

PAPEL DE LAS INTERACCIONES TRÓFICAS EN EL FUNCIONAMIENTO DE LOS ECOSISTEMAS MEDITERRÁNEOS A ESCALA PAISAJE

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Directores: Jomar Magalhaes Barbosa y Jose Antonio Sánchez Zapata

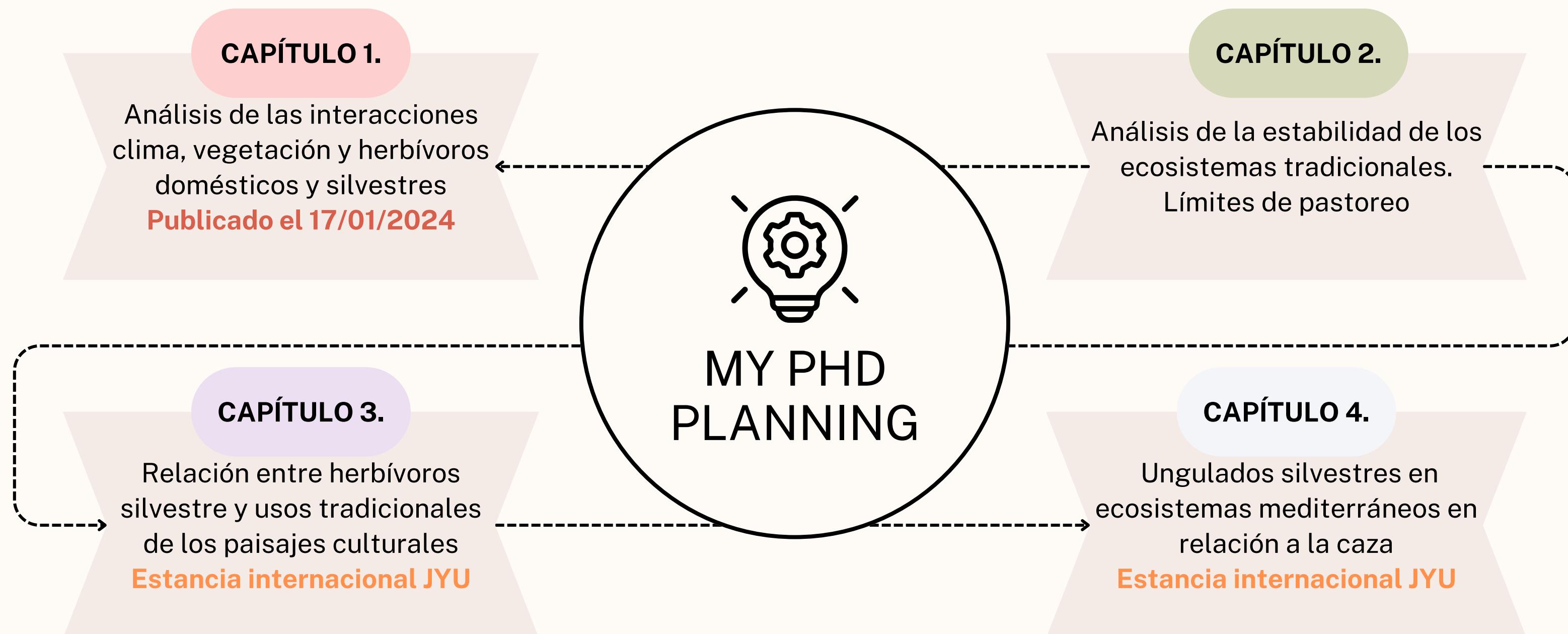
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Centro: Departamento de Biología Aplicada. Área de Ecología. UMH de Elche



OBJETIVO

“Evaluación de los efectos ecológicos de la presencia, distribución y movimiento de herbívoros silvestres y domésticos sobre la adaptación de la vegetación de ecosistemas mediterráneos a cambios en el clima”



CRONOGRAMA

Fecha de admisión: 01/02/2021

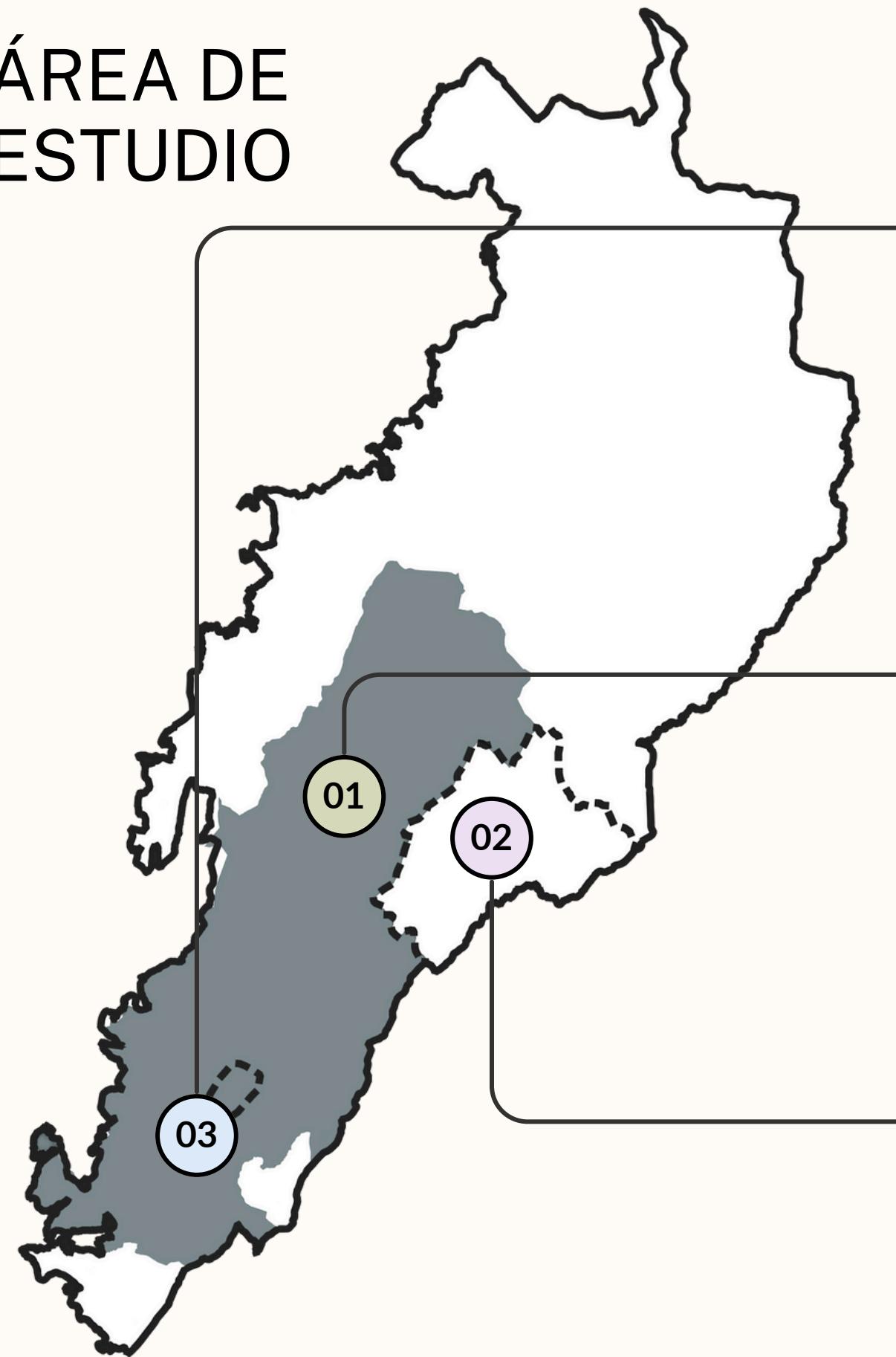
Fecha límite: 01/02/2024

Fecha límite efectiva (primera prórroga): 31/01/2025

Fecha límite efectiva (segunda prórroga): 31/01/2026

Fecha defensa: 01/04/2026

ÁREA DE ESTUDIO



ONLY WILD UNGULATES



“Sierra de Cazorla Segura and Las Villas Natural Park (CNP)”

