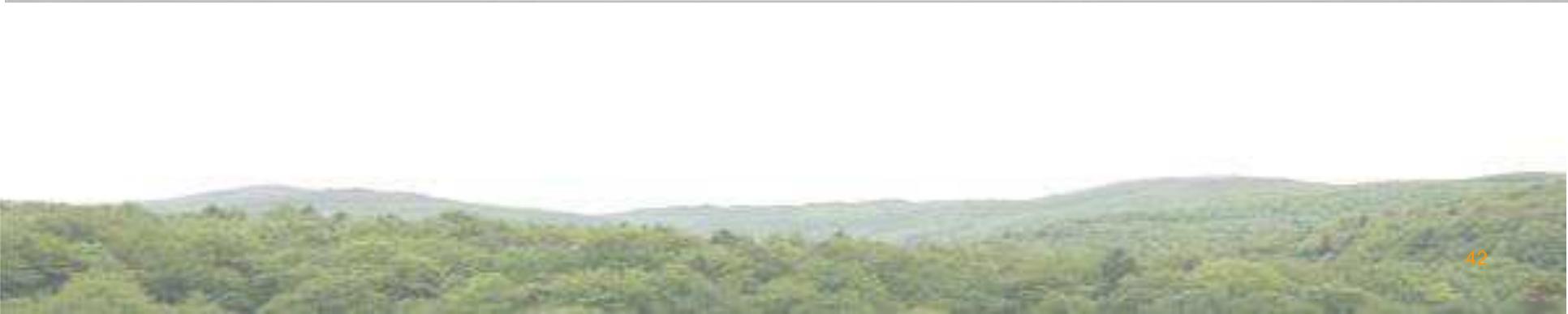


### CAIEIRAS'S FARM

Numbers of fire occurrences - Outside of farm

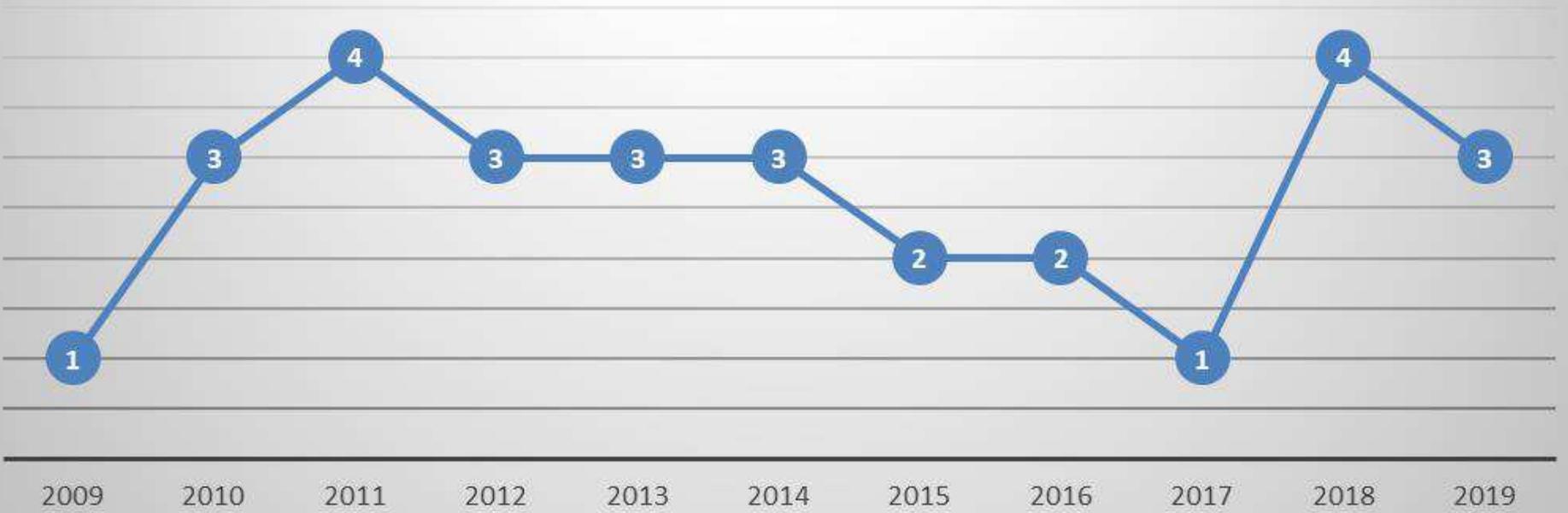


## CAMANDUCAIA'S FARM Numbers of fire occurrences - inside of farm

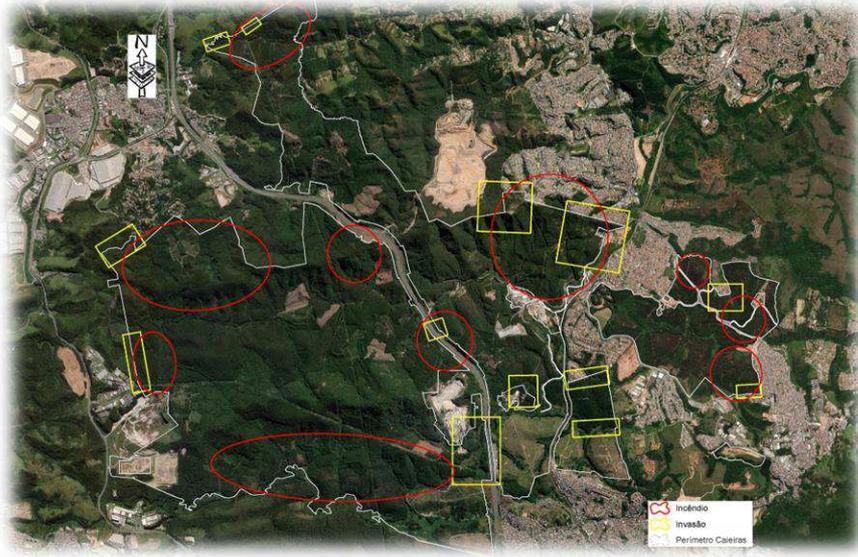


### CAMANDUCAIA'S FARM

Numbers of fire occurrences - Outside of farm

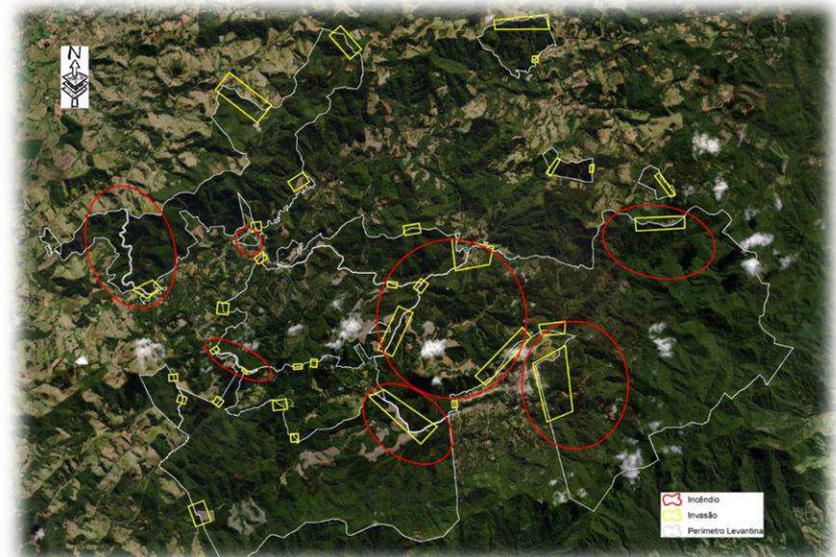


## URBAN AREA



R\$ 295,00 / ha / year  
U\$ 73,75 / ha / year

## COUNTRYSIDE AREA



R\$ 121,00 / ha / year  
U\$ 30,25 / ha / year



# Forest protection system

## We believe

### Prevention – training, technology, and system



**TRACKER** <sup>UP</sup>



### Assertive combat



### Education and culture



OFICINAS

CASA MELHORAMENTOS APRESENTA

ROPOOK

MOVIMENTO MELHORAMENTOS

Deixe o poder dos livros entrar na sua mente

DE 7 A 19 DE OUTUBRO

R. Tito, 479 - Vila Romantii - São Paulo/SP

ENCONTRO COM AUTORES

CLIQUE AQUI E CONHEÇA A PROGRAMAÇÃO COMPLETA.

