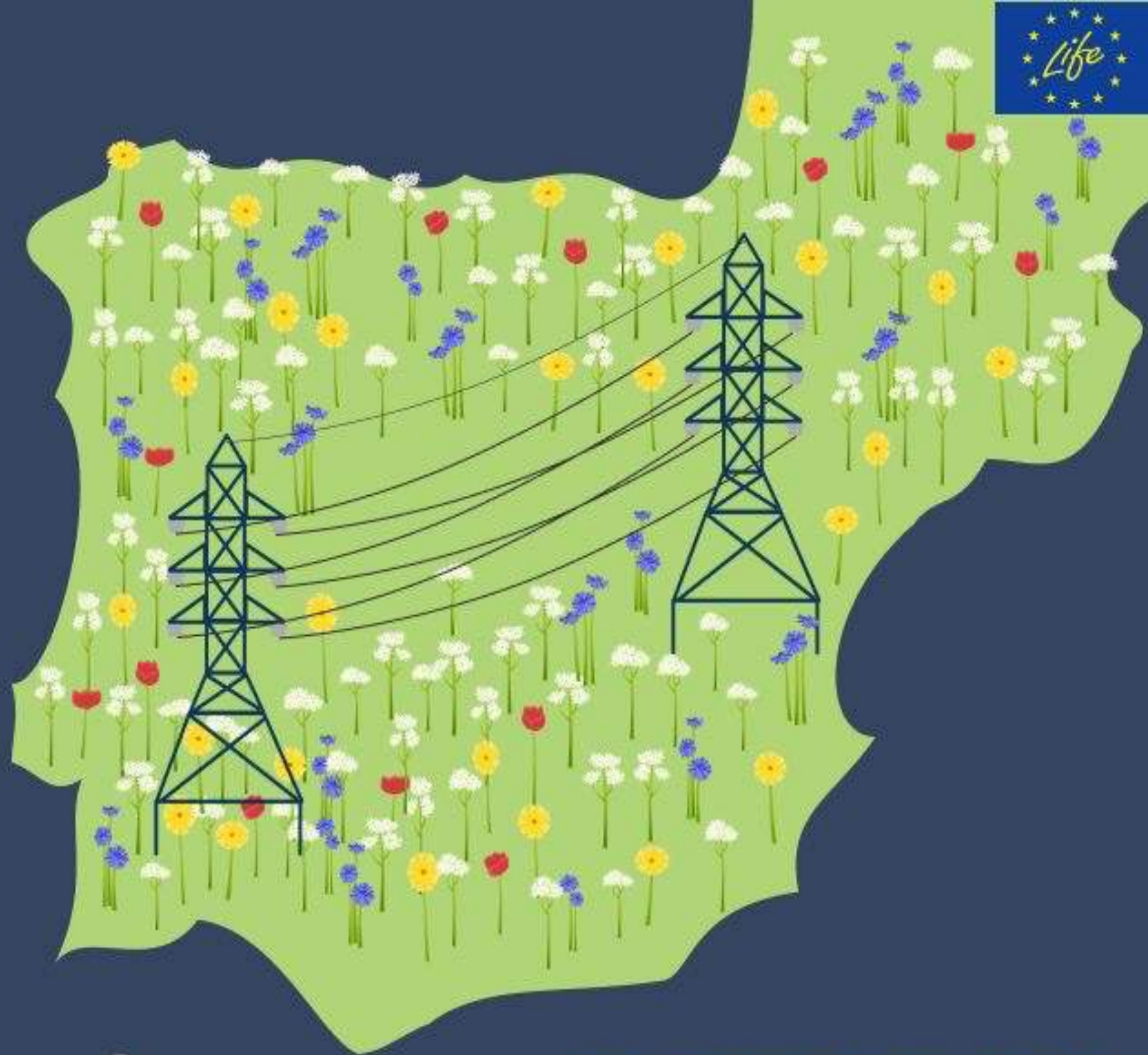


Grids for Life

Innovative approaches to
Vegetation Management
from the Iberian Peninsula



REN

red eléctrica



UNIVERSITAT DE
BARCELONA



AGROVIDAR
Soluciones agroforestales

Renewables
Grid Initiative



ENERGY & NATURE
ZOOM WEBINAR

27 OCTOBER 2022
11:30 - 13:00 CEST

Electricity transport in VHV and National Electricity System technical management

Concessionaire and operator of the Electricity Transmission Network in Portugal, with more than 9,000 km of very high voltage lines and buried cables.



