

Characterization and Analysis of Rural Property Register as an Instrument for Land Management

Miguel Domingos Teixeira, Maria de Belém Costa Freitas,
Carla Maria Rolo Antunes, Henrique César Ribeiro, Maria do
Rosário Partidário

STRUCTURE

- Objectives
- Introduction
- Case study
- Results
- Conclusions

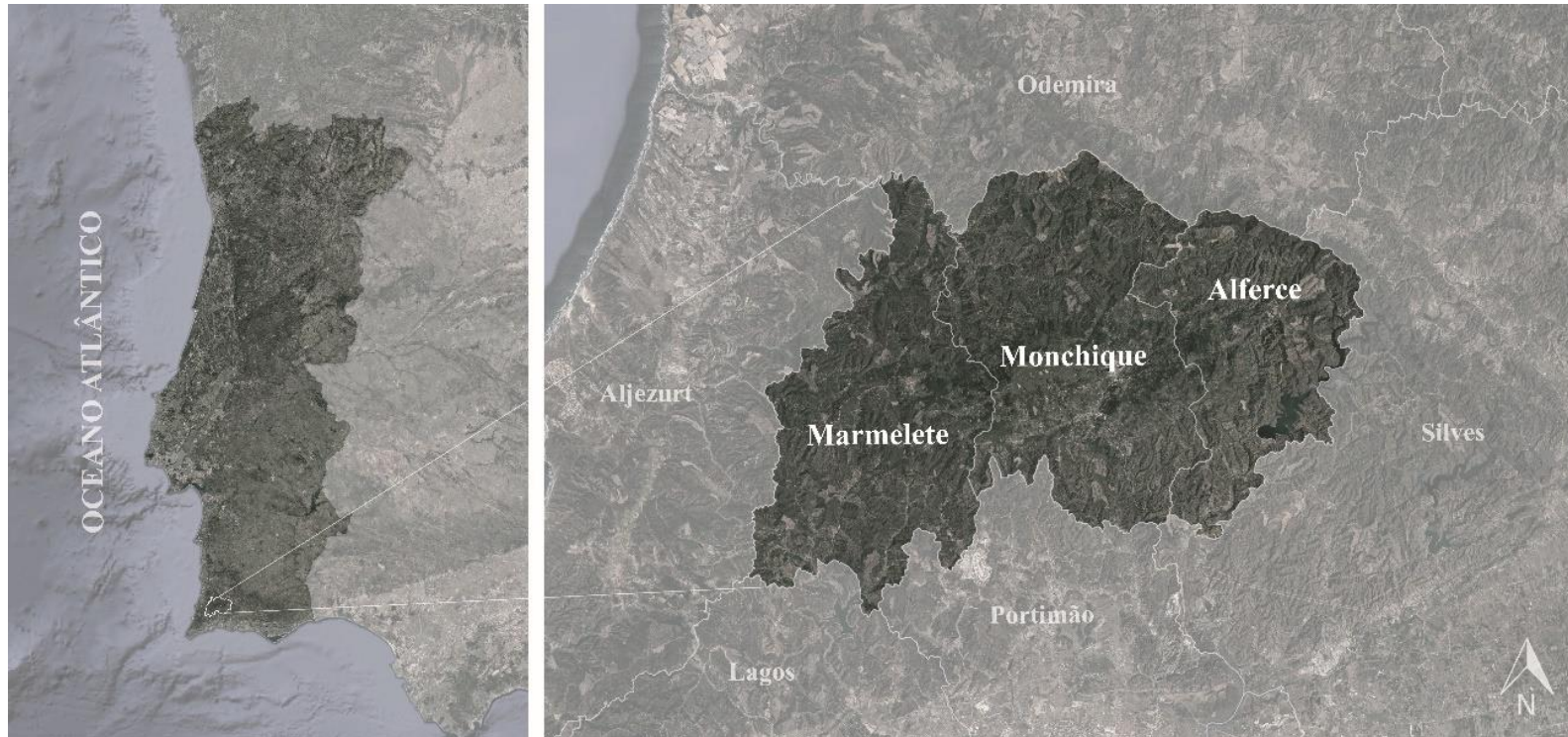
OBJECTIVES

- To analyse how rural property registration conditions land management instruments
- To highlight the importance of articulating the territory management instruments with heritage issues

The lack of knowledge on this topic can be an obstacle to combine planning with the specificities of the region and may be relevant in the context of fires.

