E-REDES
Distribuição de Eletricidade

IVM - Integrated Vegetation Management

Workshop 20/22 november, Porto

Enquadramento

IVM

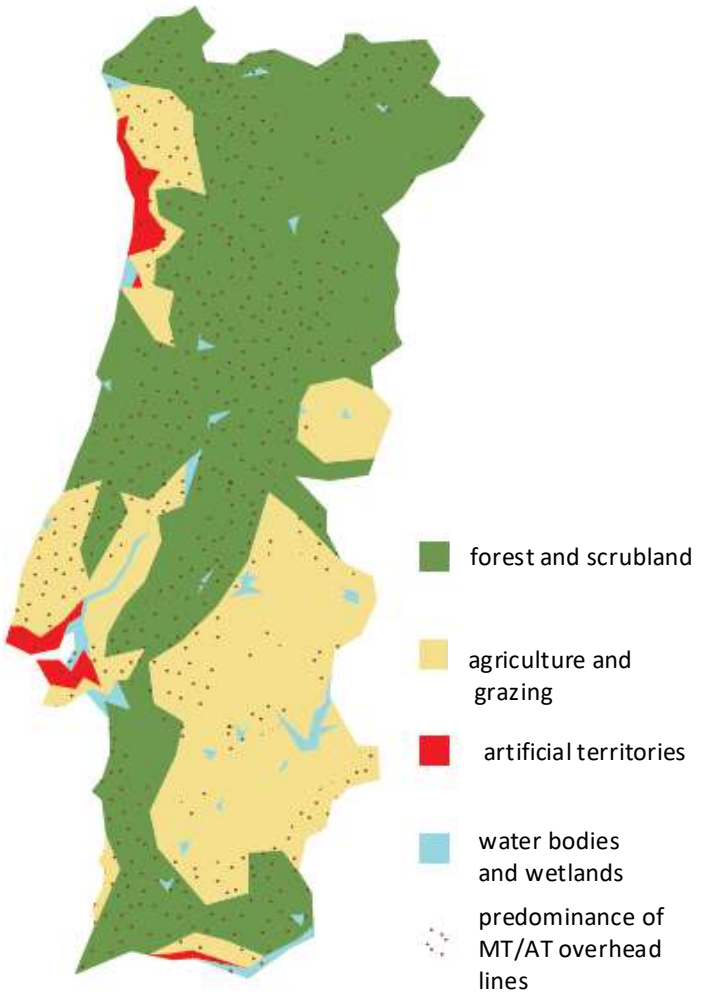
E-REDES works actively in the defence and protection of the forest heritage, with the aim of guaranteeing the safety of the population and improving the quality of service of electricity networks throughout the continent.

68,000 km* of power lines:

- 58,000 km of Medium Voltage (MV)
- 10,000 km of High Voltage (HV)

≈ **41%** of overhead power lines are located in forest areas (around 28,000 km, 10 times the perimeter of mainland Portugal).

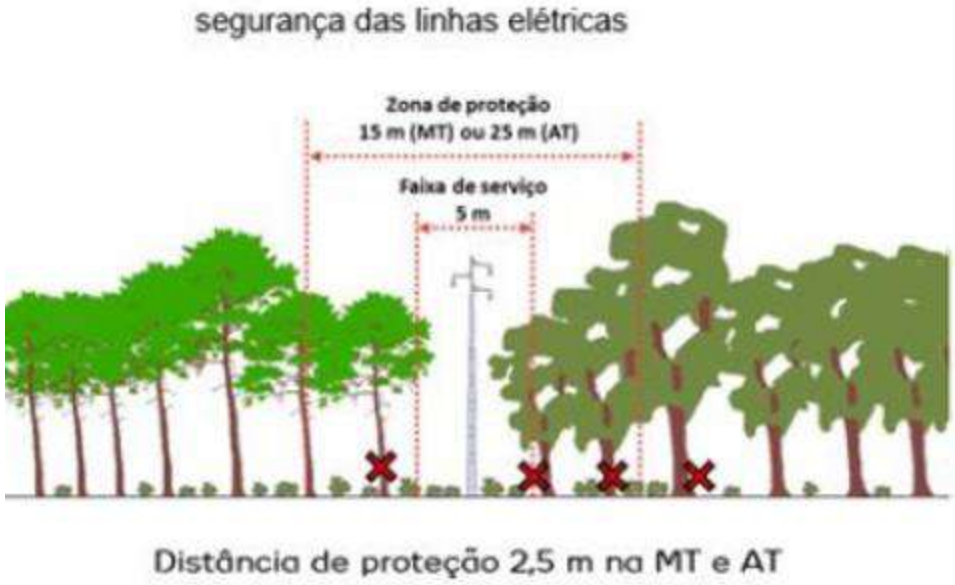
* + 110.000 km low voltage (lV)