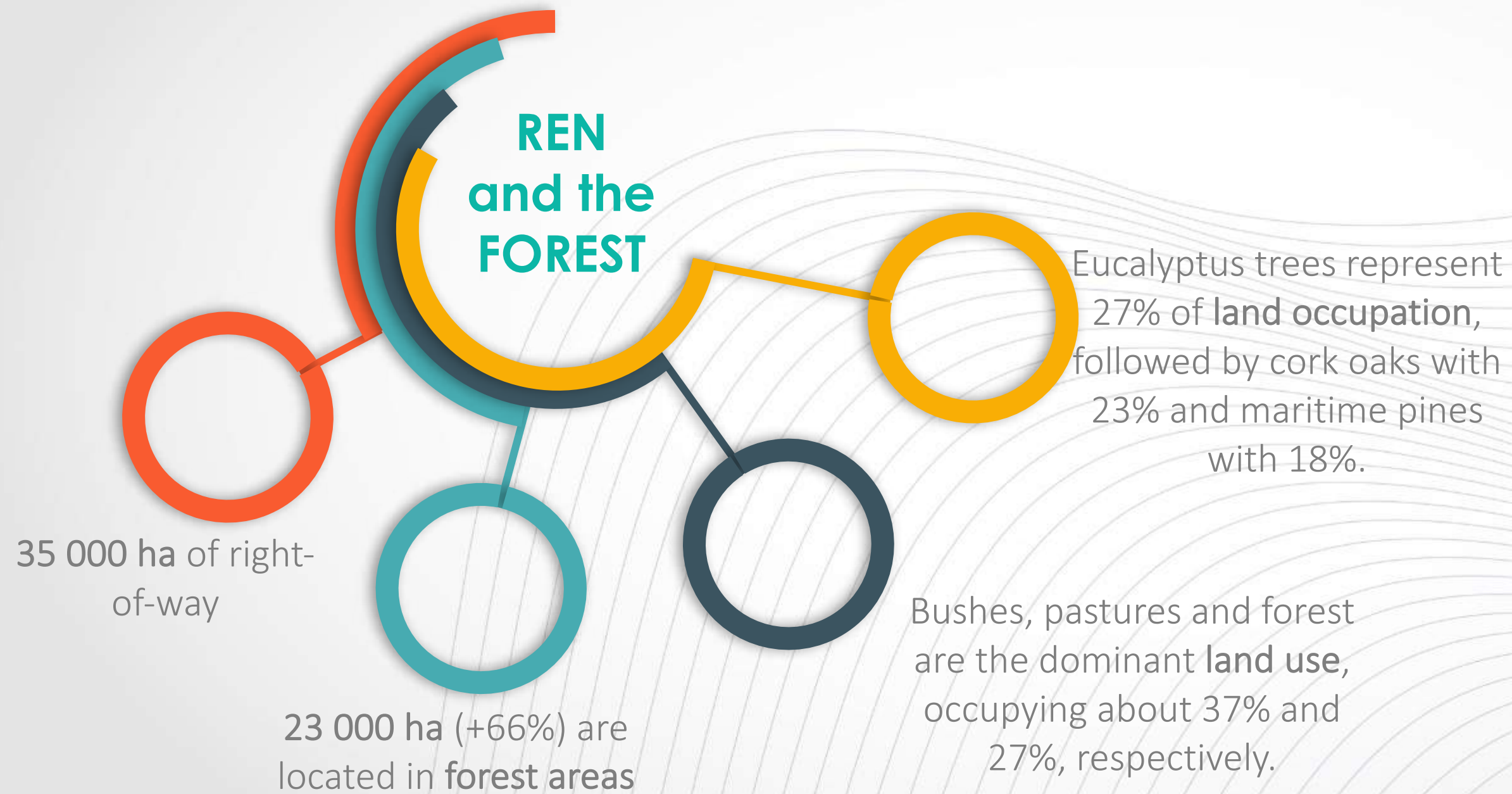
Gas transport and National Natural Gas System technical management

Concessionaire and operator of the Gas Transport Network in Portugal, with around 1,400 km of pipelines.



REN's mission is to ensure the uninterrupted supply of energy throughout the country, contributing to **community development** and improving the **quality of life** of the Portuguese people.

REN and TERRITORY



REN and TERRITORY



REN and TERRITORY

- ▶ 35.000 ha of right-of-way to manage
- ▶ 66% located in forest areas – 23.000 ha
- ▶ + 300 installations in the country
(mostly in rural spaces)
- ▶ 9.000 ha/year of vegetation management
 - ▶ Right-of-Way (8.000 ha)
 - ▶ REN properties (1.000 ha)
- ▶ + 200 active partners' employees (daily average) in vegetation management.