OBJECTIVES

The study was carried out in the parish of Alferce, Monchique, affected by big fires, in 2003 and 2018.



INTRODUCTION

- Forest is the main land use in the Portuguese territory occupying about 35% of the continental territory.
- 91% of forest land is privately owned, about 6% is called "baldios" and only 3% is owned by public entities.
- It is estimated that about 80% of Portuguese forests are not managed and that 20% of the territory has no owner or is unknown.

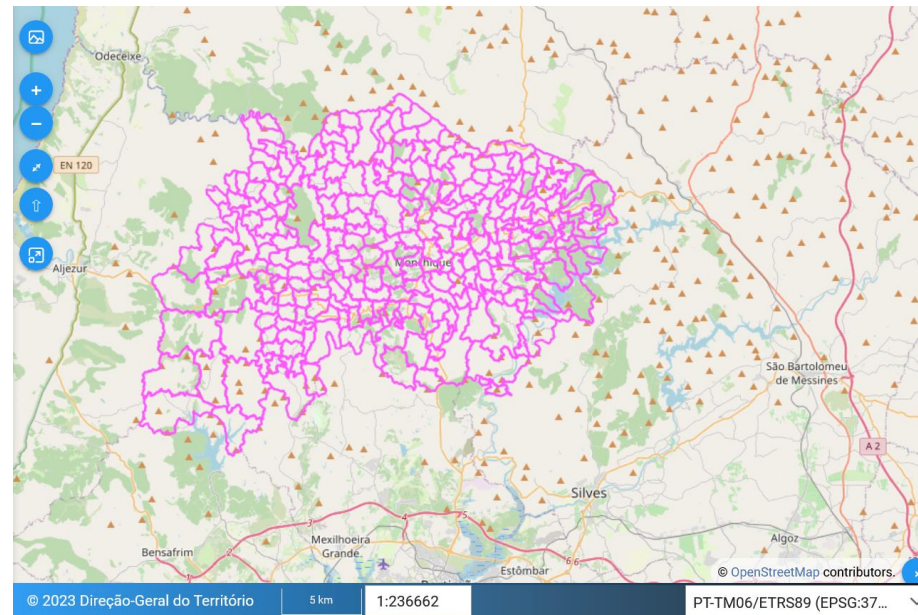
INTRODUCTION

- The profitability of the forest is significant to the country and feeds four fundamental industrial sectors: cork; cellulose, paper and cardboard; sawmilling, carpentry and furniture; wood panels.



INTRODUCTION

- For the development, planning and management of the forest, it is necessary to know the territory, which makes the land registry a crucial tool.



INTRODUCTION

In Portugal, territorial planning has undergone some reforms and changes over time in favor of a more efficient and sustainable land management. Today, sustainability is at the core of the concerns of territorial planning in the country, which includes the promotion of economic activities that respect the environment and the enhancement of the territory's natural and cultural resources.

INTRODUCTION

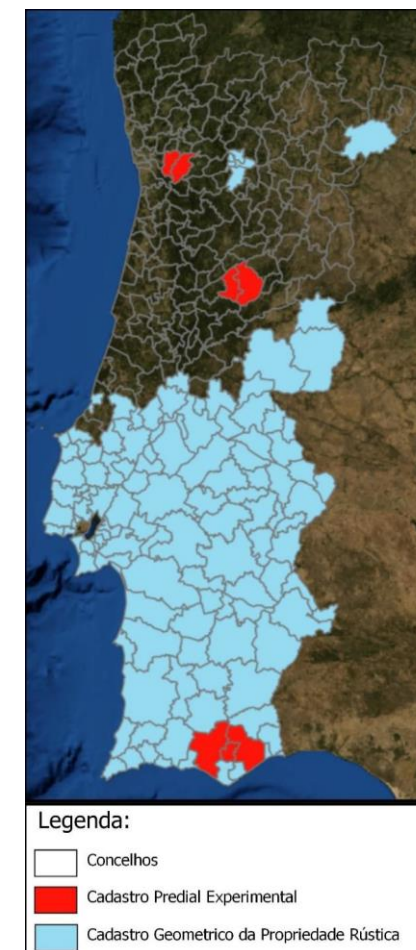
"The land registry is a fundamental and indispensable instrument for the State to pursue its constitutional and legal duties, namely with regard to land policy and spatial planning" (Machado, 2022)

Its purpose is to serve as an information tool, freely accessible to all, to speed up and make all territorial and real estate administration processes more economical, and to add more equity in taxation, facilitating inspections, licensing and expropriations, among others.

