

Calculation of potential suitable habitat in the Iberian Peninsula and Natura 2000 network



Con la colaboración de:



Content

Introduction

Objective

Methods

Results y
discussion

Conclusions
and following
steps

What is favourable conservation status (FCS)?

It's an **objective** of **Habitat Directive (92/43/CEE)**



Law 42/2007, of December 13, on Natural Heritage and Biodiversity

3 articles name FCS



- Article 3.25. Objective of conservation a place
- Article 43. Sites of Community Importance (SCIs) and Special Areas of Conservations (SACs)
- Article 46. Nature 2000 conservation measures

Establishment of a criteria that defines FCS

Reverse the criteria of IUCN categories.

IUCN categories	CR	EN	VU	NT	FCS/Least concern	>750 breeding females
Breeding females	25	125	500	750		



For the species

The population in Spain and Portugal is **genetically viable** reaching, at least, **1500 mature individuals and/or 750 territorial females**, moving to the IUCN category “least concern”.

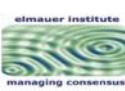
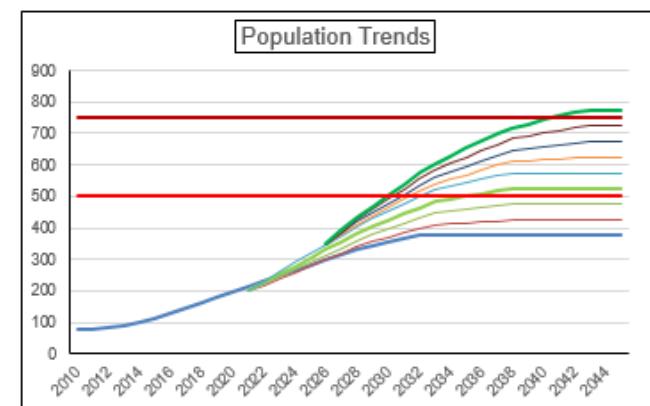
For its habitat

It is achievable a **suitable habitat surface** with a minimum of 1050km².

- Density ≥ 4 rabbits/ha at the end of spring and 1 rabbit/ha in autumn
- ↓ anthropic mortality rate
- ↑ social acceptance

Timeframes

NT ECF	>500 breeding females >750 breeding females	2035; >3 new Populations 2041; >8 new Populations
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Determine if there is enough potential habitat in Spain and in Natura 2000 to guarantee that the Iberian lynx reaches a favourable conservation status.

Female territory surface and population viability

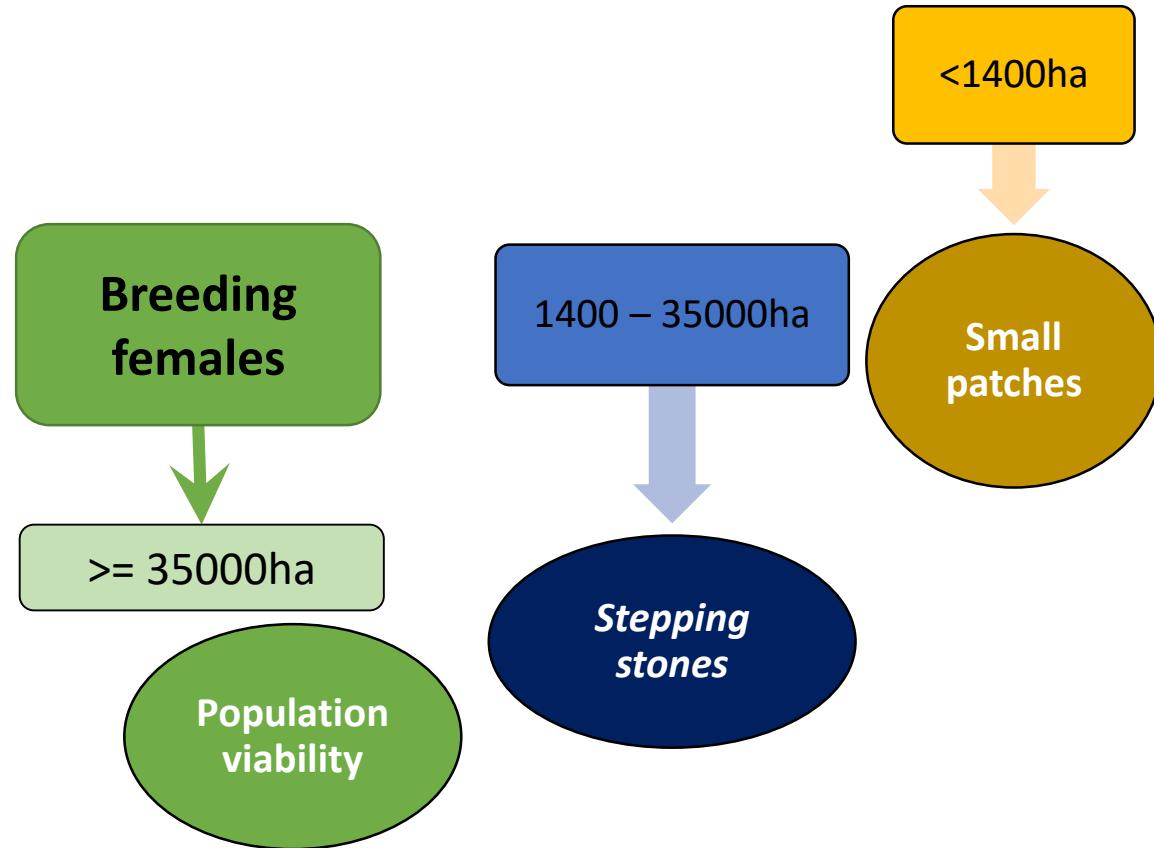
Minimum patch size: Those one which can shelter a **breeding female**, that is to say, territory surface that she uses for breeding.

1400ha

Population establishment: There is a **minimum surface** which guarantees the **viability** of a **population**.

Population viability:

- 100 years (50 breeding individuals) and,
- 1000 years (500 breeding individuals).