- 2,143 km²
- Mediterranean climate
- Hunting area
- Transhumance



BOTH WILD AND DOMESTIC UNGULATES



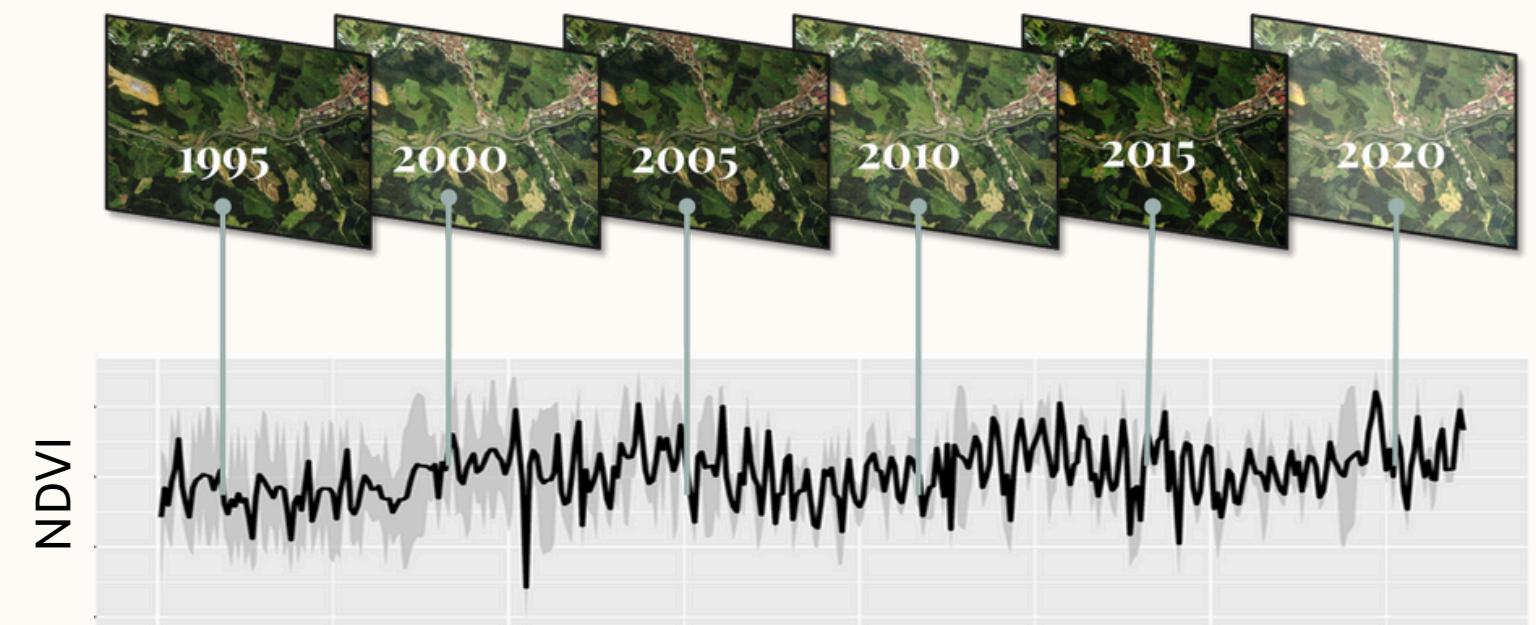
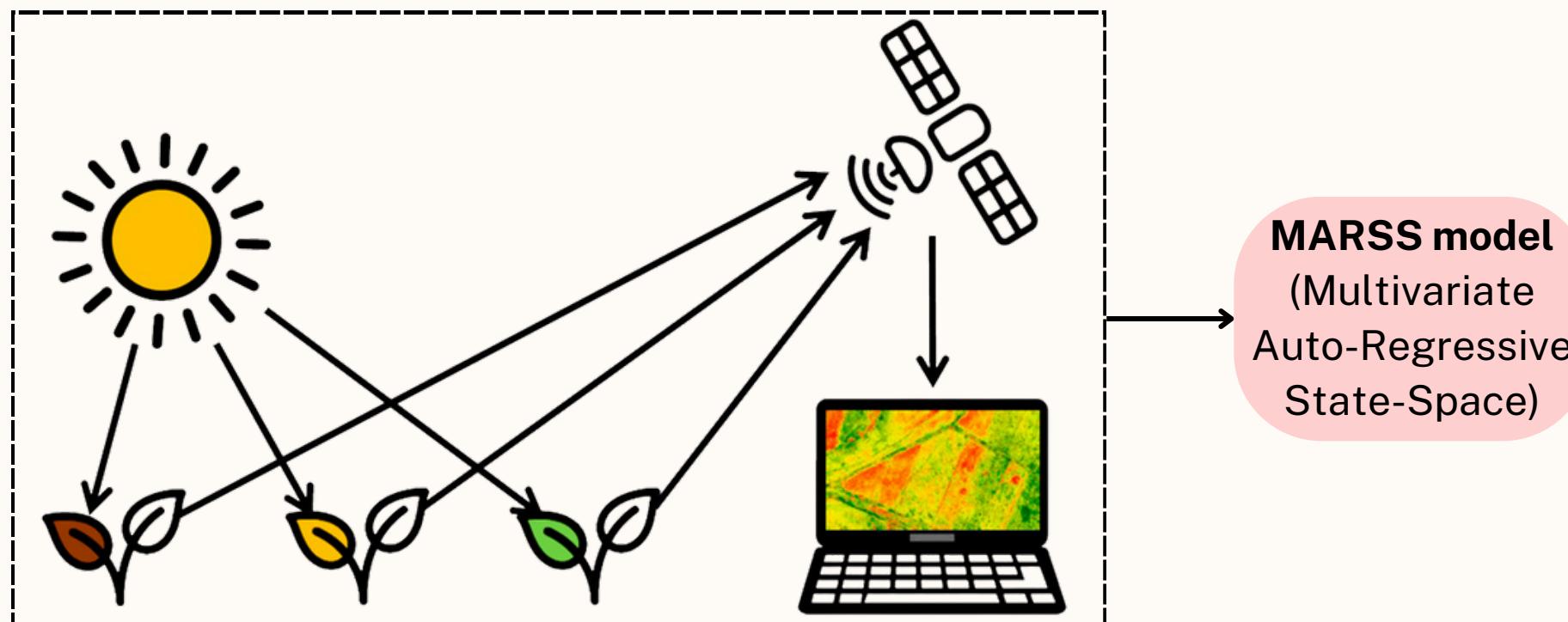
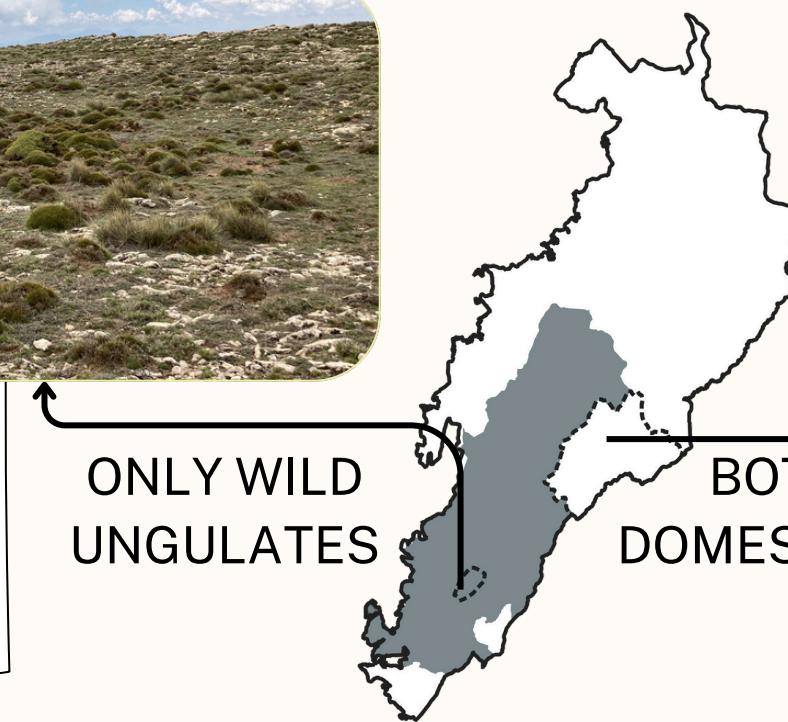
CAPÍTULO 1.