INTRODUCTION

According to DGT, the Geometric Registry of Rustic Property covers 128 municipalities, not even reaching half of the 308 municipalities at national level.

Nevertheless, according to what is known, property is very fragmented.



THE PROBLEM

Fragmentation of rural property seems to be a significant problem, especially in rural areas. Causes of fragmentation include socio-cultural, economic, physical/environmental factors and the existing land tenure system always impacts territorial planning instruments, conditioning planning decisions and the plans applicability.

CASE STUDY

Alferce parish.

This parish territory is characterized by a temperate climate, with hot summers and mild winters, with mountainous and very rugged relief.

The predominant soils are lithosols (about 86%) and the land use capacity is classified as class "E" (about 94%), which imposes several limitations, including non-susceptibility to agricultural use.

Regarding the soil use and occupation, the area is mostly occupied by forests (about 62%) and scrubland (about 29%).

The forests consist mainly of eucalyptus and cork oaks (respectively, 80.5% and 14.5% of the forest area).

CASE STUDY

Alferce parish

Population: 391 inhabitants, with a decreasing trend over the last decades.

Aging rate of the population (2021): 537 elderly people for every 100 young people in 2021.

Employment rate (2021): 30.1%

Schooling: From 2011 to 2021, the population with no education level decrease 54.7%, a tendency already verified in previous periods, there was a decrease in all levels of basic education, the population with complete secondary and post-secondary education grew by 36.4% and 20%, respectively, and the population with higher education had the highest evolution, with a substantial growth of 67.9%.

METHODOLOGY

- In depth study of the abiotic characteristics of Alferce parish.
- Interviews with Alferce forest owners

How fragmented is the territory?

Who manages this territory?

Which is the properties' dimension?

METHODOLOGY

Quantitative and qualitative analysis:

The average number of properties per owner

The average size (ha) of the property per owner

The total percentage of properties owned by Alferce main owners

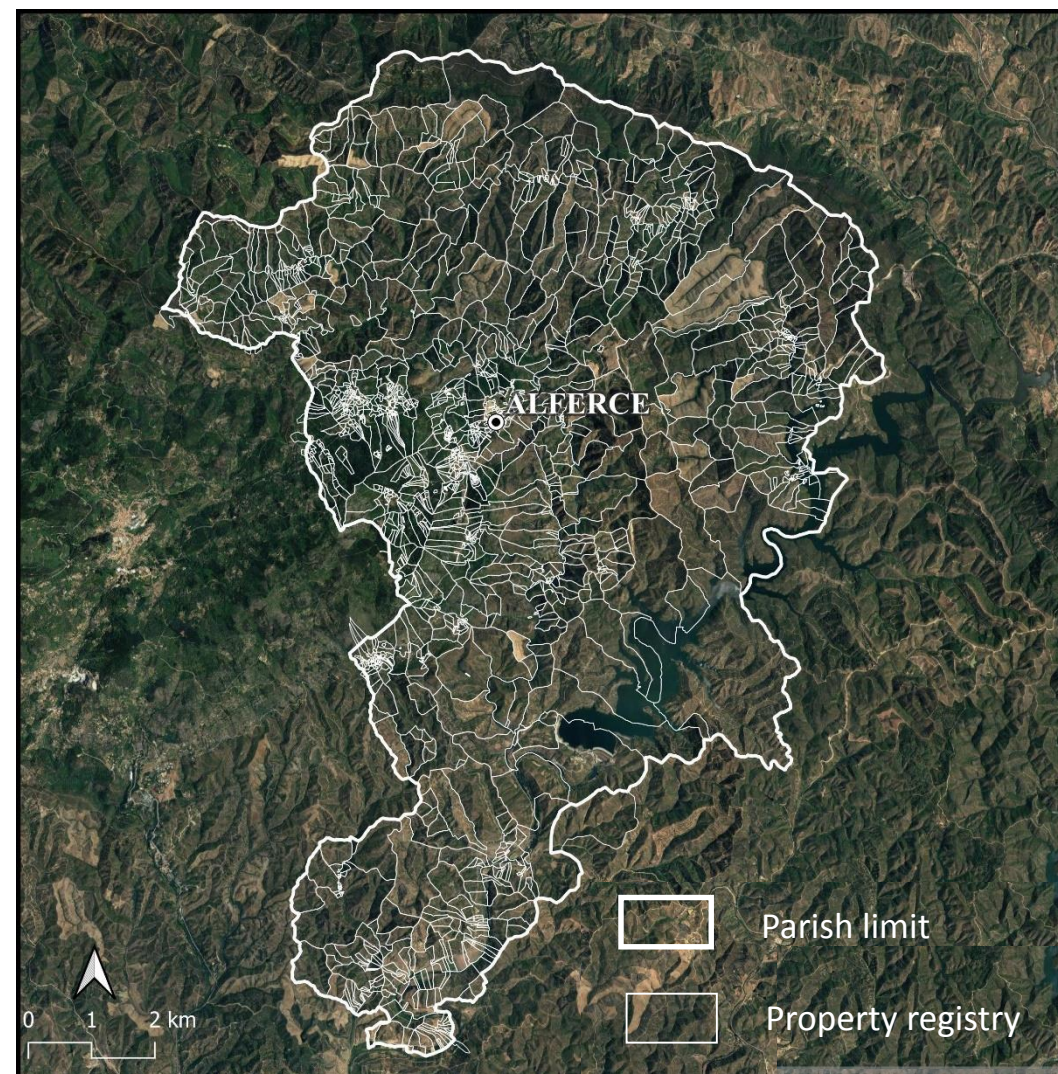
The Simmons and Januszewski fragmentation indexes of the properties