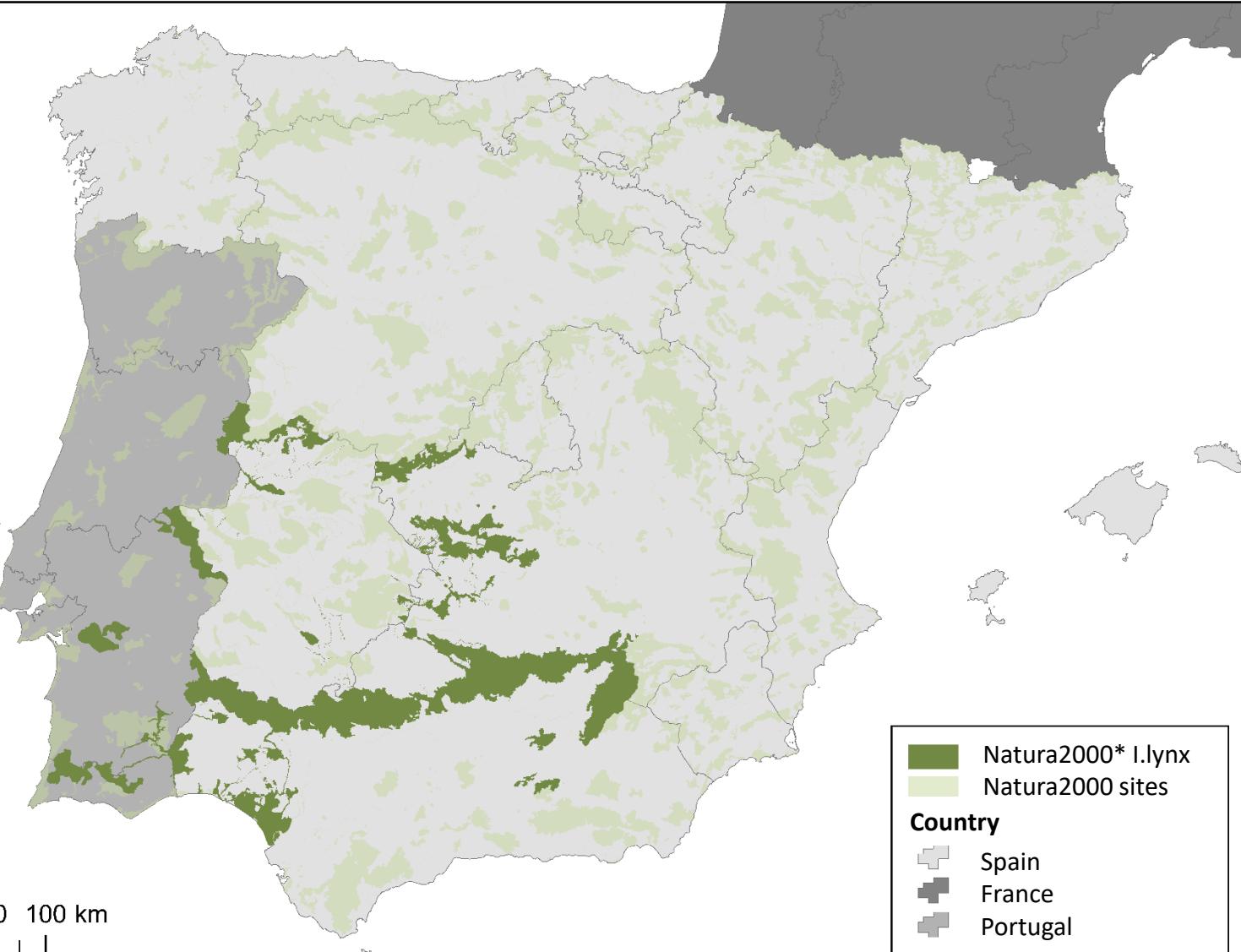


Natura 2000 network

		Natura 2000 site 2		
		(a)	(b)	(c)
Criteria				
Natura 2000 site 1	(a)	*	*	*
	(b)	*	*	*
	(c)	*	*	-

Criteria:

- a) If when the Natura 2000 site is declared the Iberian lynx is important or the species is present;
- b) if in the Natura 2000 site record the species is considered as important;
- c) If the species it is not considered in the Natura 2000 site record nor it is present.



Habitat suitability

model. Iberlince

Phase 1 (unpublished

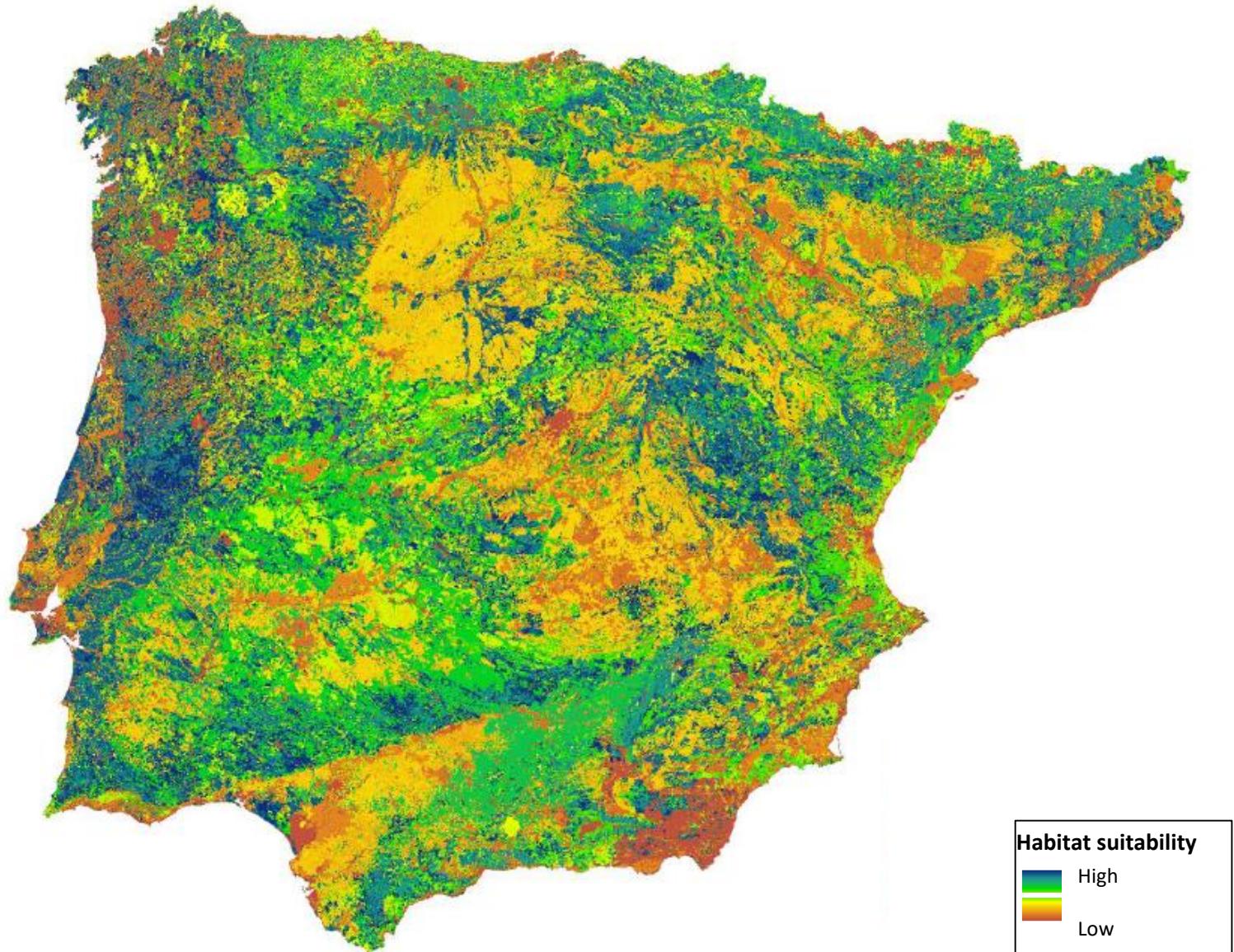
report; Saura *et al.* 2014).