PRESENCIA DE PERSONAGENS

CONTATO DE HISTÓRIAS

1 2 3 4 5 6 7

## ESCOLA ALICE WEISZFLOG

- *Camanducaia – MG – founded in 1948*
- *More than 9.500 students have completed their studied*
- *250 students in 2019*



### ENVIRONMENTAL EDUCATION PROGRAM

- *Camanducaia, Monte Verde – MG, Caieiras SP*
- *Since 2011*
- *More than 1.500 students have been trained*



# Sustainability Programs

## Social programs



MONTE VERDE WINTER FESTIVAL



SPORT SUPPORT



ORCHESTRA MELHORAMENTOS DE CAIEIRAS



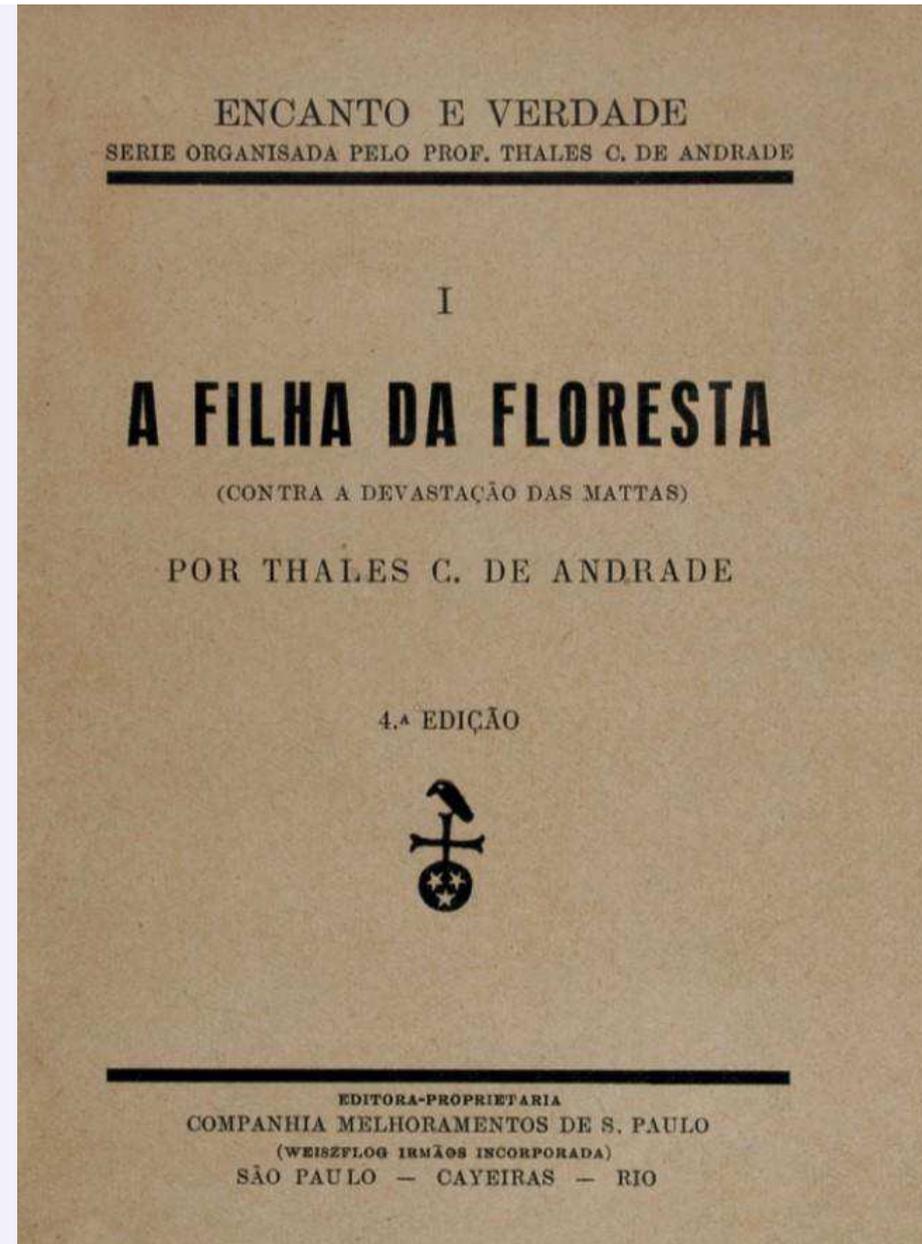
GASTRONOMIC FESTIVAL

FOREST PRODUCT FOR COMMUNITY



# Education

## A filha da Floresta – 1921 First published book about ecology





# Denivaldo Toledo Camargo

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Obrigado,  
Thanks,  
Gracias,  
Danke dir



**MELHORAMENTOS**