RESULTS

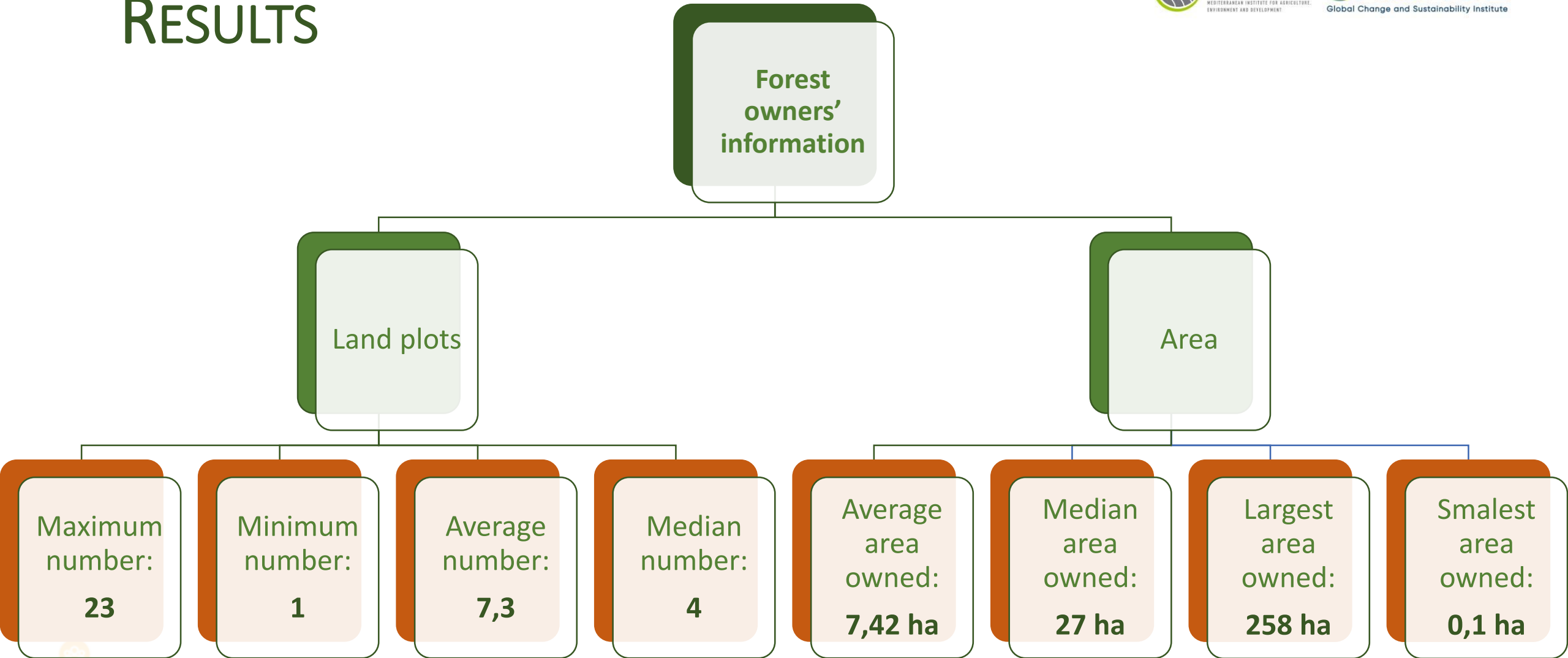
The development of territorial management instruments without full knowledge of land tenure structure is an obstacle to efficient land management.

