

Design, implementation and management of a recovery model for the European rabbit in Extremadura

ERICC

European Rabbit Iberian
Coordination Committee

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The European rabbit:

A key species in Mediterranean ecosystems

1. Key prey for numerous predators
2. Ecosystem engineer
3. High reproductive potential
4. High spatial and temporal variability



Spanish Imperial Eagle



Iberian Lynx



Bonelli's Eagle



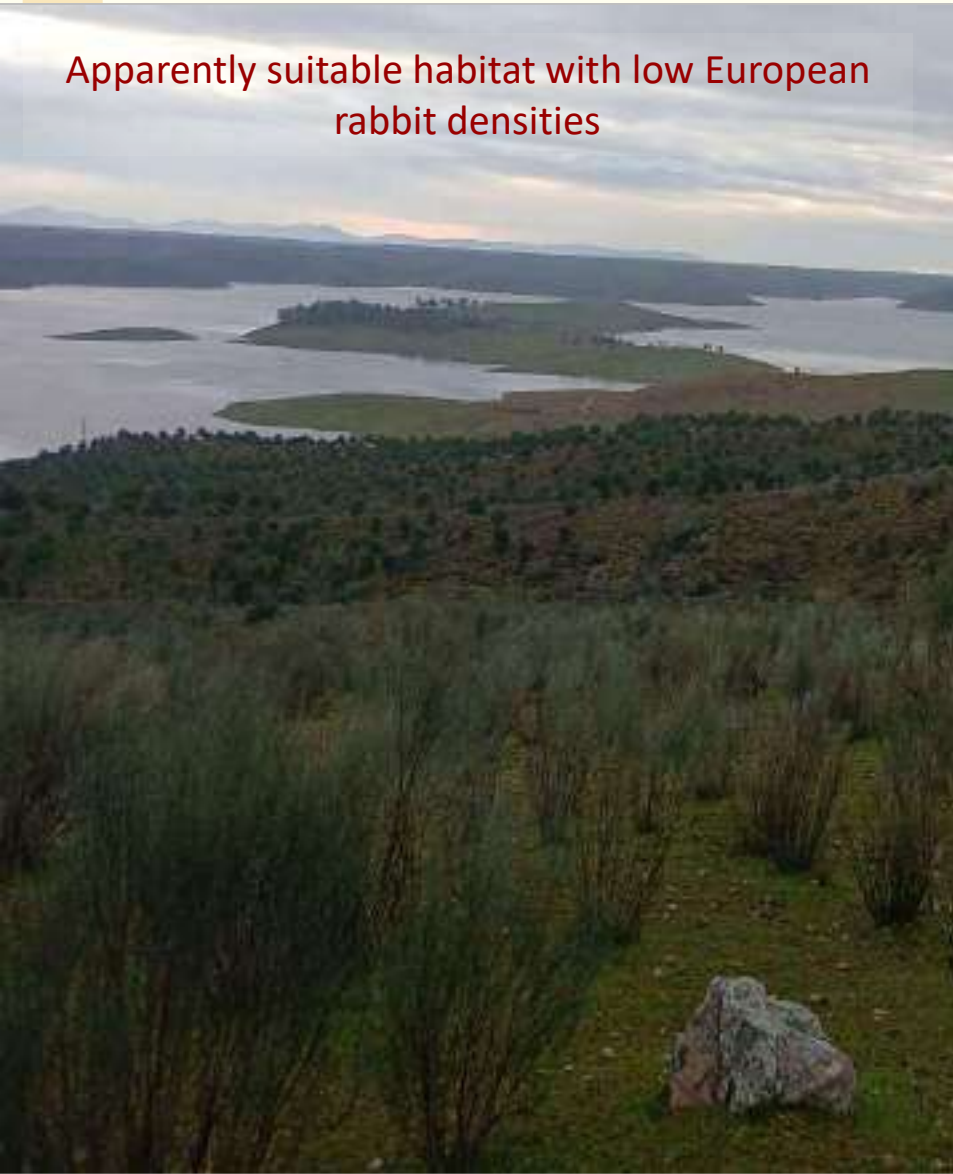
Eurasian Eagle-Owl

Conserving the European rabbit contributes to the functioning of Mediterranean ecosystems and to the conservation of numerous associated species



European rabbit management in Extremadura

Apparently suitable habitat with low European rabbit densities



1. **Widespread population decline.**
2. **Limited natural recovery in many areas.**
3. **Impacts on biodiversity and sustainable hunting.**
4. **Need for an effective population recovery model.**

In response to this situation, the Regional Government of Extremadura launched two pilot projects to design, validate and optimise a recovery model for European rabbit populations



Evolution of the recovery model: From technical validation to practical implementation



Model
adaptation



Project 1

Reference model

Project 2

Optimised and replicable model

The first project enabled the development of a reference model for European rabbit population recovery. A second project was subsequently designed following the same principles, while adapting the recovery sites to reduce implementation costs and facilitate their adoption by landowners and land managers, without altering the functional basis of the original model.