REN and TERRITORY

Main objectives:

- ▶ Infrastructure protection
- ▶ Territories more resilient to rural fires

Other objectives:

- ▶ create value for landowners
- ▶ increase of the biodiversity, and
- ▶ job creation at a local/regional level



REN and TERRITORY

Vegetation Management (Right-of-Way and REN Properties)

$\Sigma \approx 49\,350$ ha
(2016 – 2021)

unidade: ha



áreas executadas

STRATEGIC OBJECTIVES

Environmental Impact Assessment

Compliance with the measures defined in the Environmental Impact Statements



SUSTAINABILITY

Local Communities and landowners, promotion of biodiversity, based on the principle of creating shared value



SAFETY

Increased resilience of infrastructure to extreme events (extreme rural fires, hurricanes, storms, freezing rain and others)



COSTS
Efficient cost management

INTEGRATED VEGETATION MANAGEMENT PLAN

LEGISLATION

DL 82/2021
Protection of infrastructure against rural fires



LEGISLATION

DR 1/1992
Power line safety regulations



LEGISLATION

DL 11/1994
Gas pipeline safety regulation



REN Innovative Approaches to Vegetation Management



Aligned with **ESG Goal 15 - Life on land**, REN is contributing to the protection and recovery of native forest in Portugal.



SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

REN Innovative Approaches to Vegetation Management



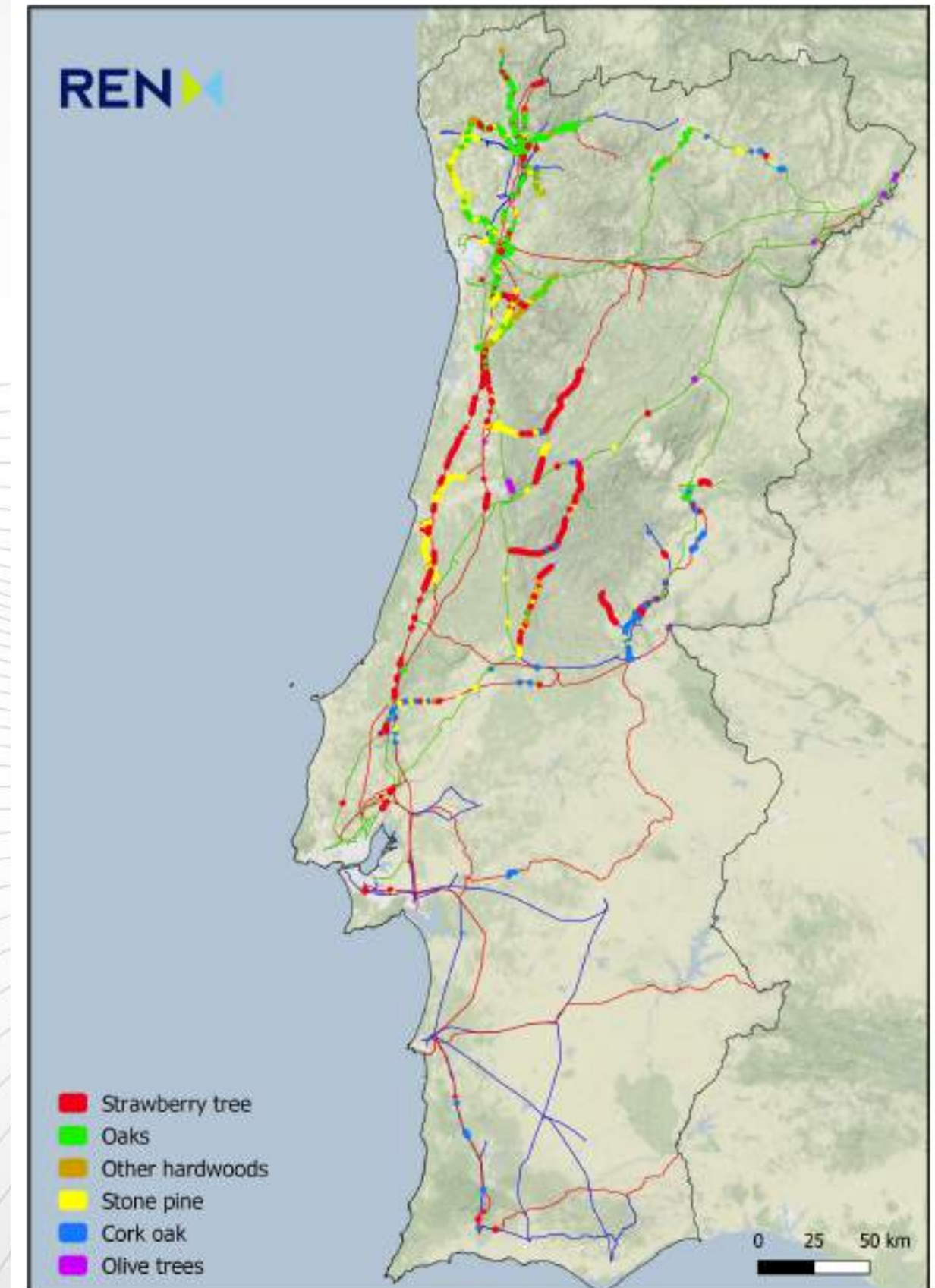
In collaboration with official authorities and with the involvement of local communities and landowners, between 2010 and 2021, REN proceeded with the land reconversion of 3,645 ha of forested area, mainly occupied with eucalyptus trees, involving 20 764 landowners.