RESULTS

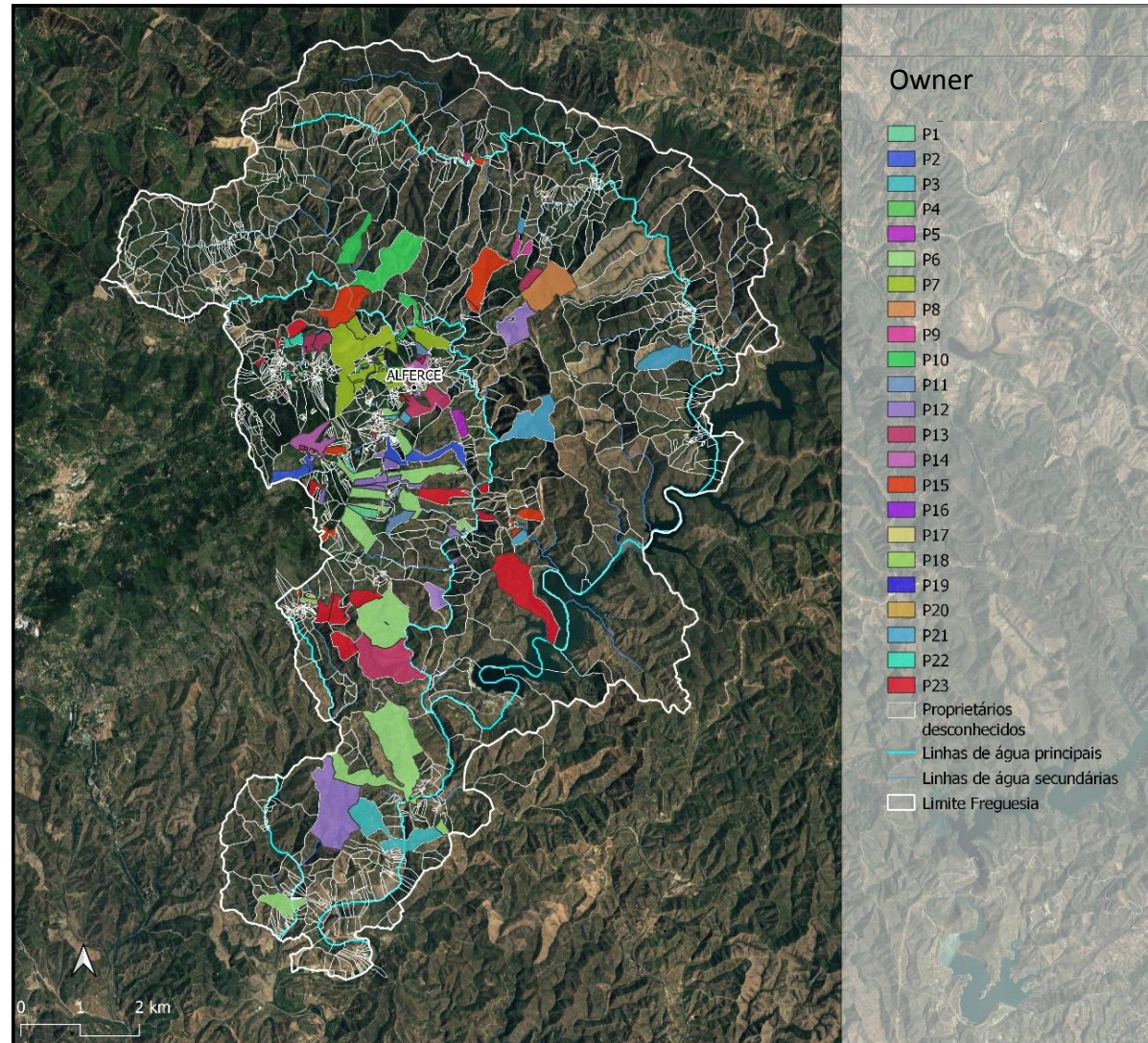
How fragmented is the territory?