❖ Environmental variables:

- CORINE Land Cover (1:100.000)

❖ Biological data:

- 44.002 GPS-GSM locations (48 individuals)

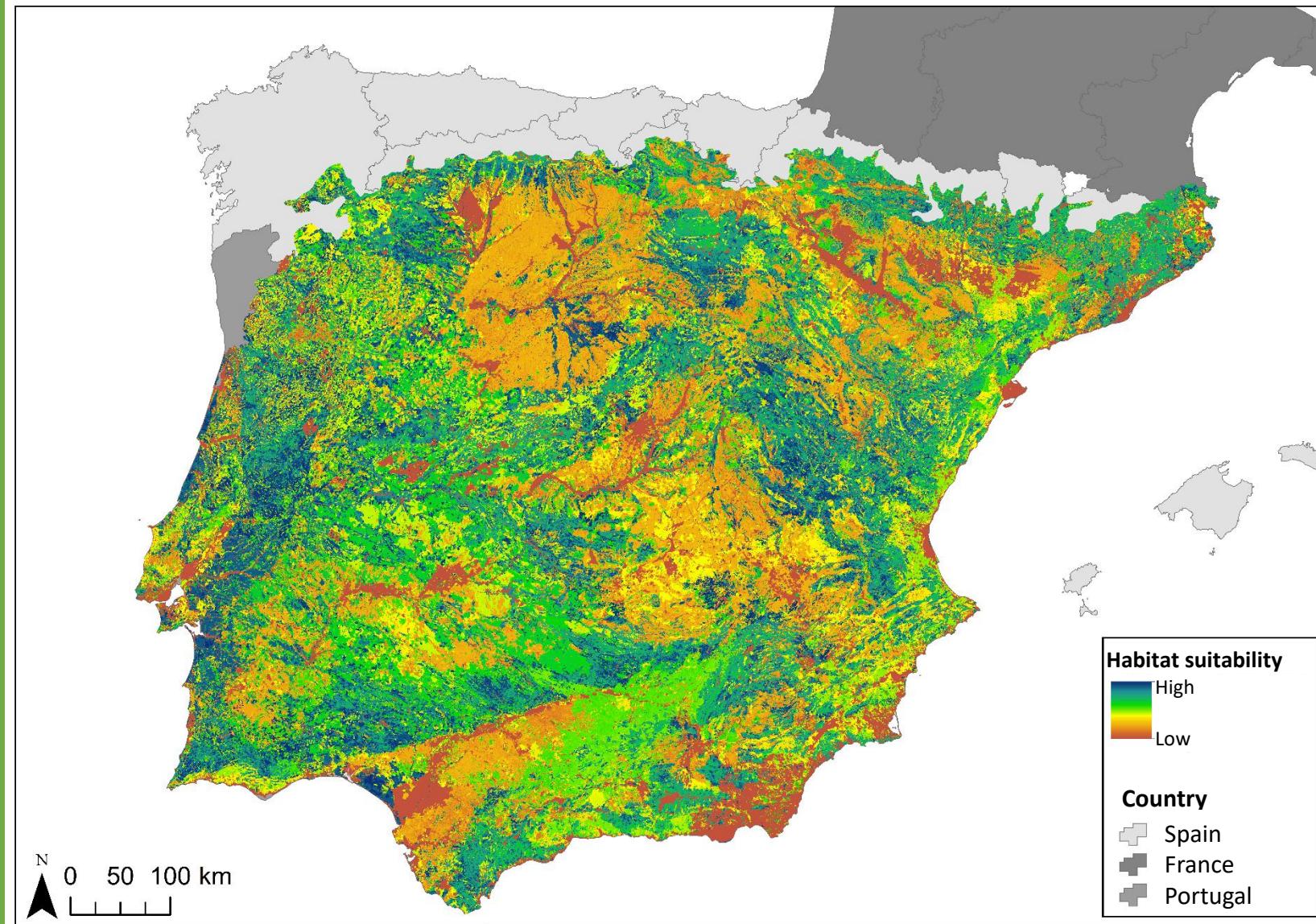


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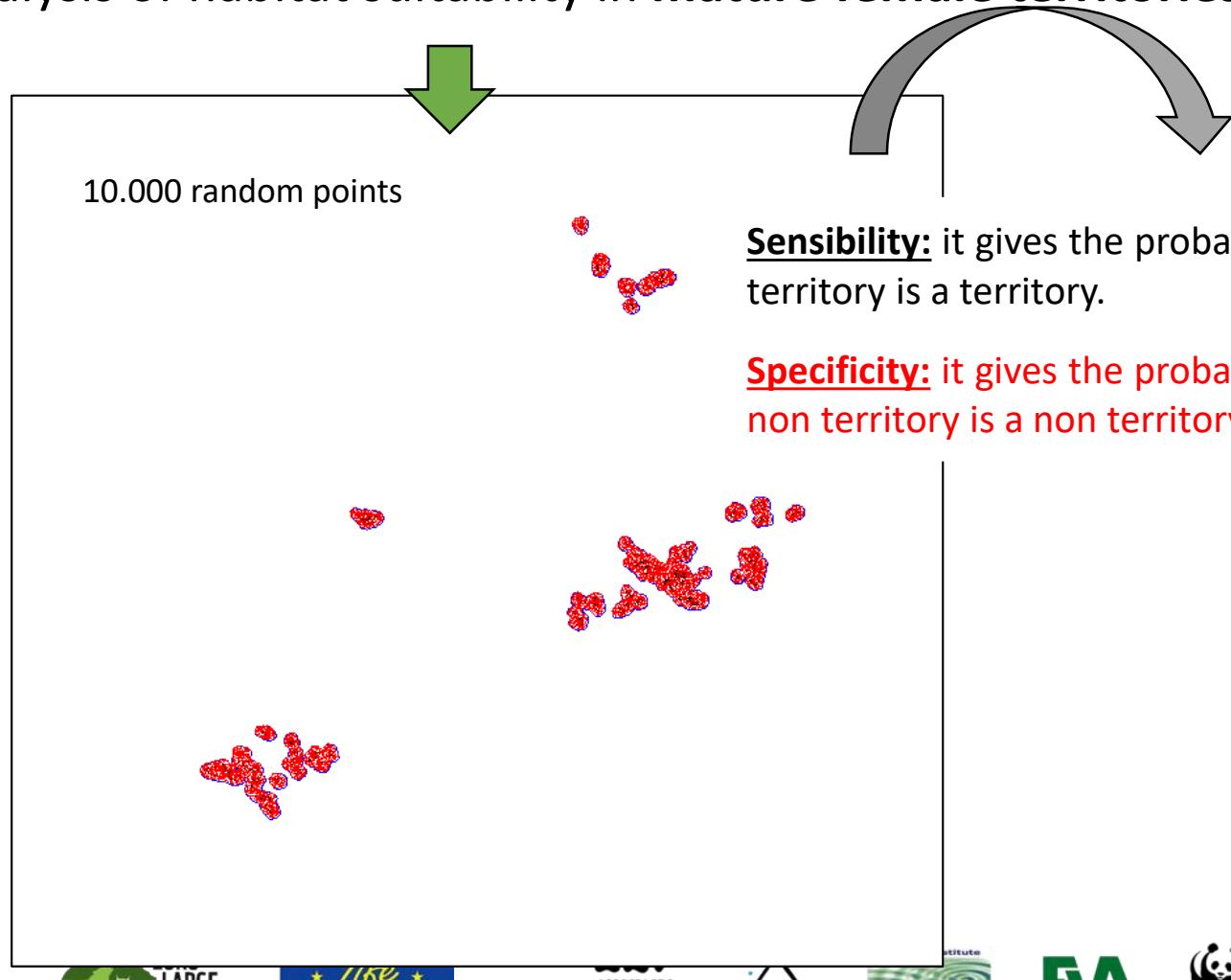
Habitat suitability model Iberlince Phase 1 in the mediterranean region (unpublished report; Saura *et al.* 2014).

- ❖ Environmental variables:
 - CORINE Land Cover (1:100.000)
- ❖ Biological data:
 - 44.002 GPS-GSM locations (48 individuals)