REN Innovative Approaches to Vegetation Management



**Reforested area
(2010 – 2021)**

3 645 ha



REN Innovative Approaches to Vegetation Management

The reconversion arose from the need to:

- **increase the resilience** of our powerlines in areas occupied by fast-growing forest species;
- **reduce maintenance costs**, and
- **increase properties value** that are often abandoned by landowners, as they abdicate their management.



REN Innovative Approaches to Vegetation Management

This **active approach** involves the reconversion of the right-of-way corridor, and consists in:

- **Land Use change**, converting forest areas into agricultural areas (vineyards, pastures, orchards); or
- **Land Occupation change**, by replacing existing fast growing forest species with native forest species compatible with the infrastructure.



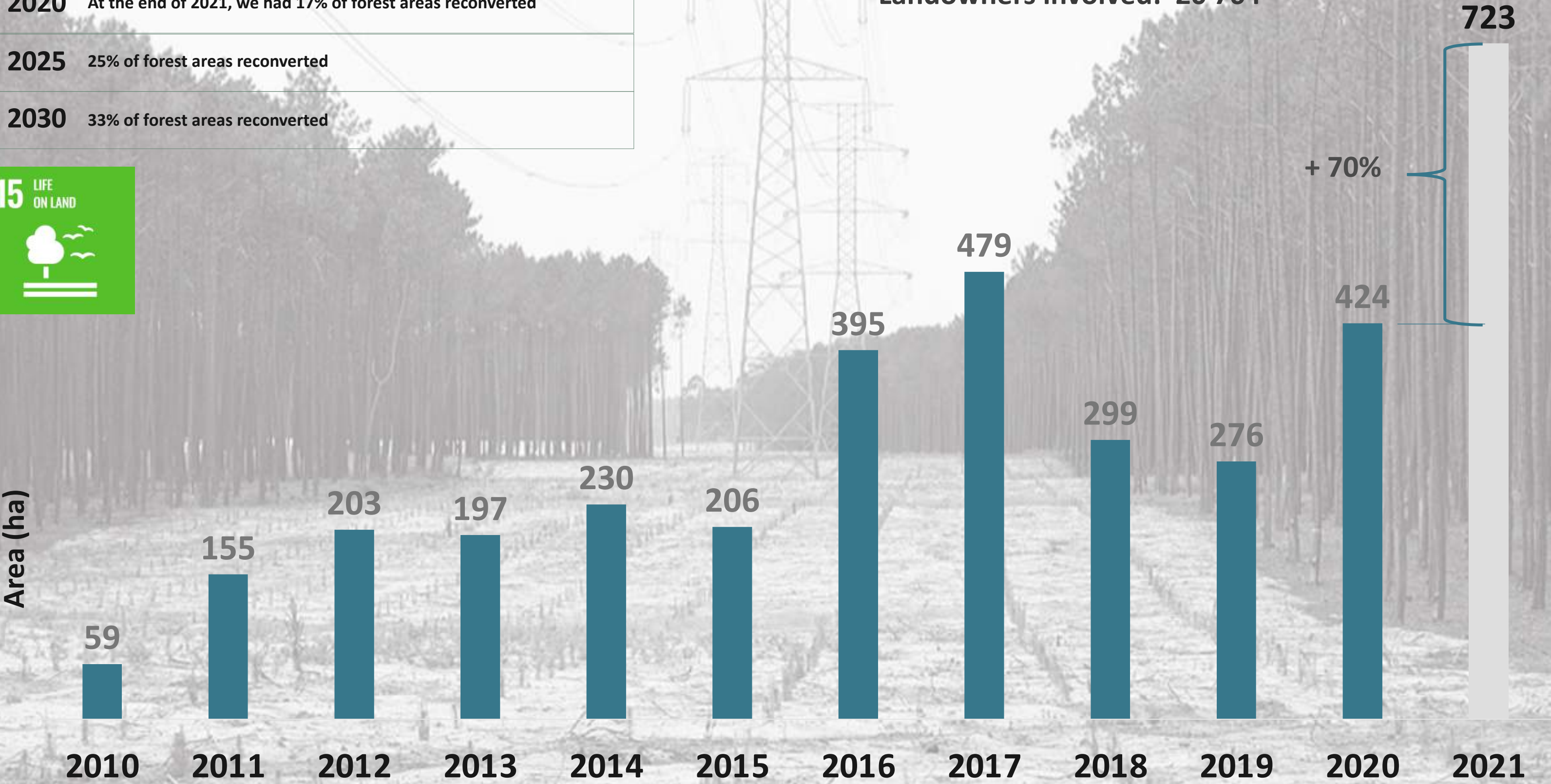
REN Innovative Approaches to Vegetation Management

