

STUDY AREA DESCRIPTION

# EL ESPINAR

SEGOVIA, SPAIN



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the European Union**

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## 1 INTRODUCTION

Located at the southern edge of the Sierra de Guadarrama, the area of El Espinar combines forests, meadows, and high mountain pastures. Here, vertical transhumance, the seasonal movement of livestock between mountain and valley pastures, still shapes seasonal rhythms. Its proximity to Madrid, Segovia, and Ávila fosters intense flows of visitors and second residences, while extensive livestock farming, mainly cattle, remains important to the landscape and cultural identity. In recent years, the return of the Iberian wolf has added new challenges to pastoral management and reactivated debates on coexistence between wildlife, farming, and conservation. This area now stands among the most affected zones in Castilla y León in terms of wolf attacks, making coexistence a particularly sensitive and pressing issue for local communities.



**Figure 1:** Extensive cattle grazing on valley pastures in El Espinar, at the foothills of the Sierra de Guadarrama. The landscape combines open grasslands with surrounding woodlands, reflecting the mosaic of traditional livestock farming and natural habitats (Photo: Zuriñe Alba Iglesias González).

## 2 OVERVIEW

- **Municipalities:** El Espinar, Villacastín, and Navas de San Antonio (Segovia).
- **Geographical size:** Combined area of approximately 385 km<sup>2</sup>.
- **Human population:** The 3 municipalities hosted approximately 12,000 residents in 2025, with a strong concentration in El Espinar.

- ▶ **Number of livestock farmers:** In total, there are approximately 240 registered farms, excluding horse farms. However, this figure probably overestimates the number of professional farms, since it includes hobby farmers and small-scale holdings.
- ▶ **Livestock farming systems:** The area's livestock farming is dominated by extensive cattle farming, followed by sheep farming. There has recently been an increase in horse breeding. Historically, the local farming system centred on sheep, but these herds were gradually replaced by cattle over time, as they require less management and are more profitable. For similar reasons, some cattle farms have shifted towards horses in recent years. Traditional vertical transhumance still characterises the system: herds move up to the high-mountain pastures from May to October, before returning to the valley pastures and Dehesas (traditional agroforestry systems characterised by open oak woodlands combined with grazing and sometimes crop production) between November and April.
- ▶ **Large carnivore species:** The wolf (*Canis lupus*) is the only large carnivore with an established presence in the area.
- ▶ **Wolf population:** According to official censuses, Segovia province is home to around 20 stable wolf packs, 13 of which are primarily active within the province. Over the past two decades, the number of wolves in the province has increased notably. The most recent official wolf survey detected around 3 breeding packs in the study area.



**Figure 2:** Cows of the Avileña Negra Ibérica breed grazing in the high pastures of El Espinar. This hardy native breed is well adapted to mountainous environments and plays a central role in the region's extensive livestock systems (Photo: Asociación Raza Avileña).



### 3 SOCIOECONOMIC CONTEXT

- **Physical environment and protection:** The area ranges in altitude from 980 to 2,100 metres and has a temperate mountain climate, with dry summers, long winters and frequent snowfall. The landscape is a mosaic of pinewoods, oak forests, shrublands and riparian valleys. Much of the territory is protected within the Sierra de Guadarrama National Park and the 'Real Sitio de San Ildefonso–El Espinar' Biosphere Reserve, as well as nearby SACs.
- **Local economy:** Traditional agroforestry coexists with growing rural and nature-based tourism. The area blends small commerce, construction, and services with strong cultural and natural features, attracting visitors year-round. El Espinar serves as the main tourism hub, while Villacastín and Navas de San Antonio have smaller economies based on local services and construction.
- **Social structure:** Daily buses and trains link El Espinar with Madrid, Segovia, and Ávila, enabling residents to live locally while working in the cities. The town concentrates key services and hosts many second residences, raising the seasonal population. This creates a diverse community of long-term residents and newcomers, strongly connected to the natural surroundings.



**Figure 3:** Charolais cattle in the meadows of El Espinar. This French-origin breed has been widely integrated into local systems, valued for its growth rates, often complementing or crossbreeding with native breeds such as Avileña-Negra Ibérica (Photo: Zuriñe Alba Iglesias González).

## 4 FARMING CONTEXT

Livestock farming is mainly extensive, with beef cattle (Limousin, Charolais, Avileña-Negra Ibérica breeds and their crosses) prevailing, along with sheep and horses. Many farms still follow a vertical transhumance model: from May to October, herds move up to high-mountain pastures, returning to valleys and Dehesas in winter. Management is low intensity, involving moderate stocking rates and the broad use of communal land and valley meadows. These operations rely heavily on privately owned valley meadows, as well as private mountain pastures, shrublands and communal forests. Communal lands make up a smaller portion of individual farms but cover the largest total area overall, with widespread grazing beneath pine and oak woodlands. Dehesa lands, though less common, remain strategically important for winter grazing and livestock management.

### Main Challenges:

- ▶ Ageing farming population and low generational renewal.
- ▶ High production costs, low profitability and dependence on CAP subsidies.
- ▶ Considerable predation by wolves and the associated emotional and administrative burdens.
- ▶ Sanitary and animal health regulations, particularly tuberculosis and brucellosis.

## 5 LOCAL CONFLICT ASSOCIATED WITH LARGE CARNIVORES

### Number of attacks:

The study area is one of the zones most affected in Castilla y León. In 2024, Segovia province officially recorded 869 wolf attacks, resulting in the deaths of 868 animals, primarily cattle and sheep.

The situation in the three case study municipalities is particularly severe. Over 425 livestock losses were confirmed in a single year, making this one of the areas with the highest levels of wolf predation in Castilla y León.

### Social conflict:

- ▶ **Emotional and psychological stress among farmers:** Feelings of frustration, and helplessness are widespread often linked to the prohibition of lethal control.
- ▶ **Perceived insufficiency of compensation systems:** Payments are seen as slow, incomplete, or unfair, failing to reflect real losses or the full scope of the problem
- ▶ **Limited effectiveness or feasibility of preventive measures:** Guard dogs and electric fences are often unsuitable in extensive mountain systems or constrained by cost and terrain.



- **Growing polarization and tension between different social positions:** The conflict transcends material damages and reflects broader social divisions between control-oriented and protection-oriented perspectives. This is one of the areas with the most wolf attacks in all Spain.
- Conflict intensified after legal changes: prohibition of lethal control (2021–2025) and new management authorisations (2025–2026).



**Figure 4:** Traditional stone walls and wire fencing surrounding grazing areas in El Espinar. These enclosures mark property boundaries and restrict livestock movement but offer limited protection against wolf. (Photo: Zuriñe Alba Iglesias González).

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