

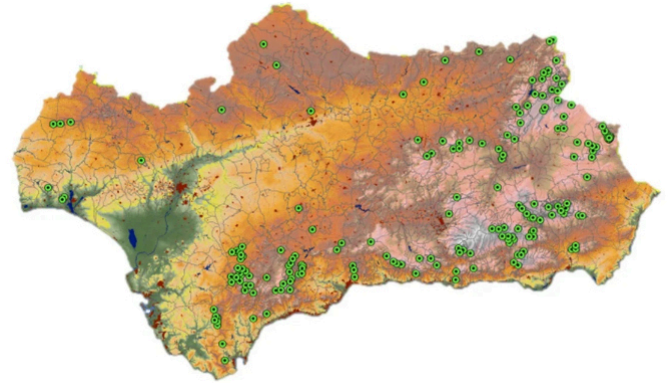
The Andalusian grazing-firebreaks Network (RAPCA)

Targeted Grazing for vegetation control: The RAPCA network.



Location of Andalusia within Spain.

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Map of the firebreaks network in Andalusia.

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/// Context ///

The RAPCA Network in Andalusia, Spain, known as the “Red de Áreas Pasto-Cortafuegos de Andalucía,” focuses on using targeted grazing as a method for fire prevention and sustainable land management. This approach strategically utilizes livestock grazing to reduce vegetation, thereby creating natural firebreaks that help prevent the spread of wildfires. The network carefully selects areas for grazing based on their fire risk and ecological characteristics, ensuring a balance between fire prevention and environmental conservation.

In this system, livestock, particularly sheep and goats, play a multifunctional role. Beyond their traditional agricultural purposes, they are used as tools for environmental

management, maintaining open landscapes that have lower wildfire risk levels. The RAPCA Network involves collaboration among farmers, environmental agencies, and local governments to effectively implement and manage these grazing practices.

Continuous monitoring and evaluation are essential components of the network, allowing for the assessment of grazing effectiveness in reducing fire risk and making necessary adjustments to optimize results. Overall, the RAPCA Network represents a sustainable and proactive approach to wildfire prevention, integrating traditional agricultural practices with modern environmental management strategies.

/// Solution for a Resilient Future ///

The Andalusian General Directorate of Management of the Natural Environment established the Network of Grazing-Firebreaks in Andalusia (RAPCA). This program utilizes targeted grazing to reduce biomass in specific areas, maintaining an appropriate forest structure to prevent fires. To encourage shepherds to graze their livestock in these areas, the RAPCA program offers monetary compensation as part of the payment for ecosystem services (PES).

Launched in 2005, the RAPCA program is a PES scheme in Andalusia that compensates sheep, goat, and cow shepherds for controlling biomass and maintaining firebreaks in public forests. The program prioritizes grazing in areas with existing fire prevention infrastructure, such as mechanically created firebreaks, and regions with a strong

livestock tradition. This focus minimizes the need to relocate herds, build new livestock infrastructure like watering troughs and pens, and supports local economic activity. It ensures that livestock grazing aligns with comprehensive mountain management.

The shepherds who initially joined the program were instrumental in encouraging their peers and fostering trust with RAPCA staff. By 2010, the scheme was fully operational with 67 shepherds. By 2016, the RAPCA network covered 6,000 hectares, involving 223 shepherds from 189 livestock farms, with approximately 90,000 sheep, 20,000 goats, and 1,000 cows.

Technicians from the General Directorate of Management of the Natural Environment provide advice to shepherds

participating in the RAPCA program. Grazing is more intensive during spring and early summer to achieve the desired biomass reduction before the wildfire season. Livestock farmers decide the timing and methods of grazing to meet biomass reduction targets, reducing the need for costly monitoring. Shepherds declare the grazed areas, which are verified against the EU Common Agricultural Policy (CAP) Land Parcel Information System. Compensation for biomass control is based on the area grazed, success rate, and grazing difficulty.

The RAPCA program is managed by the General Directorate of Management of the Natural Environment and executed by



Sheeps grazing in a firebreak.

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the Andalusian Public Agency of Environment and Water (AMAYA). Livestock farms with grazing agreements on land owned by the Andalusian government or local councils are given priority for participation in public forests. Shepherds must sign an annual contract, taking responsibility for vegetation control in a designated area. RAPCA staff, employed by AMAYA, prepare contracts, coordinate involved agents, identify suitable grazing areas, and verify shepherds' tasks through periodic monitoring. They conduct pre-assessments in spring and communicate with shepherds throughout the year, performing a final assessment to ensure proper compensation.



Sheeps grazing under *Pinus halepensis*.

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/// Always Moving Forward ///

When the RAPCA was conceived, there were virtually no similar initiatives in Spain, and few around the Mediterranean. Nowadays the PES scheme linking wildfire prevention and extensive grazing are gaining track, like the case of "Gran Canaria Pastorea", for which the RAPCA network was a model. The testing that took place two years prior its official launch was quite important, during which the public administration cooperated and received advice from the Spanish National Research Council (CSIC). For the development of the RAPCA programme, it has been essential for the technicians of the General Directorate technicians to acquire a deep understanding of the way

shepherds work, their labour needs and the challenges they face. Including the infrastructure that they need in the areas where their animals graze. In addition, it takes special communication skills and empathy to be able to engage with shepherds and lure them into the RAPCA programme, since it is a job that entails a considerable degree of isolation. The work to improve the RAPCA programme is ongoing, yet it has definitely become a model in the Mediterranean context about how extensive grazing can be coupled with wildfire prevention services, and therefore with building more resilient landscapes.

Further information

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