ESG Goal

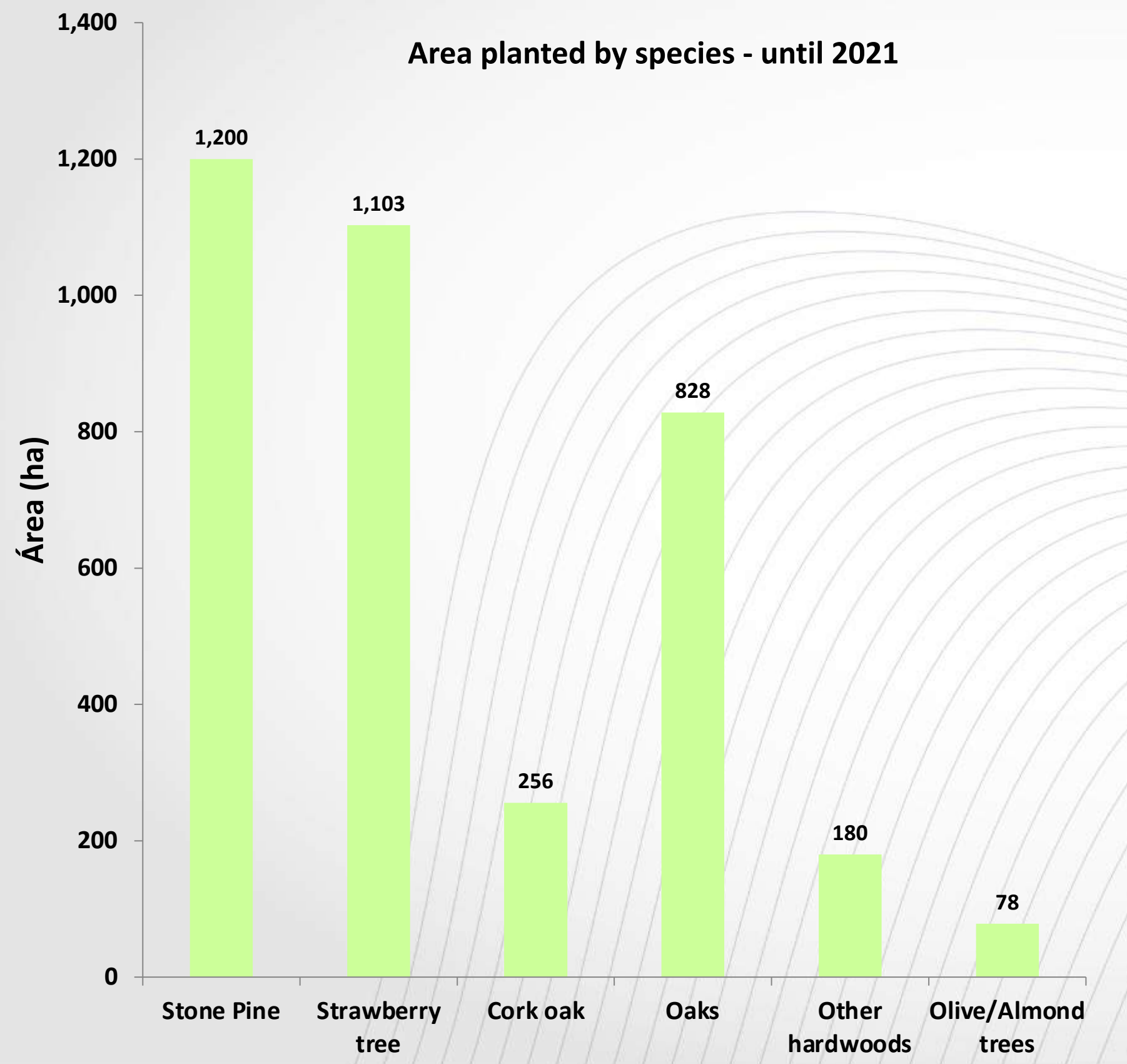
2020	At the end of 2021, we had 17% of forest areas reconverted
2025	25% of forest areas reconverted
2030	33% of forest areas reconverted



