

## Red Electrica is developing a pioneering project in Spain to control the vegetation under power lines through grazing

- Pastoreo enRED is being carried out in Calahorra (La Rioja) by a local livestock farmer, the company Agrovidar, the autonomous government and the town council
- The Red Electrica Group plans to replicate the initiative in other regions owing to its benefits in terms of improving biodiversity, maintaining an activity in recession –grazing– and combating rural depopulation.
- A study by the University of Alcalá has demonstrated that the use of livestock for maintenance work on the electricity transmission grid reinforces the ecosystem services of supply, regulation and culture, favouring biodiversity and the well-being of society

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The Red Electrica Group is developing in Calahorra (La Rioja) a pioneering pilot project in Spain to control the development of vegetation located under electricity transmission lines with the help of sheep grazing. The initiative, Pastoreo enRED, incorporates knowledge and technological innovation to extensive grazing, since the monitoring the state vegetation is carried out by means of remote sensing flights (drones) and the sheep are tracked by placing GPS collars on some of them.

The project prevents forest fires, promotes biodiversity and increases natural capital. In addition, it promotes a new source of employment for shepherds, favours generational change, the socio-economic development of rural areas and helps to consolidate their population. The Red Electrica Group intends to replicate the project in other regions of the country.

"Red Electrica's transmission grid has some 44,000 kilometres under which there are safety corridors that require pruning to prevent vegetation from growing and reaching the cables. If we manage to get the local sheep to do it, which, by grazing under the lines, reduce the larger bushes and favour the appearance of grass, we will be providing a significant ecosystem service", stated the Manager of Sustainability Area of the Red Electrica Group, Antonio Calvo.

The project is being developed in the public utility hill "Los Agudos", a forest area within the municipality of Calahorra crossed by the 220 kilovolt (kV) Quel-La Serna power line, owned by Red Electrica, a key infrastructure for the Ebro Valley.

Jesus Garcia, a livestock farmer from Aldeanueva de Ebro with 700 sheep and the Riojan company specialised in sustainable agri-environmental solutions, Agrovidar, are in charge of developing the project with the collaboration of the Department of Sustainability and Ecological Transition of the Government of La Rioja and the Calahorra City Council.



"The Government of La Rioja supports Pastoreo enRED because it has the virtue of combining benefits for biodiversity and the shepherds of the area, whose herds are provided with food in Red Eléctrica infrastructures that need to be cleaned up", points out the Regional Government's Minister for Sustainability and Ecological Transition, Alex Dorado. The mayoress of Calahorra, Elisa Garrido, adds: "It is a source of pride for our municipality to have been pioneers in this project that unites the most ancient tradition of pastoralism with new technologies to improve the future of our country and the planet".

The project has been the subject of a study by the University of Alcalá, carried out by a research group led by Professor of Ecology Antonio Gomez Sal, which has shown that the use of livestock in the maintenance of the electricity transmission grid enhances the services of regulatory, cultural and supply ecosystems and favours biodiversity and the well-being of society.

### **Technology and tradition in a project that can be replicated in other territories**

Pastoreo enRED stands out as the most sustainable alternative for clearing the "safety corridors" under the transmission grid lines in forest areas where the vegetation growth has to be controlled so that it does not reach the power lines. Normally, these pruning and felling works are carried out with machinery, but recurrent grazing has proved to be ideal for this purpose due to the effect of the vegetation ingestion by the animals, their trampling, the time they spend lying down, and the organic matter they leave behind. With the continuous passage of livestock, the composition of the plant species is modified, since when the sheep consume the shoots of the scrubs, they weaken their vigour and capacity for regrowth, while the appearance of more palatable herbaceous vegetation is stimulated.

The work commenced in October 2019. After using drones to take multispectral images of the terrain to determine the strength of the vegetation, a pasture plan was drawn up to ensure the best use by the livestock and to digitally delimit the priority intervention areas (a corridor 3.5 kilometres long and 30 metres wide) from those to be preserved due to the existence of erosive processes.

The placement of GPS devices on some of the animals in the herd has provided detailed information on their location and their permanence in each area. Drone flights, geographic information systems and remote sensing have facilitated the management and coordination of the clearing work. "New technologies have been of vital importance for the development of this project," explained Agrovidar's director, Gonzalo Villalba.

The aim of this project is to create a practical guide that will allow similar actions to be carried out quickly and practically in other areas of the autonomous region of La Rioja and the rest of Spain, combining technology with support for agroecology and extensive livestock farming, today at risk of extinction. "I am selling lambs at the same price as 40 years ago and I can't even go on holiday because I have no one to leave the sheep with", says farmer, Jesus Garcia, adding: "I think it is great and beneficial for everyone that I am here with my livestock cleaning under the electricity grid".

The commitment of the Red Eléctrica Group to the rural areas where the power lines are located, as well as its dedication to sustainability and the fight against depopulation, together with Agrovidar's experience in the use of technology applied to agro-ecological management systems and the



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participation of the shepherds, has made this clear example of a fruitful cooperation between companies operating in the territory, livestock farmers and administrations a reality.