Landscape Ecol (2024) 39:1
https://doi.org/10.1007/s10980-024-01806-2

RESEARCH ARTICLE

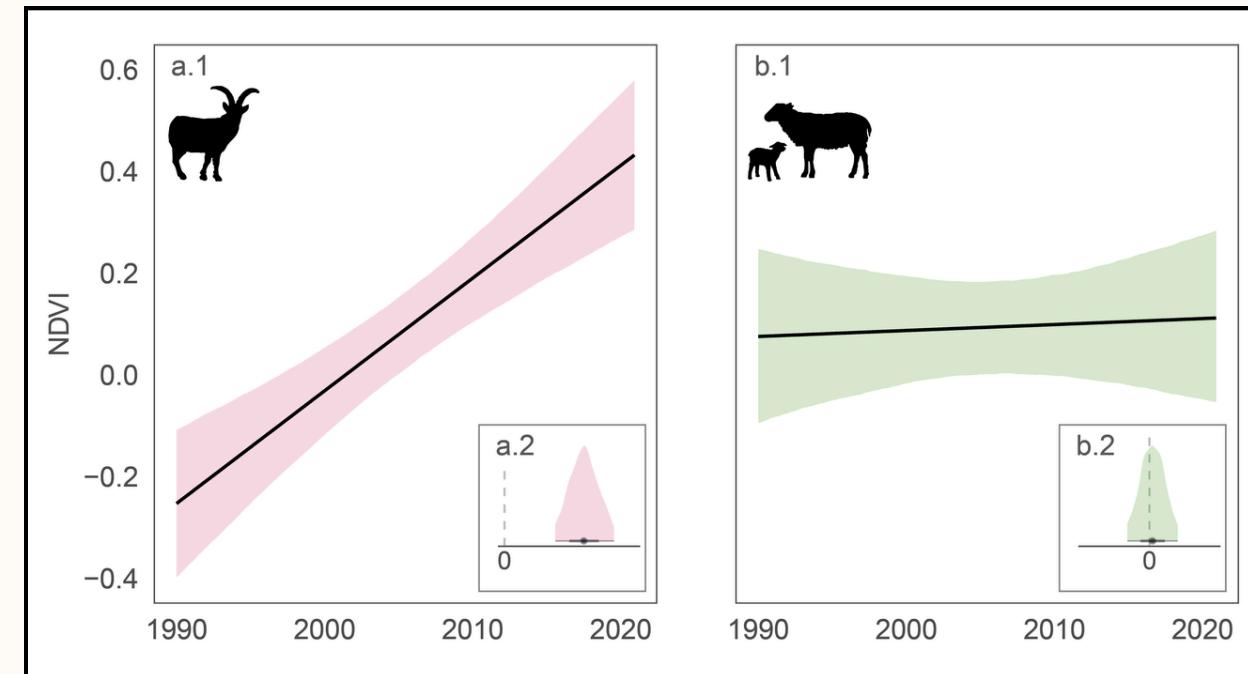
Long-term vegetation responses to climate depend on the distinctive roles of rewilding and traditional grazing systems

Marina Rincon-Madroñero  ·
Jose Antonio Sánchez-Zapata  ·
Xavier Barber  · Jomar M. Barbosa 

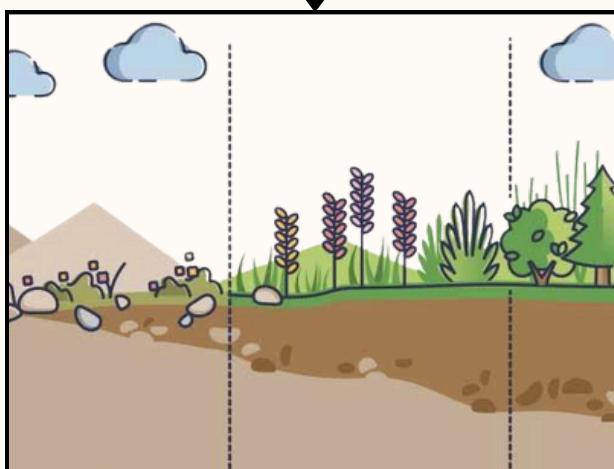


CAPÍTULO 1.