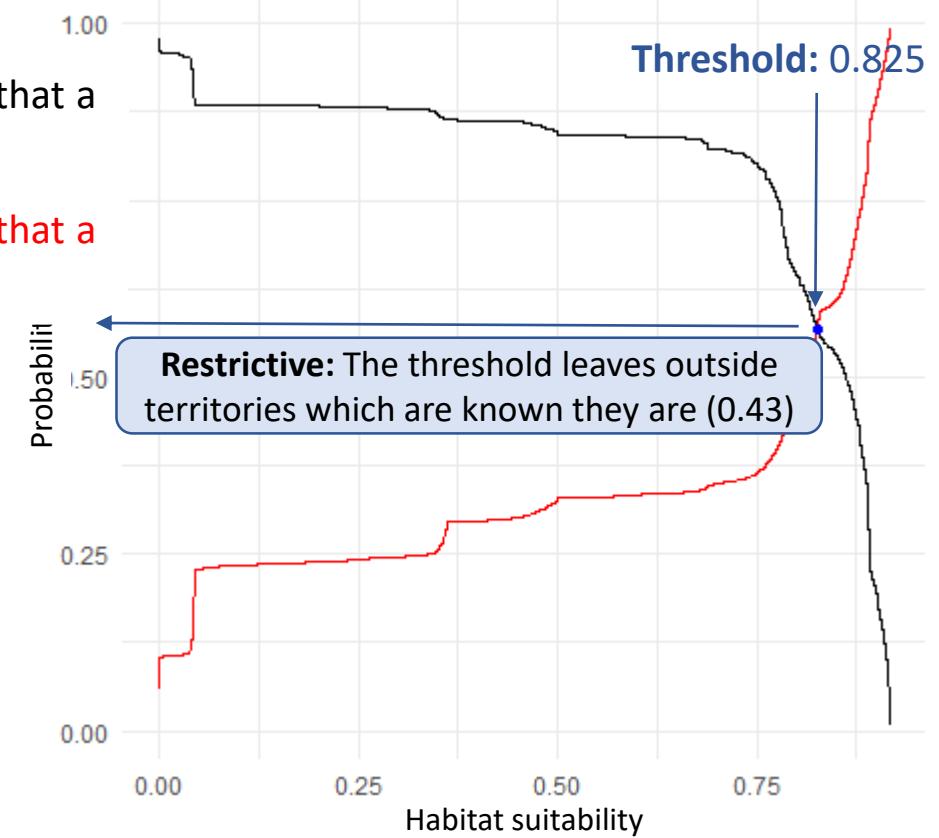


1. Establishment of a threshold

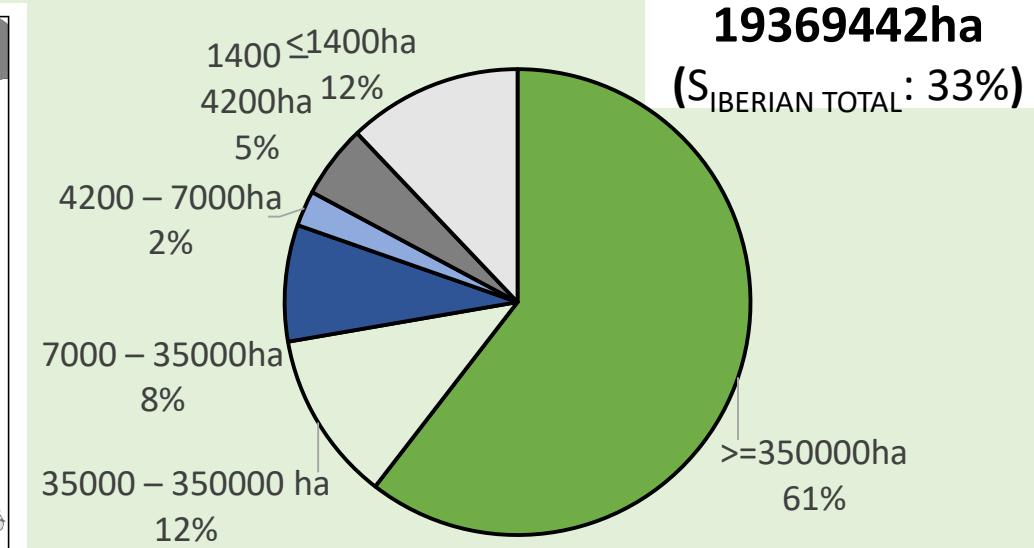