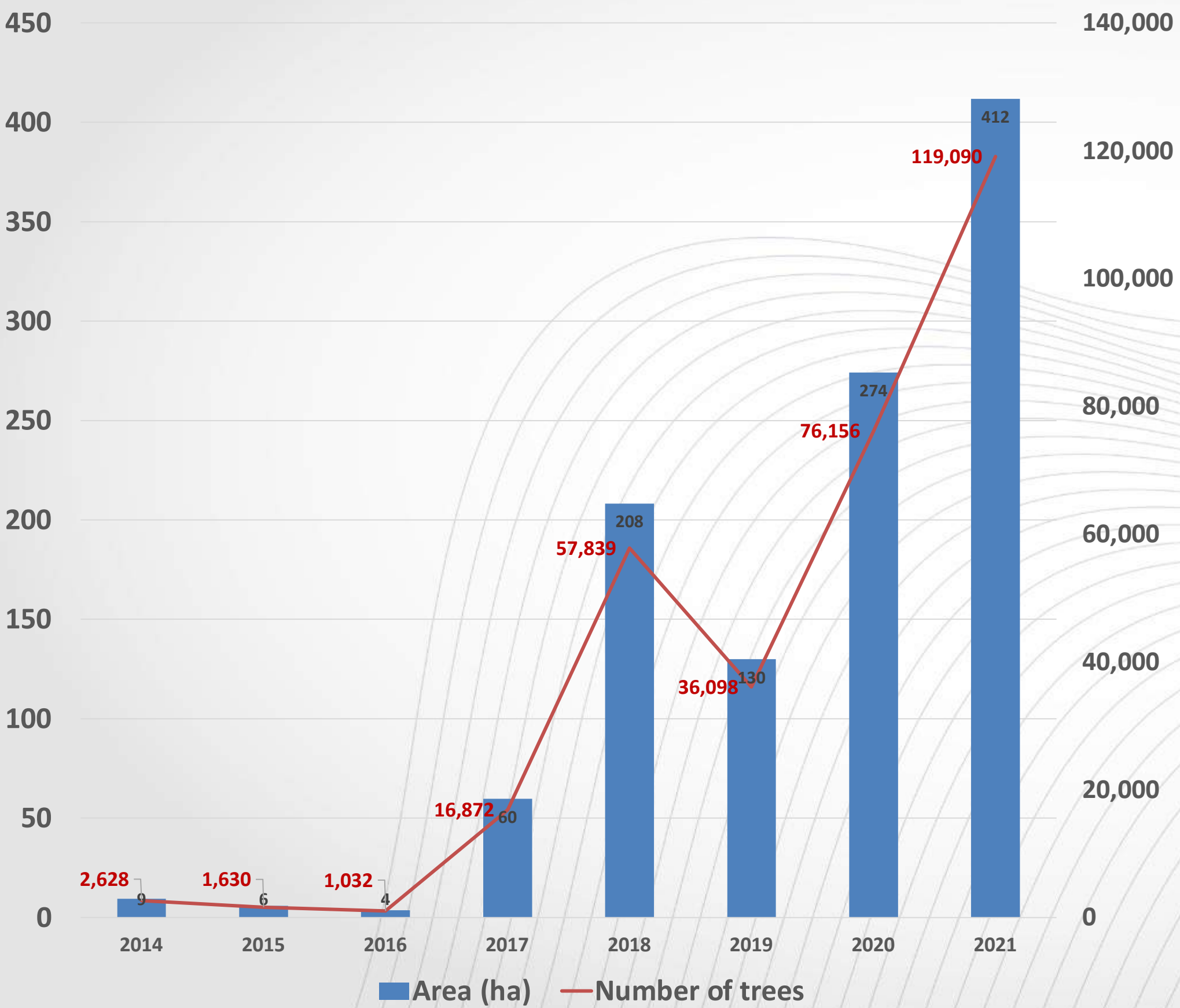
Landowners involved: 20 764



REN Innovative Approaches to Vegetation Management



REN Innovative Approaches to Vegetation Management





REN Innovative Approaches to Vegetation Management







REN Innovative Approaches to Vegetation Management



Under **ESG Goal 17 - Partnerships for the goals**, REN established a protocol with ACERG (Association of Garrano Equine Breeders), APOSC (Association of Planning of Serra da Cabreira) and the Municipality of Vieira do Minho for the **shared management of an area of 100 ha.**