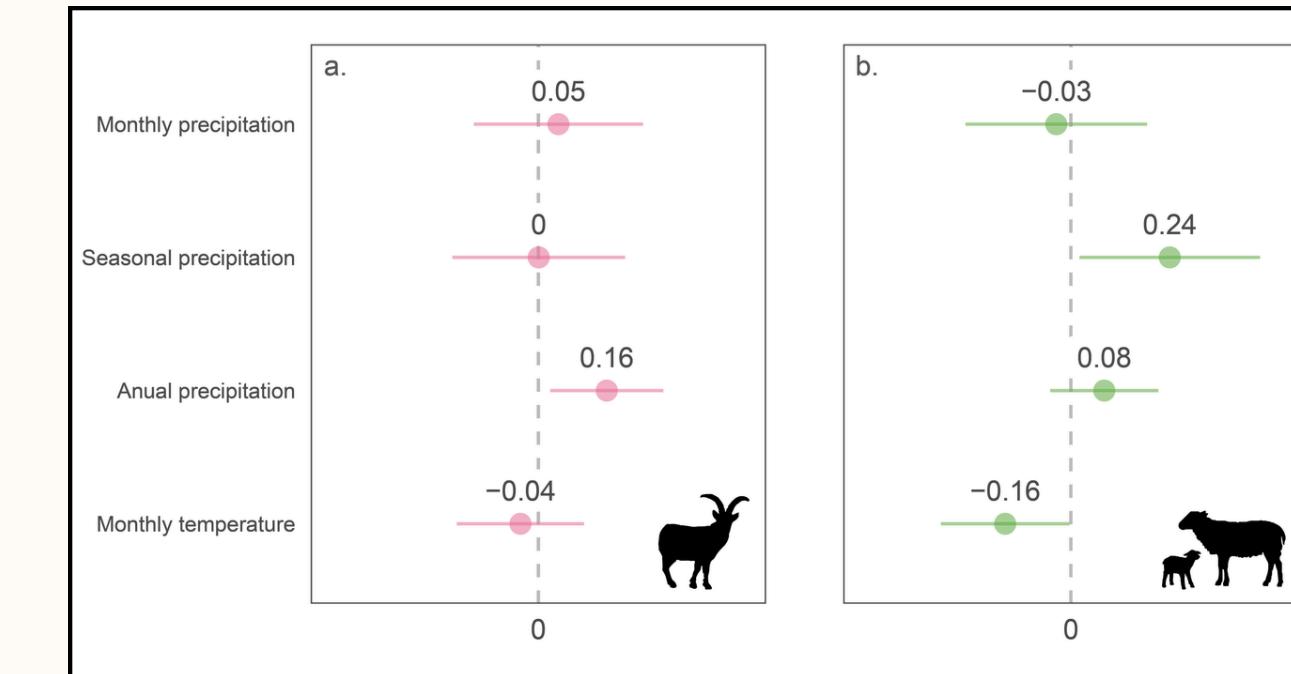
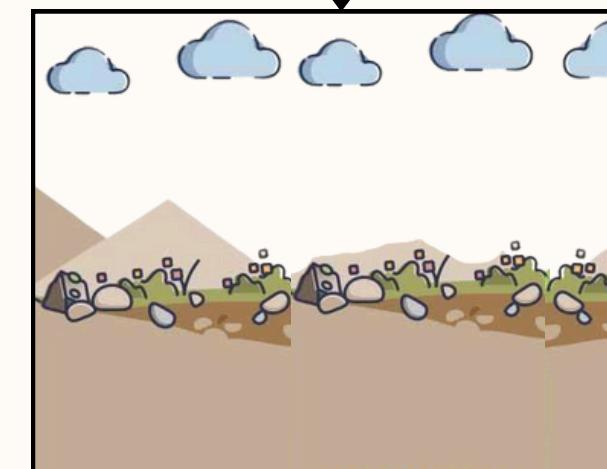
Long-term vegetation responses to climate depend on the distinctive roles of rewilding and traditional grazing systems



Biomass increased in the last 30 years



Biomass remained constant



Primary productivity was affected by
ANNUAL PRECIPITATION

Primary productivity was affected by
SEASONAL P. and MONTHLY T°

“Wild and domestic ungulates have distinctive roles in defining Mediterranean landscapes’ adaptability to climate”

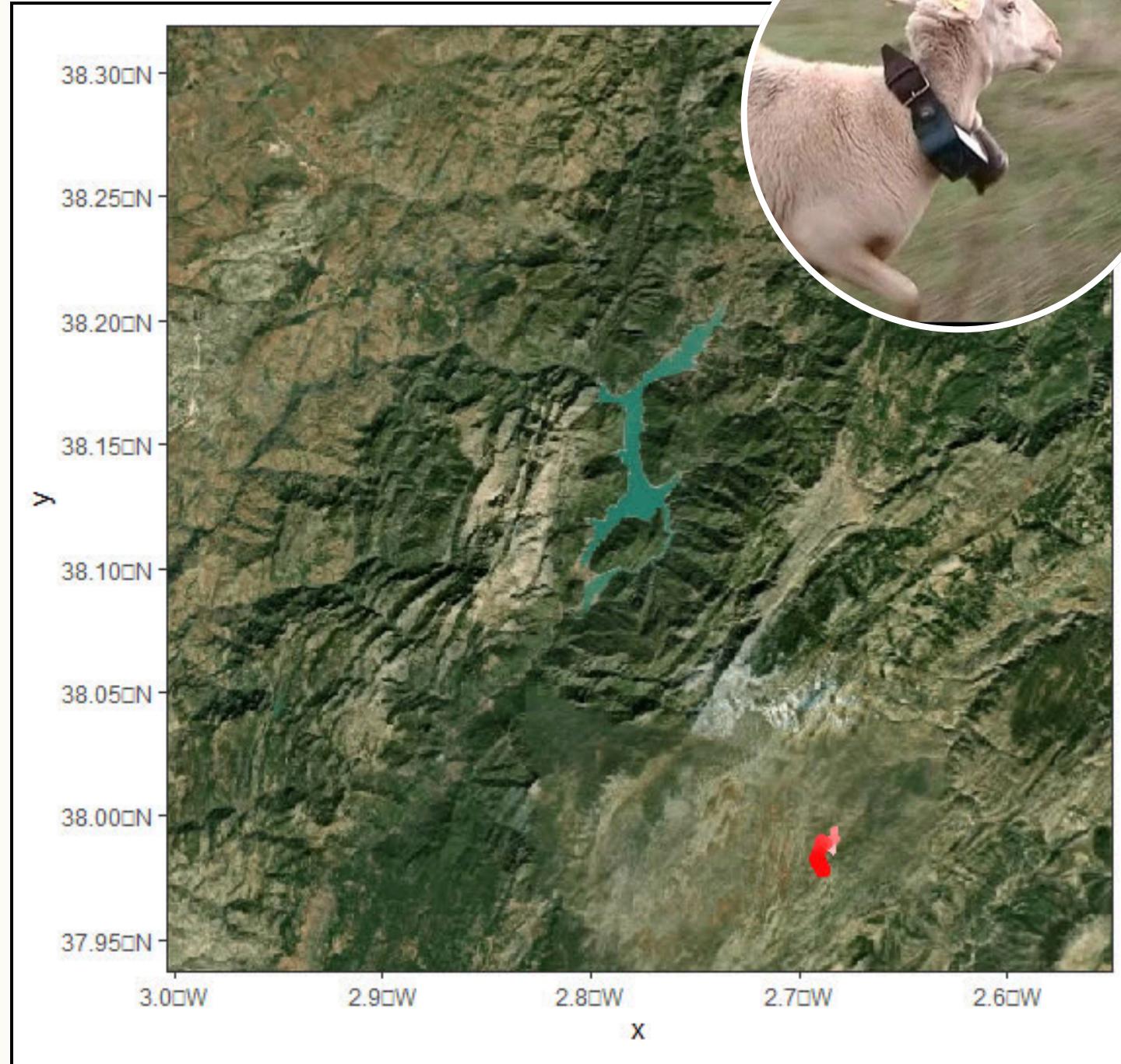
“Maintaining both ecosystems can enhance landscape heterogeneity and ecological sustainability in a context of climatic changes”