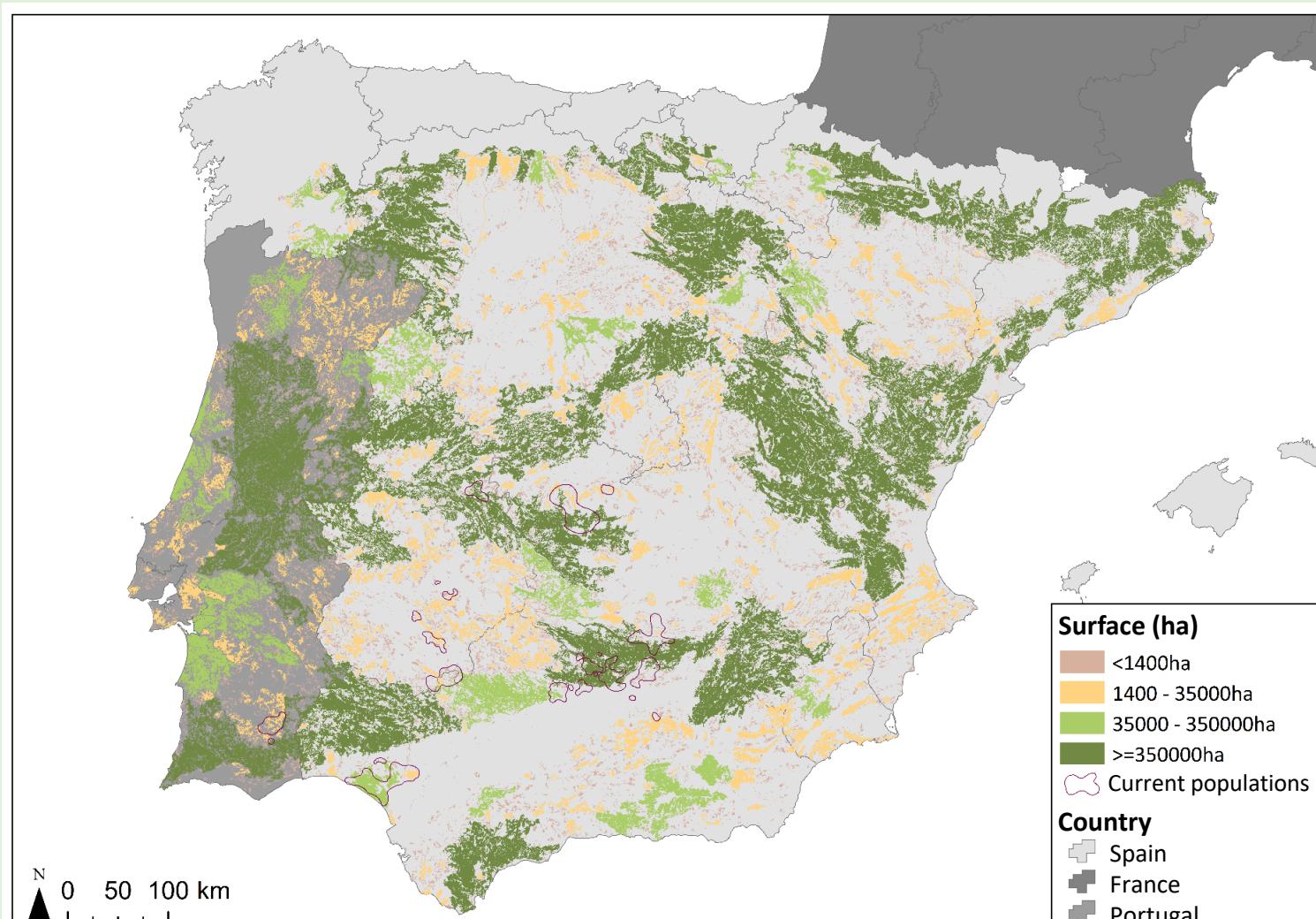
- Analysis of habitat suitability in **mature female territories**.