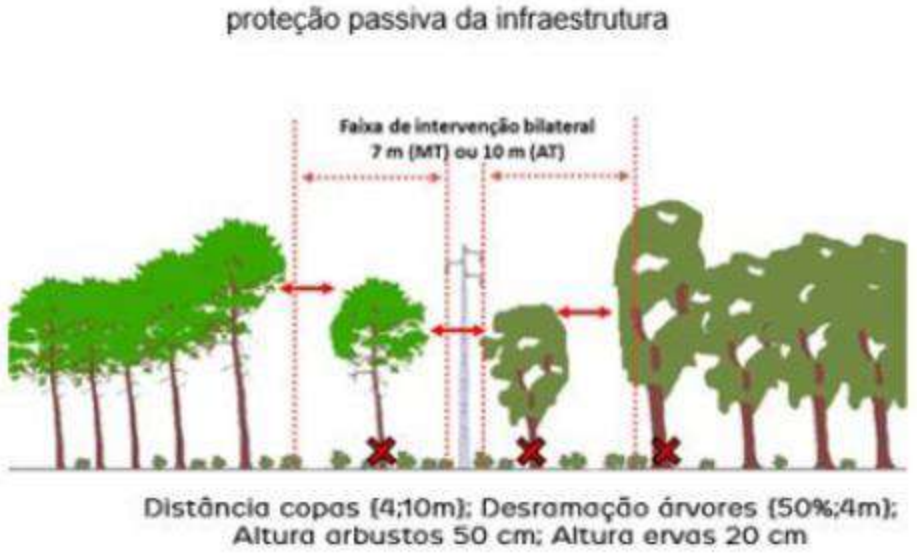


Legal framework

Regulatory Decree no. 1/92 of 18 February, article 28 - Distance between electric lines and trees

Law-Decree 82/2021 of 13 October, Integrated Rural Fire Management System (SGIFR) - FGC





Legal framework

Law-Decree 82/2021 defines that:

Compatible occupation – *"the occupation of land in a manner other than that provided for in the fuel management rules, provided that it is reconcilable with the objective of fuel management, reducing its availability for the ignition and progression of fire, and generating value for owners or communities; (Law-Decree no. 82/2021, Art. 3)"*

Work carried out with Colab Forestwise

- Support for species
- Operational Management Models
- Consultation and visualization platform (dashboard)

https://ocupacoescompativeis.forestwise.pt/

Compatible occupations

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identification of the areas of fuel management strips that could be the target of compatible occupations, by municipality

+

consult experts to identify possible compatible species by municipality

Suitable species (212)

Maximum height of vegetation, for compatible occupation proposal – safety distances

Potential Fire Hazard

Socioeconomic information

Final list species (107)

strata: arboreal, shrubby and herbaceous

https://ocupacoescompativeis.forestwise.pt/

Examples

Implementation

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Ecological restoration

Potential fuel occupations: meadows, scrubland and pastures;

Evaluate the possibility of **adaptive fuel management** - without cutting all the fuel in the 2 strata (herbaceous and shrub), leave 30 per cent of the ground cover;

Maintenance only - no fuel management strips intervention, only safety distances guarantee;

Reconversion - meadows or with compatible occupation of herbaceous or shrubby strata;

Evaluation of ecosystem services, and consideration of interventions when **biodiversity has a differentiated value in relation to fuel management strips execution**, without ever jeopardising the safety of the infrastructure.