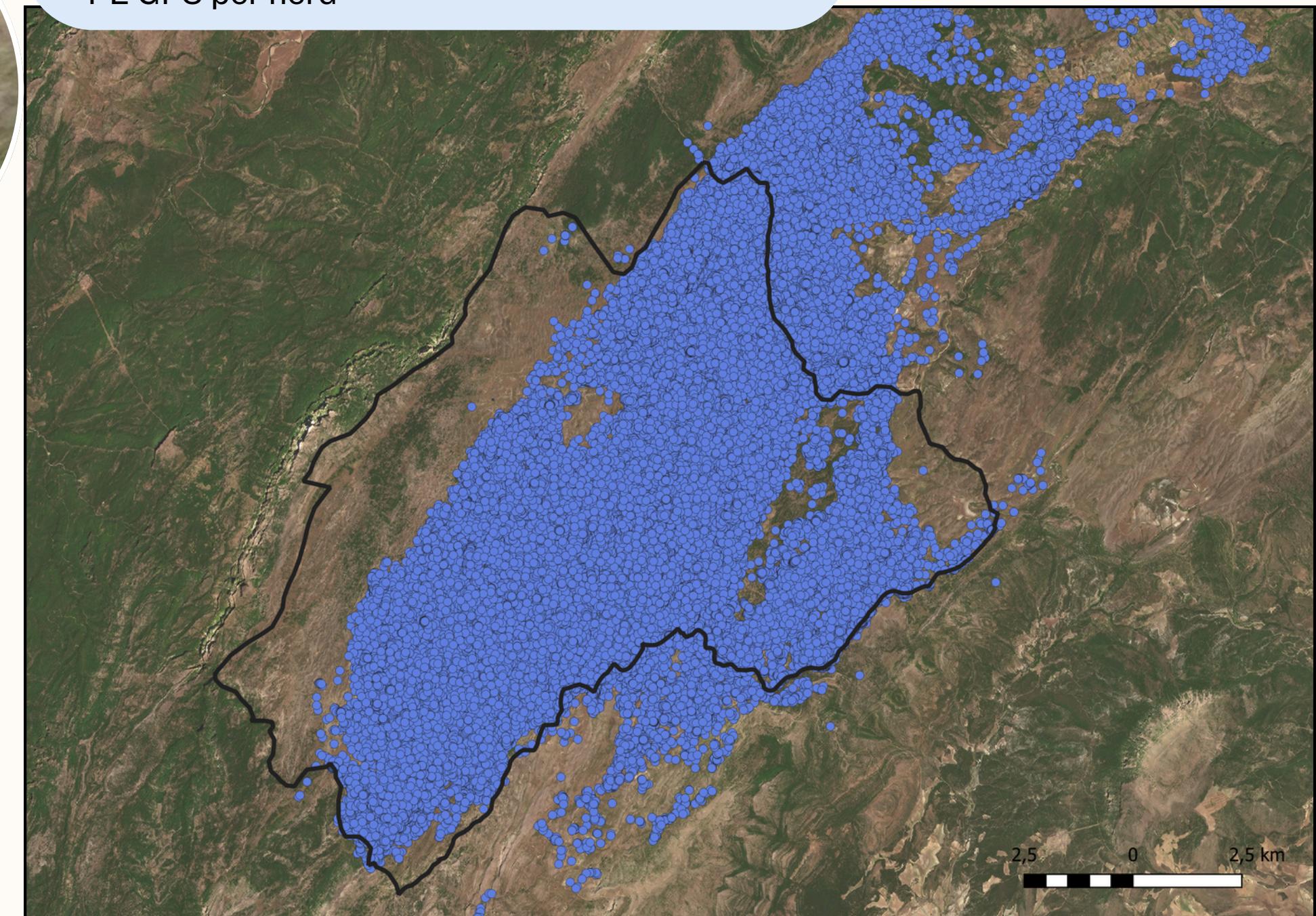
They increase spatiotemporal heterogeneity of ecosystems

CAPÍTULO 2.

Análisis de la estabilidad de los ecosistemas tradicionales. Límites de pastoreo



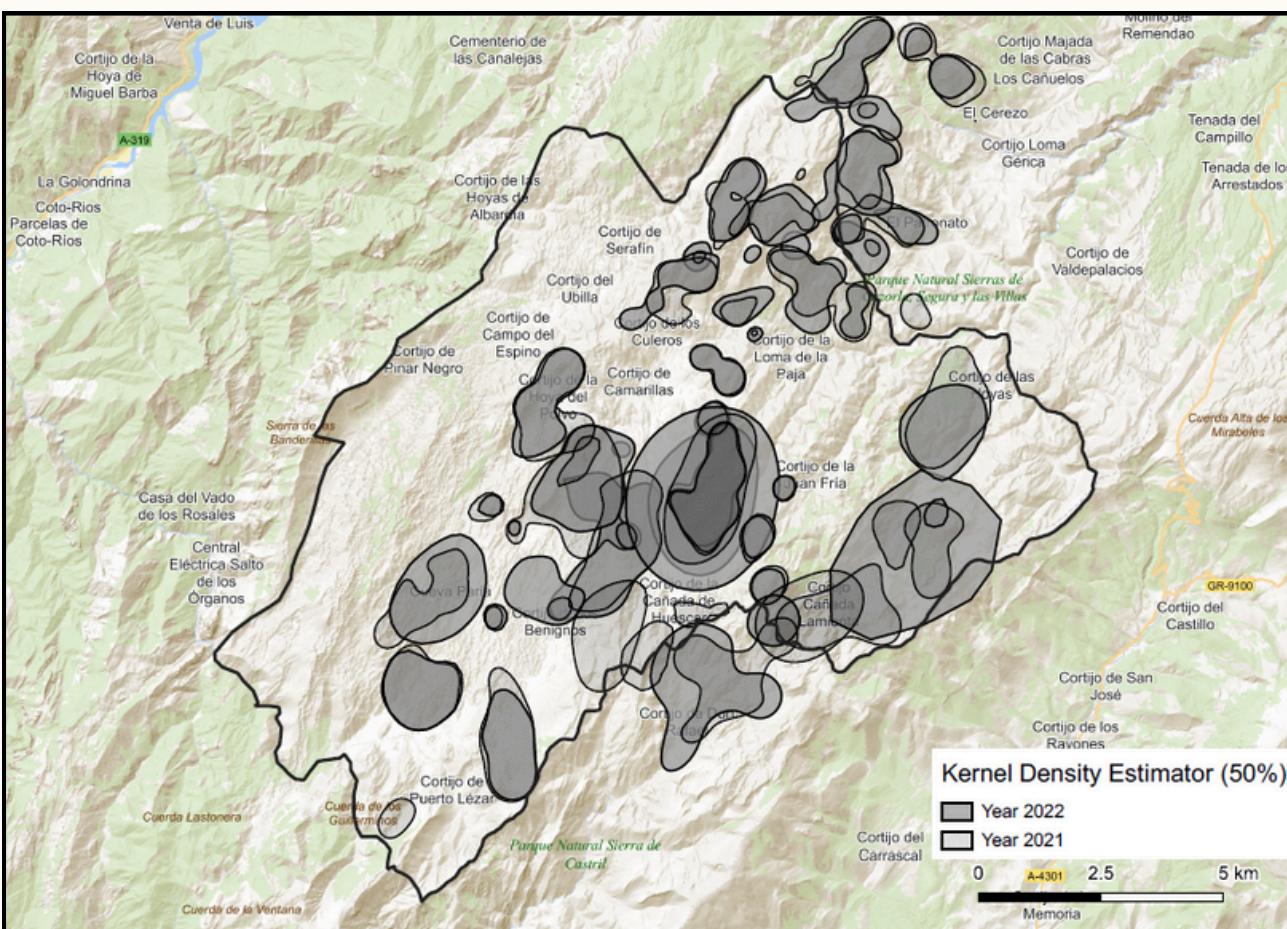
- Studied period: 2019 - 2022
- Time resolution 5 - 60 min (resampled to 60 min)
- 26 herds (30 GPS tracking devices)
- 1-2 GPS per herd



CAPÍTULO 2.