Sensibility and specificity curves



Habitat suitability surface available in the Iberian Peninsula



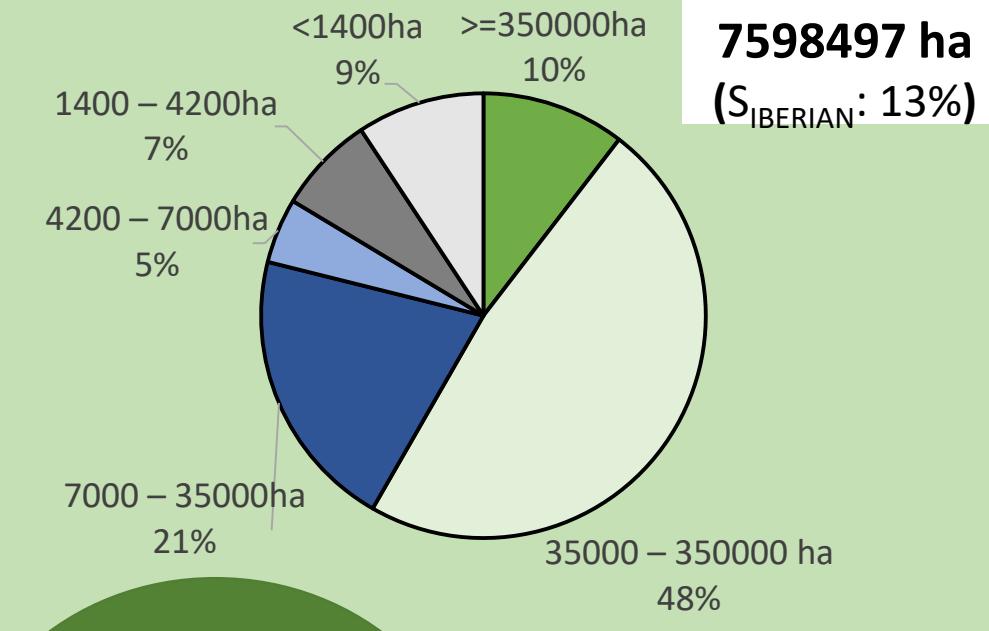
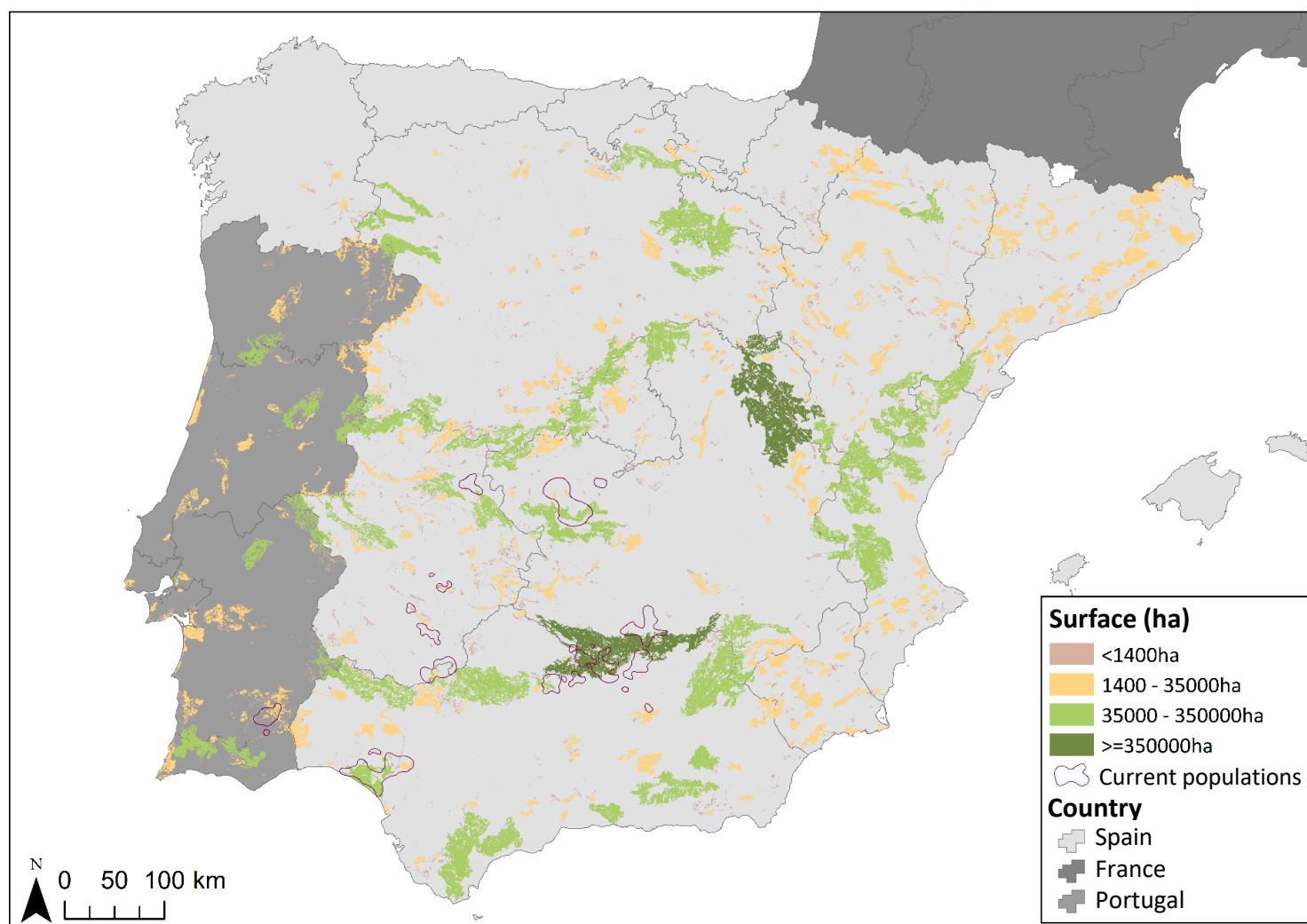
24% of Iberian surface
are favourable places
for the establishment
of a population



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Habitat suitability surface available in Natura 2000



29% of Natura2000 surface (ESP & PT) is favourable for the establishment of populations.

8% of peninsular surface.