RESULTS



RESULTS



RESULTS

Fragmentation indices: Simmons' (FI) and Januszewki's (K)

Without information about the owners:

$$FI = 0,03$$

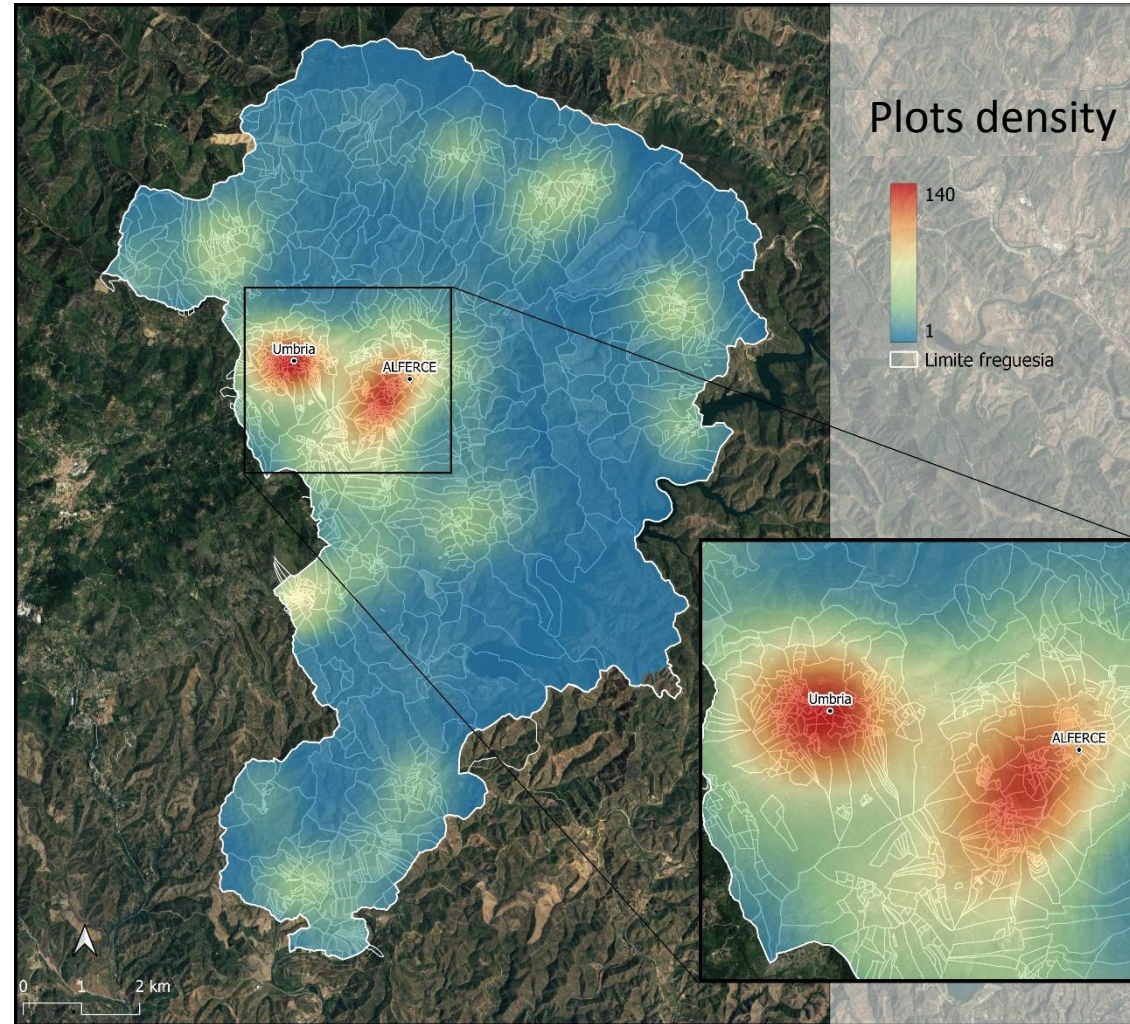
$$K = 0,11$$

Considering the information about the owners and weighting the indices of each holding, considering the weight of the holding's surface in the total area :

$$FI = 0,37$$

$$K = 0,41$$

RESULTS



CONCLUSIONS

- Considerations about property fragmentation are biased by a lack of information about owners.
- This information is relevant and should be considered for planning and decision-making related to the development and sustainability of the territory.
- Management plans for a given territory must reflect the objectives and aspirations of the people who intervene in the territory and for whom it is an important mean of livelihood.

Thank you