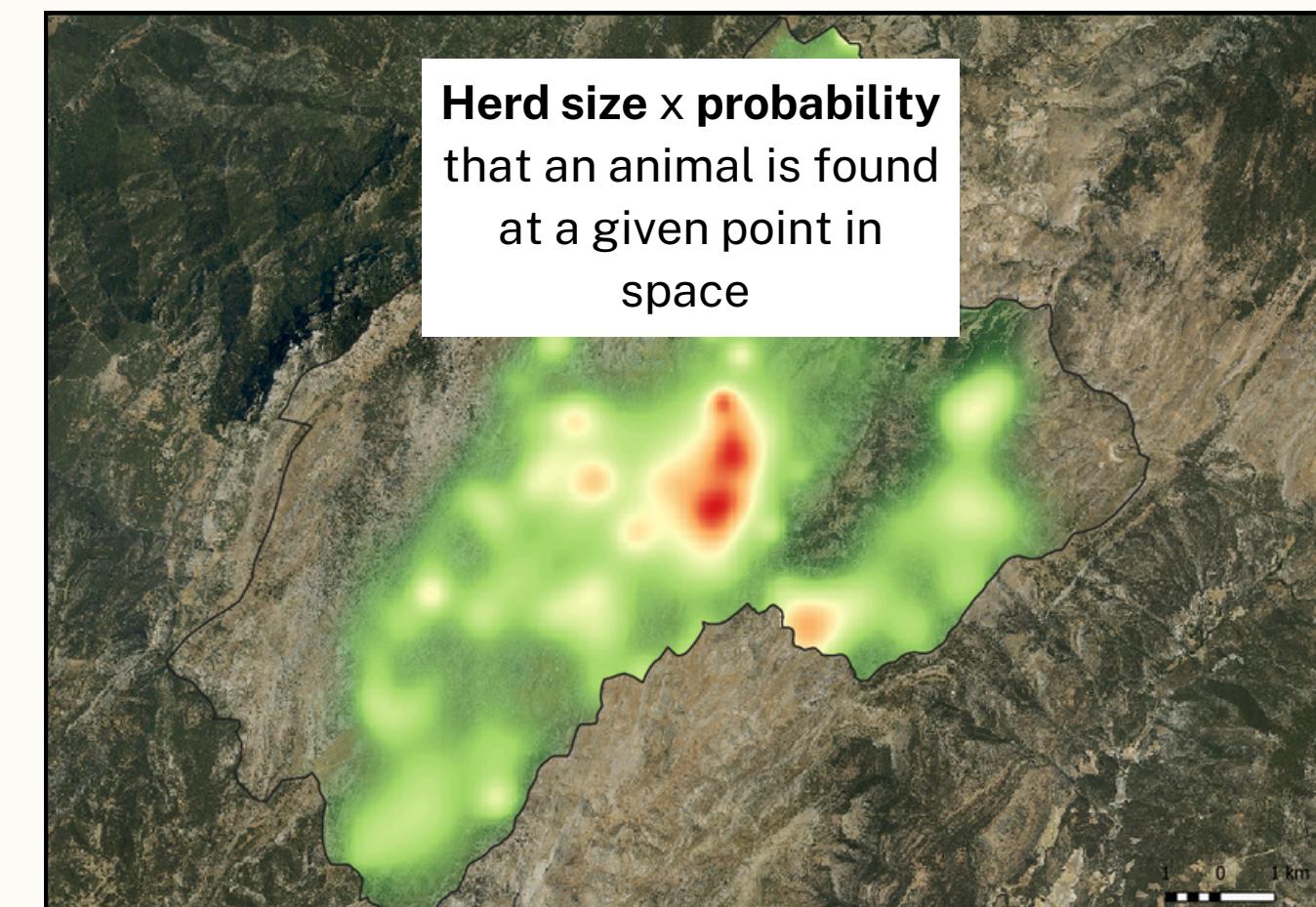
Análisis de la estabilidad de los ecosistemas tradicionales. Límites de pastoreo