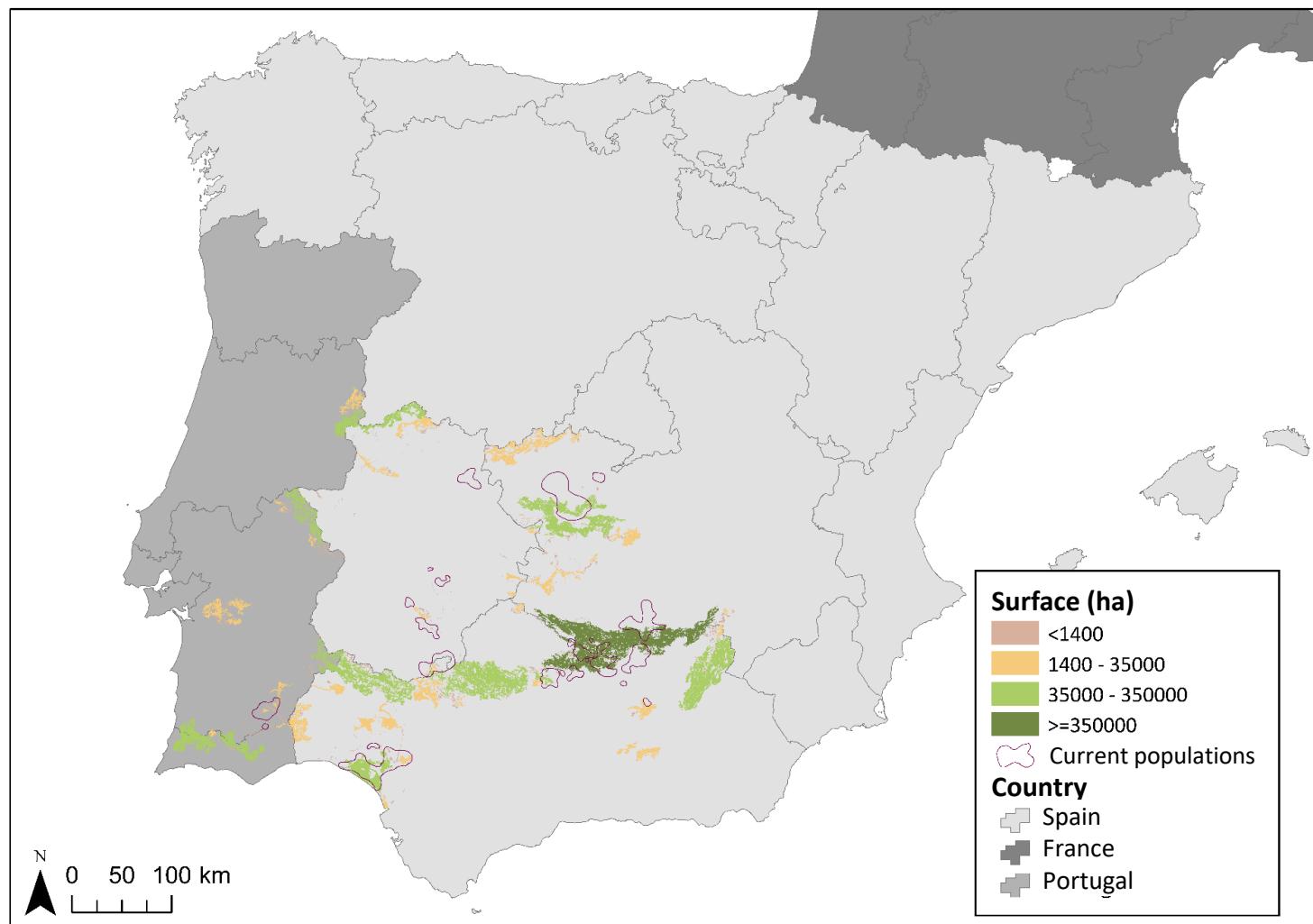
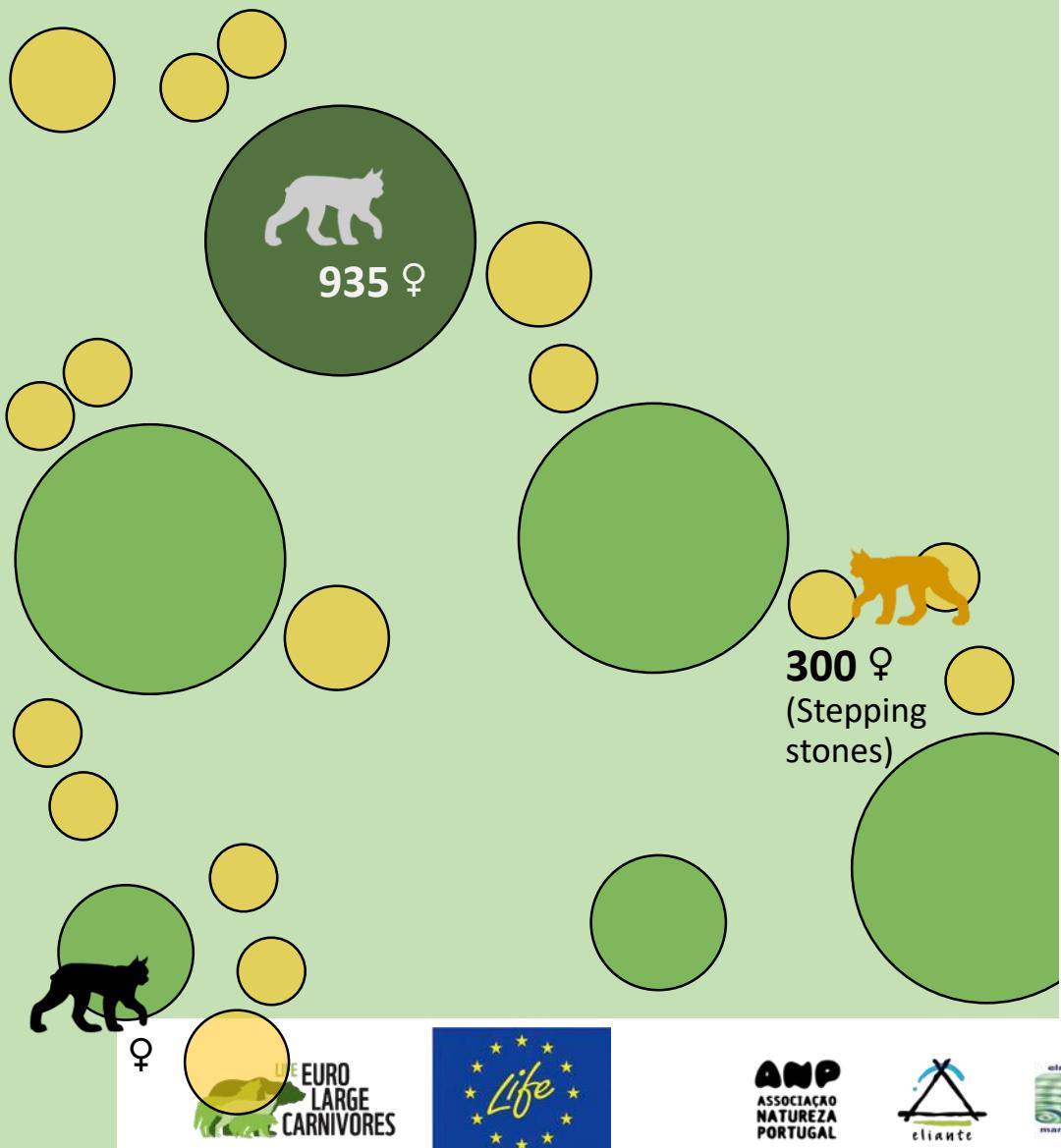