SGD 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

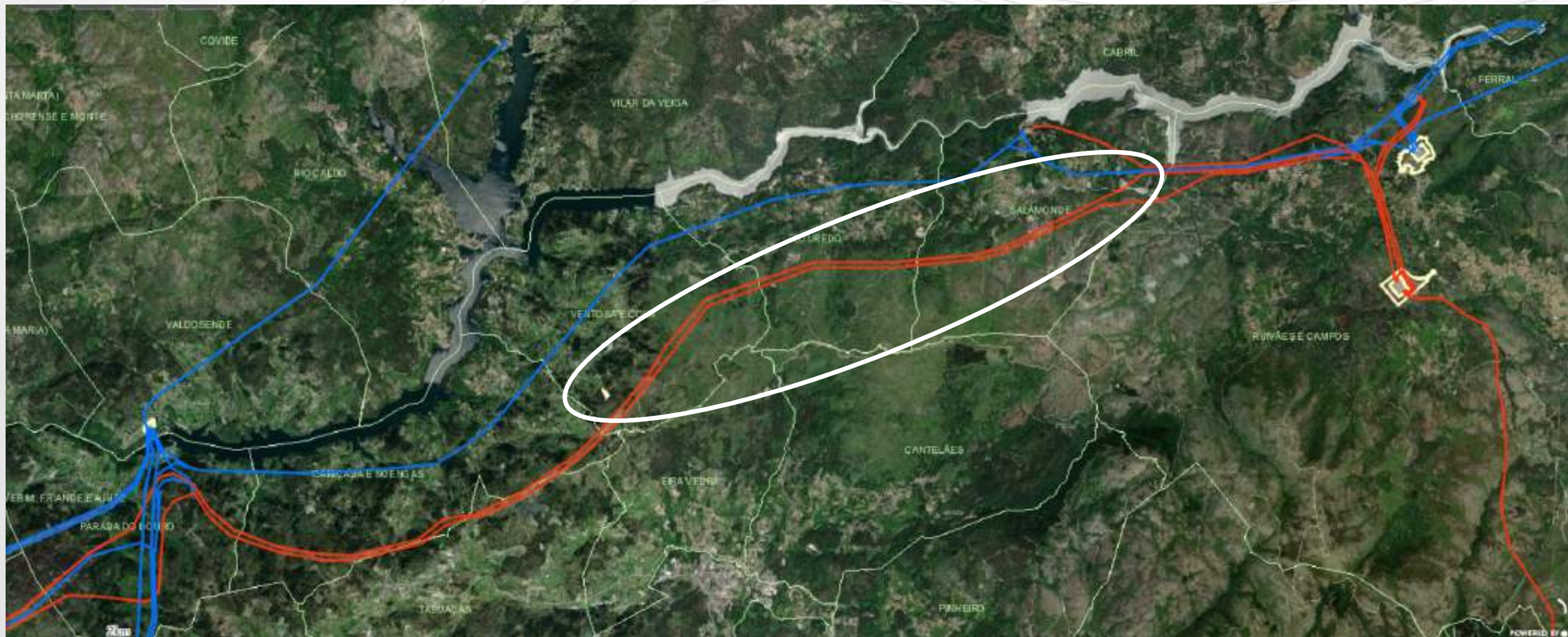


APOSC

REN Innovative Approaches to Vegetation Management



Use of **Garrano horses**, an native animal species, adopting **extensive grazing** as a tool to **reduce the risk of fire** (vegetation management) in rural areas, helping to prevent fires in Serra da Cabreira (Vieira do Minho).



REN Innovative Approaches to Vegetation Management



This innovative approach brings together REN and local stakeholders to **create shared value**, helping to **prevent rural fires** in this mountainous region and, at the same time, create conditions to **defend this endangered species**.



REN Innovative Approaches to Vegetation Management

- The permanence of about **263 mares and 28 stallions**, in the high areas of the mountain, will lead them to feed mainly in these areas.
- As each Garrano horse eats an average of 25 kg of food per day, this horses that live in Serra da Cabreira will feed daily on about **7,000 kilos of shrub and herbaceous vegetation**, substantially reducing the risk of forest fires.
- This partnership also includes the participation of Association of Planning of Serra da Cabreira, which, through their **forestry brigades**, complement the work that is not carried out by the Garranos horses.