MONTHLY, YEARLY OVERLAP



Historical inheritance
Land use space
Herds overlap

HERBIVORY PRESSURE



Vegetation - climate interaction
MARSS

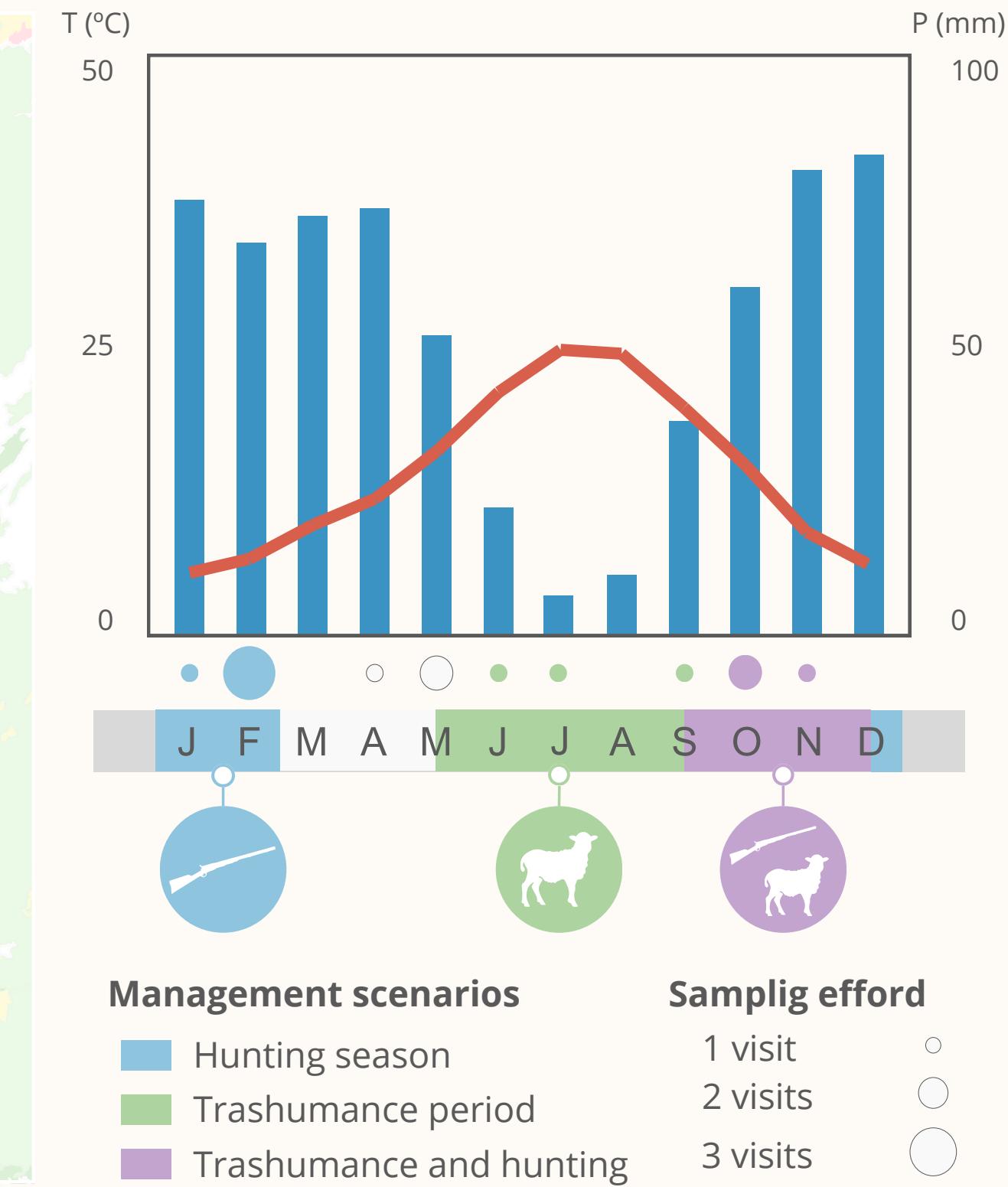
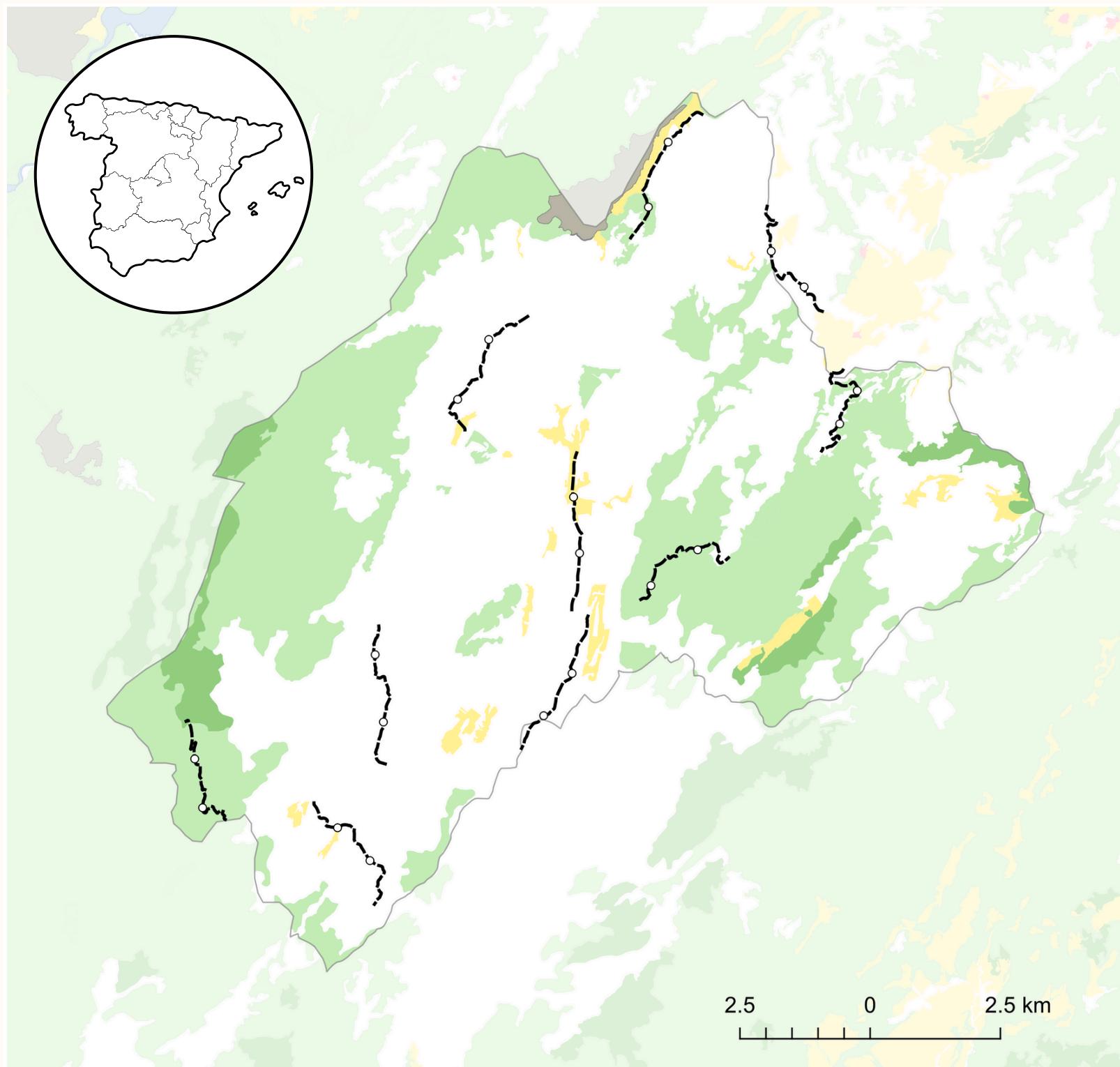
CAPÍTULO 3.

CAPÍTULO 4.