Comparison of the two recovery models

REFERENCE MODEL

Project 1:

- Larger recovery sites (approx. 3–4 ha).
- Greater number of artificial rabbit refuges.
- Larger refuges.
- Greater use of imported construction materials.
- Higher implementation cost.

MODELO REPLICABLE

Proyecto 2:

- Smaller recovery sites (approx. 1 ha).
- Fewer artificial rabbit refuges.
- Smaller average refuge size.
- Greater use of locally available materials.
- Lower implementation cost.

Cost reduction did not imply a change in the underlying concept, but rather an adaptation of the model to facilitate its implementation by landowners and land managers.

Project 1

Objective: Technical validation

Project 2

Objective: Transferencia del modelo



Selection of the intervention areas

SELECTION CRITERIA:

Management criteria

1. Public Forests (MUP).
2. Hunting estates managed by Local Hunting Associations (Project 2: selection carried out in collaboration with the Extremadura Hunting Federation, prioritising Local Hunting Associations actively involved in European rabbit recovery)
3. Balanced distribution between the provinces of Cáceres and Badajoz.

Once the intervention areas had been selected, the exact location of each recovery site was determined according to ecological and functional criteria adapted to each location.



Functional design of the recovery sites

Design based on population production, reinforcement and natural dispersal

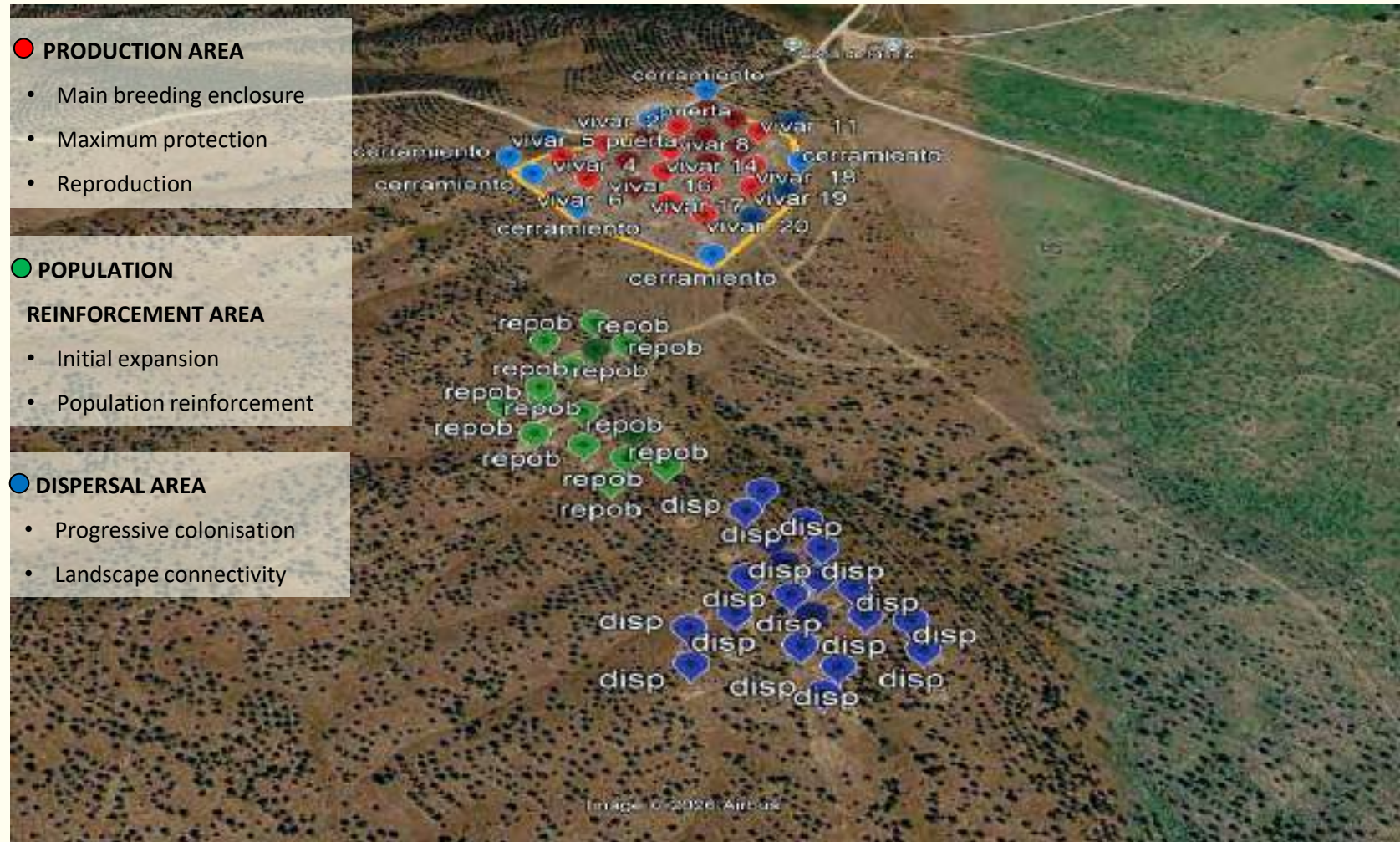


Image © 2008, Airbus

The recovery sites were designed as an integrated system capable of promoting reproduction, strengthening local populations and facilitating their progressive expansion into the surrounding landscape.



Recovery site infrastructure

Construction of artificial rabbit refuges



Artificial rabbit refuges constitute the main structural element of the recovery site, providing shelter and breeding opportunities through a stable and functional design.



Recovery site infrastructure

Construction of the breeding enclosure



The predator-proof breeding enclosure defines the breeding nucleus, ensuring the maintenance of a stable breeding population and the continuous production of rabbits for the progressive colonisation of the surrounding area.



Recovery site infrastructure

Additional infrastructure



The recovery site incorporates complementary infrastructure that facilitates population management and contributes to the proper functioning of the recovery model