REN Innovative Approaches to Vegetation Management

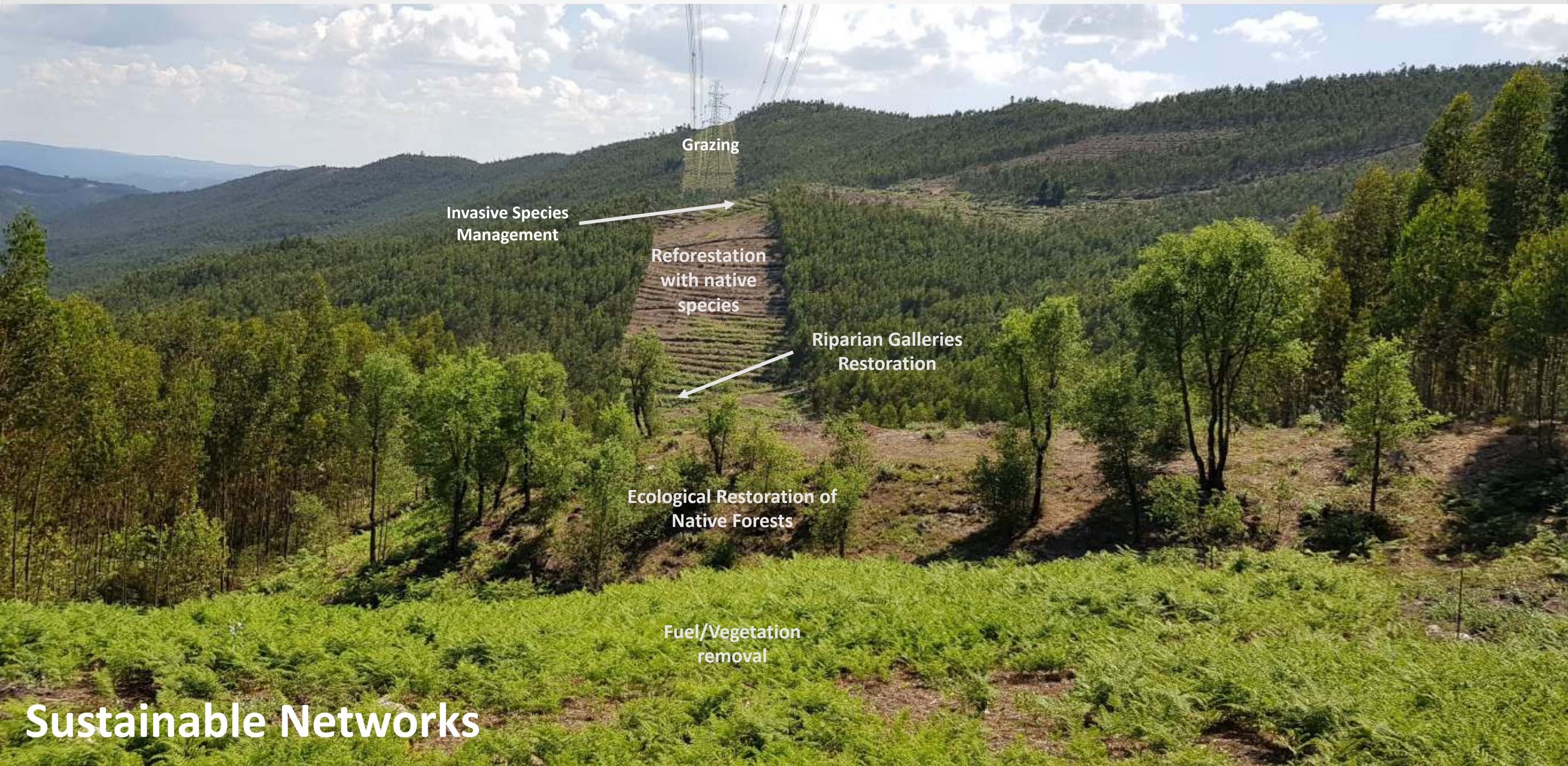


REN is responsible for:

- **payment of a certain value (€) per ha**, corresponding to the vegetation management carried out through grazing by the Garranos horses;
- **building a fence**, in some specific sections, that will prevent the Garranos from easily reaching the national road, thus reducing the possibility of road accidents;
- create a system of **improved pastures** and **plant native shrub species** in selected areas, helping the animals to not feel the need to travel to other areas to find food, as well as contributing to an **increase in biodiversity**;
- creating **drinking fountains** for the animals, and
- placing **GPS locators** on dominant stallions and mares, with the aim of **monitoring** them.



REN Innovative Approaches to Vegetation Management





Contacts:

Email: pedro.marques@ren.pt

Tlm. 00351 96 857 35 42