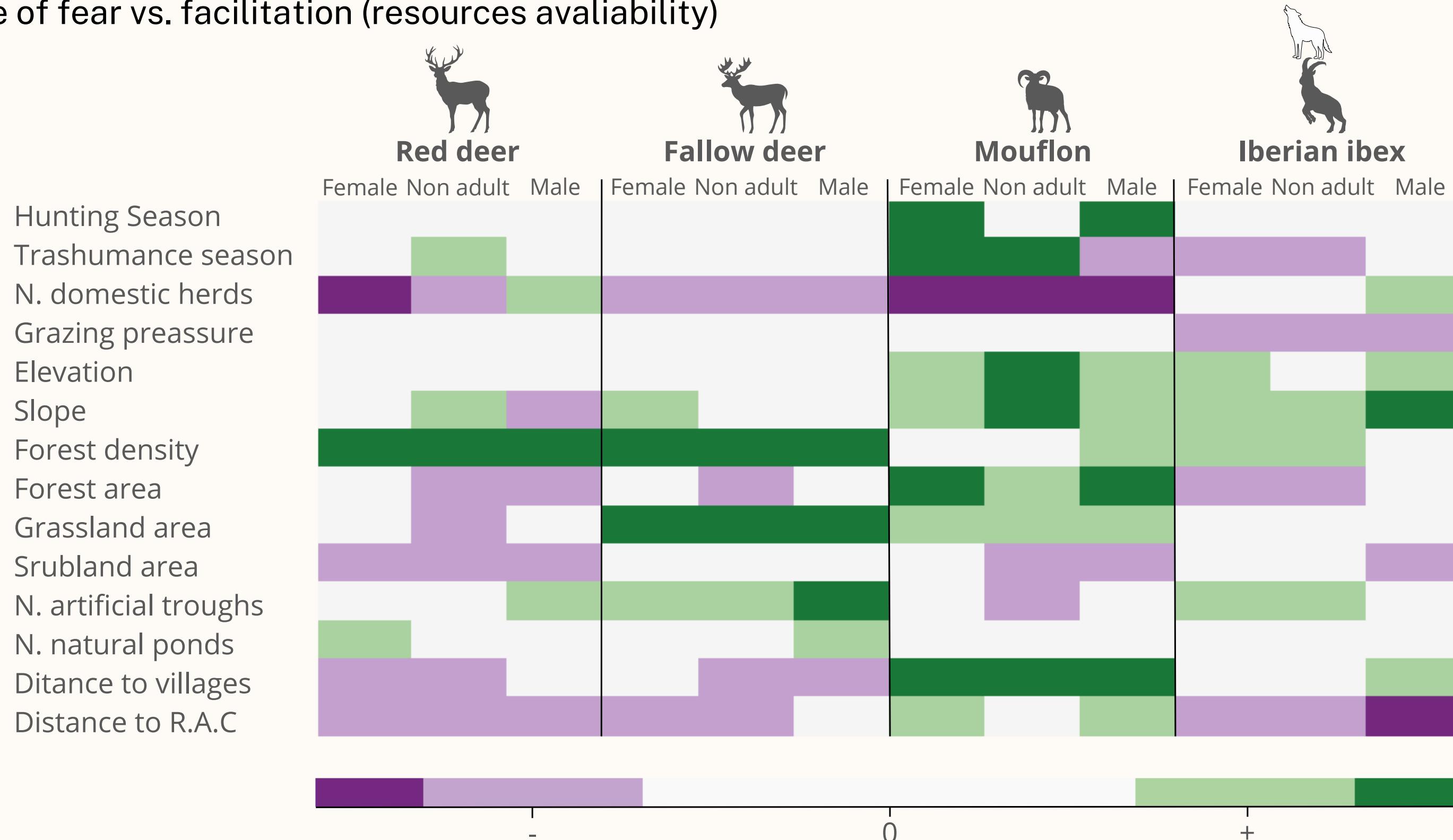
CHAPTER 3.

Landscape of fear vs. facilitation (resources availability)



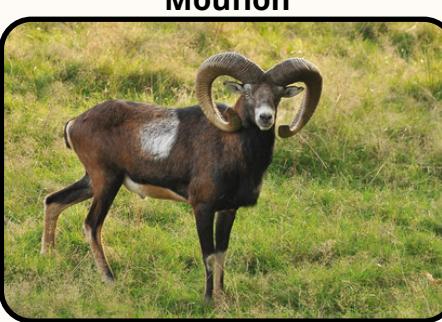
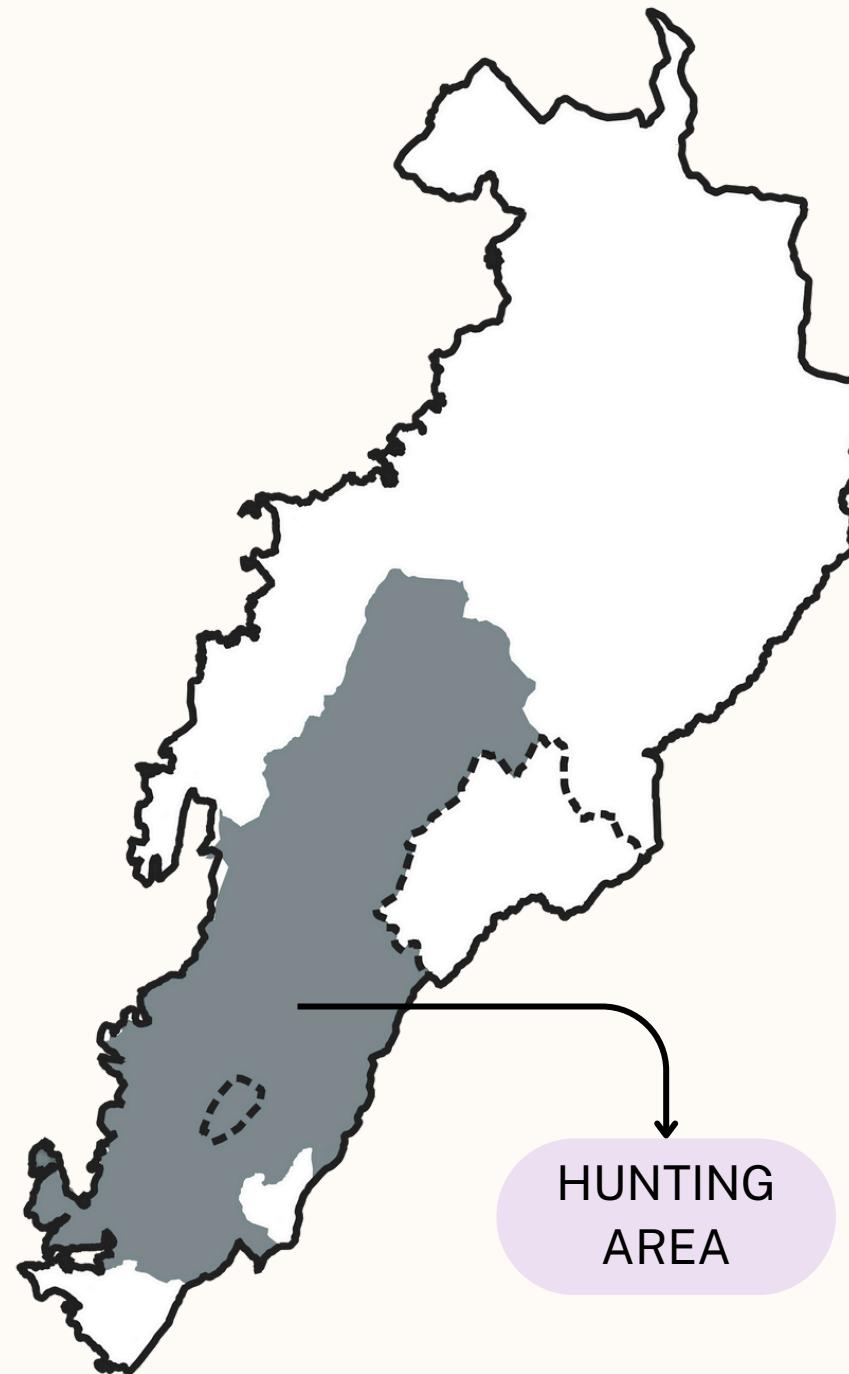
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Landscape of fear vs. facilitation (resources availability)



CHAPTER 4.

Trophies, climate, sarcoptic mange

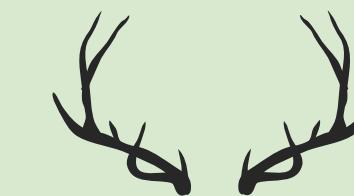


HORNS



Present in males and females during their whole life

ANTLERS



Present only in males and dropped every year

SARCOPTIC MANGE



CHAPTER 4.

Trophies, climate, sarcoptic mange