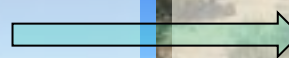
Functional dynamics of the recovery site



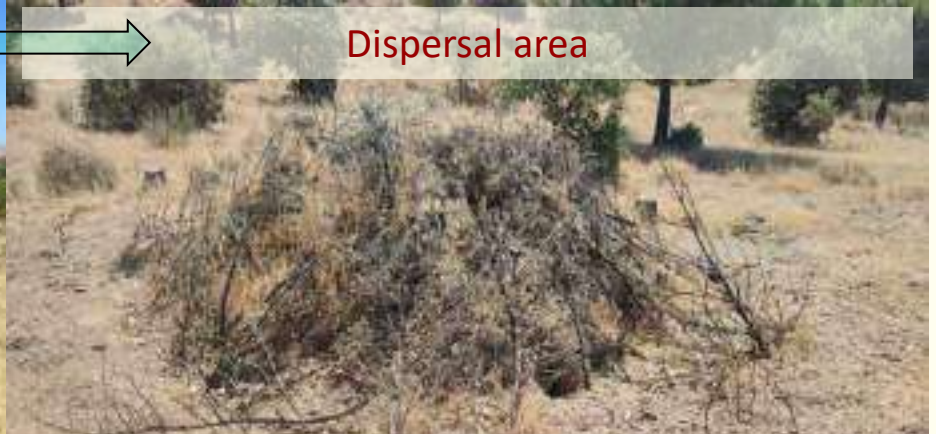
Release into the breeding enclosure



Population reinforcement area



Dispersal area



The model generates a stable breeding population that, through successive captures and natural dispersal, promotes the progressive colonisation of the surrounding landscape.



Management and maintenance of the recovery model

The effectiveness of the model depends not only on an appropriate design but also on the long-term commitment of land managers



MAINTENANCE PROTOCOL

- Maintenance and repair of infrastructure.
- Surveillance of the recovery site.
- Population monitoring.
- Reporting of incidents.
- Cooperation between the Regional Government and Local Hunting Associations.

The involvement of land managers is essential to ensure the continuity and effectiveness of the model.



Scientific monitoring and continuous improvement of the recovery model

Continuous assessment makes it possible to validate the model and identify opportunities for improvement.



MONITORING OBJECTIVES

- Population trends.
- Colonisation of the surrounding landscape.
- Evaluation of model performance.
- Continuous improvement of management.

Adaptive management, supported by scientific monitoring, will progressively improve the European rabbit recovery model.



Proposed scientific monitoring programme

A research framework proposed within the LIFE GAZAPO project to evaluate and improve the recovery model

Preparación LIFE Gazapo

Reunión del miércoles 21 de mayo de 2024 - Zoom



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The proposed scientific monitoring programme included:

- Assessment of population dynamics.
- Evaluation of the use of the different recovery site components.
- Assessment of landscape colonisation.
- Identification of opportunities to improve the model.

The activities proposed within the LIFE GAZAPO project included the development of a scientific monitoring programme, in collaboration with the University of Córdoba, to validate and optimise the recovery model. Although the project was ultimately not approved, the need for such monitoring remains fully relevant.



European rabbit recovery requires a long-term vision based on planning, adaptive management and scientific knowledge

The long-term consolidation of the model will depend on collaboration between public authorities, land managers and the scientific community

THANK YOU FOR YOUR ATTENTION