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Habitat suitability surface available in Natura 2000*, with Iberian lynx priority



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Currently there is **enough potential suitable habitat** in the Iberian Peninsula,
in **Natura 2000 network** and **Natura 2000*** sites to achieve the **Favourable
Conservation Status** of the Iberian lynx and its populations are **far from UICN
threatened categories.**



Following steps

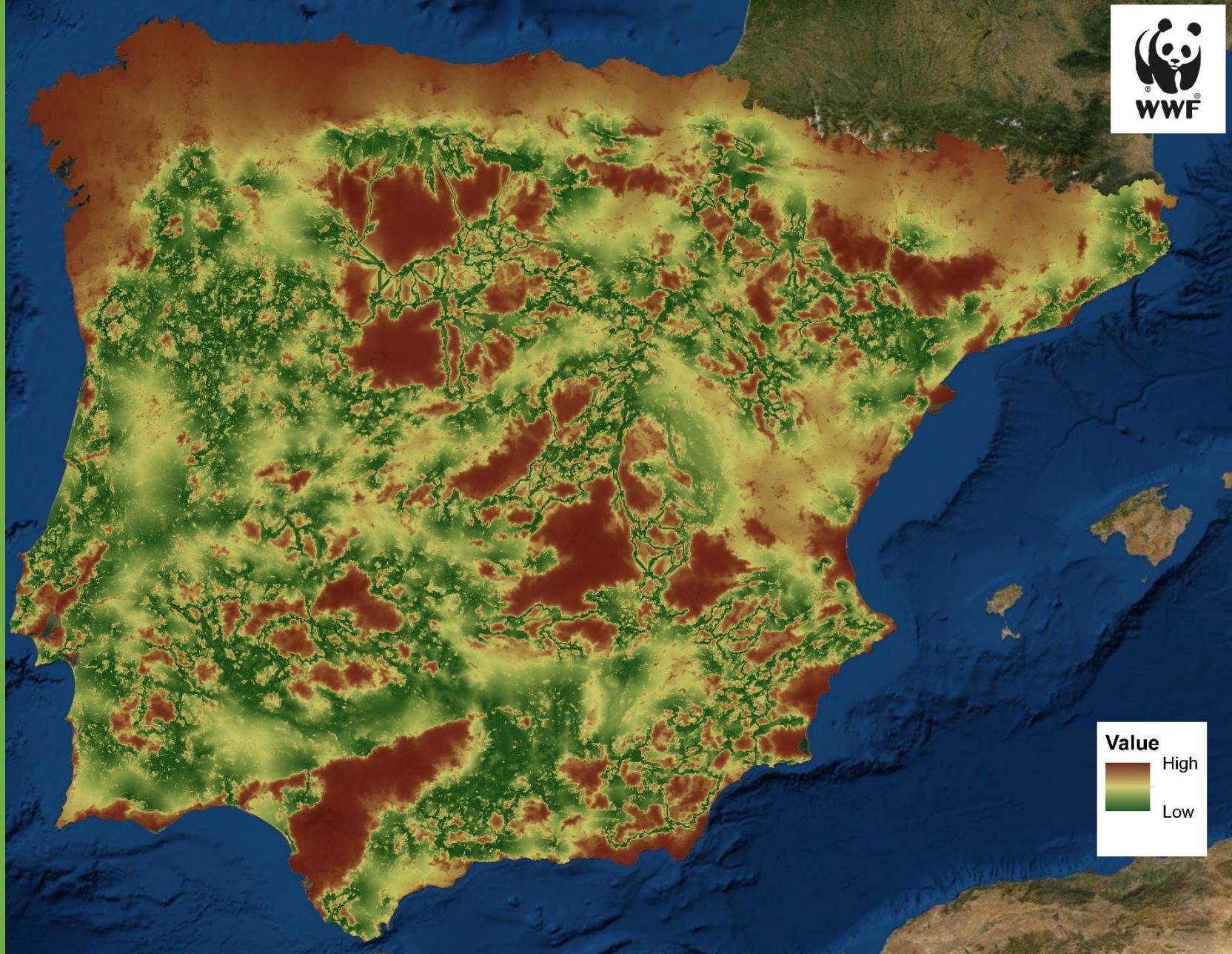
1. Evaluate the **status of the wild rabbit** in potential suitable areas for breeding females.

2. Connectivity

2.1. Evaluate between established populations and potential areas for breeding females establishment.

2.2. Evaluate the importance of stepping stones and connectors among areas.

3. Population viability analysis (PVA) current and new possible populations.



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References

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Saura, S., Gastón, A., & Blazquez-Cabrera, S., 2014. Fase 1. Modelos de distribución de la calidad del hábitat y la permeabilidad del paisaje para el lince ibérico en la Península Ibérica, Informe inédito. Madrid:

Rai, U.K. 2003. Minimum Sizes for Viable Population and Conservation. *Our Nature*, 1 pp.3-9

Soule, M. E. 1980. Thresholds for survival: maintaining fitness and evolutionary potential. In *Conservation biology: An evolutionary-ecological perspective* (Eds. M. E. Soule and B. A. Wilcox) Sinauer Associates, Sunderland, Massachusetts. pp.151-169



¡Gracias por vuestra
atención!