Reduce erosion (water and soil)

Promote biodiversity associated with habitats

Promote ecosystem services

Implementation

how to identify target areas in fuel management strips

The intervention planning and monitoring team cross-checks and assesses the need to restore safety distances and interventions in fuel management strips, through:

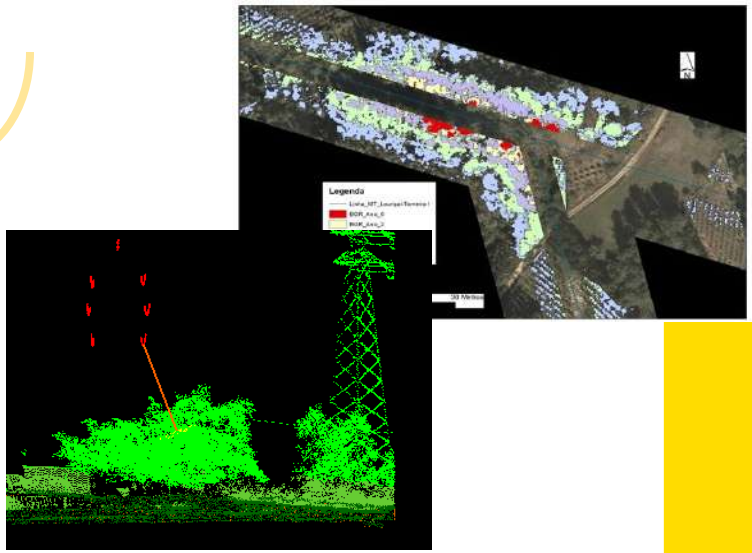
helicopter flights

Drones

satellite images for prioritizing vegetation interventions

Type of data collection

RGB
Infrared
Lidar



This allows us to identify areas that can be occupied differently depending on the need for intervention, as well as cross-referencing with biodiversity parameters to be preserved

Next steps

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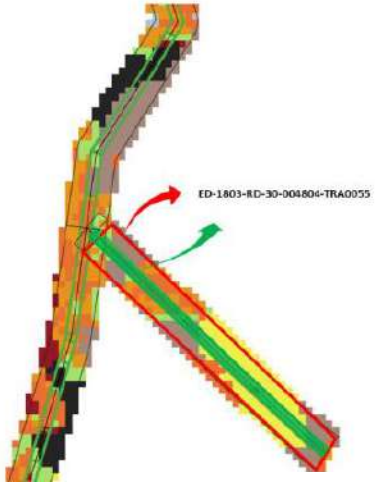
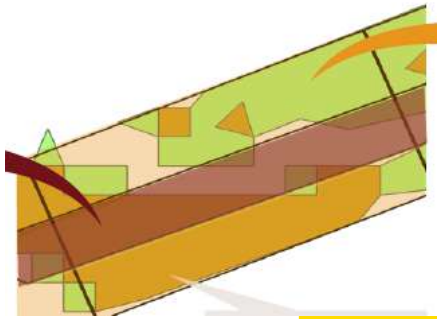
Strategic **baseline for biodiversity** and ecosystem services

↳ **"Spatial Conservation Planning"**



Habitats, species (richness), fauna (including protected birdlife), flora, ecosystem services



LIFE application - identify new forms of adaptive fuel management that promote biodiversity

Avifauna
establishing the relationship between biodiversity promotion solutions and bird protection parameters, such as the correction of lines in project areas;