

STUDY AREA DESCRIPTION

VIDZEME AND SĒLIJA

LATVIA



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1 INTRODUCTION

The study area is located in central Latvia, a region that holds a remarkable distinction: it contains the largest continuous wooded landscape stretching between Estonia to the north and Lithuania to the south (Figure 1). The region's forests have been steadily reclaiming the land—over the past century, Latvia's forest cover has doubled through both natural expansion and deliberate afforestation of marginal agricultural land. Yet amidst this greening landscape, livestock grazing continues to play a vital role. Cattle and sheep maintain the region's natural meadows and cultivated grasslands, whilst generating economic value from less fertile soils that might otherwise lie fallow.

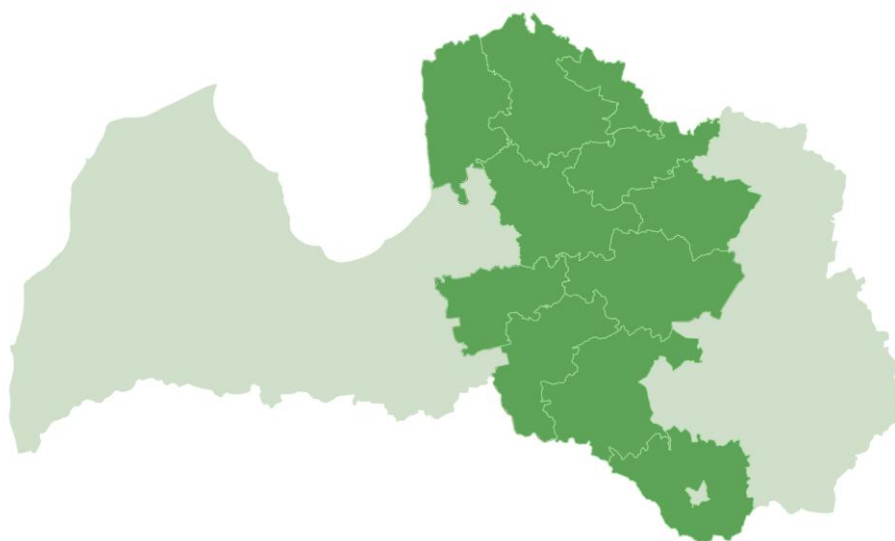


Figure 1. Survey area in Latvia (Photo credit: Gundega Done, LSFRI "Silava").

2 OVERVIEW

- ▶ **Municipalities:** Alūksne, Cēsis, Gulbene, Limbaži, Madona, Ogre, Saulkrasti, Smiltene, Valmiera and Valka in Vidzeme region and Aizkraukle, Jēkabpils, Augšdaugava in Sēlija región.
- ▶ **Geographical size:** 24,970 km².
- ▶ **Human population:** The region is home to approximately 312,000 residents (260,000 excluding largest towns).
- ▶ **Number of livestock farmers (approx.):** ~3.700 cattle farms: 1.6% large (≥ 200), 13% medium, 19% small (20–50); 700 sheep farms: 1.6% large (>300), 22% medium, 77% small (<50).
- ▶ **Livestock farming systems:** Extensive beef cattle and/or sheep farming through low-input family operations relying on natural grazing resources, as well as breeding and selection operations that combine grazing with indoor feeding.

- ▶ **Wild large carnivore species:** Autochthonous species include grey wolf (*Canis lupus*), Eurasian lynx (*Lynx lynx*) and brown bear (*Ursus arctos*). The golden jackal (*Canis aureus*) has recently expanded into the region.
- ▶ **Wolf/ population:** Approximately 200-300 individuals.

3 SOCIOECONOMIC CONTEXT

- ▶ Although the study area was selected based on large carnivore distribution patterns, it closely aligns with the location of two historical Latvian regions: Vidzeme and Sēlija. Whilst the region can be recognised as currently united and distinct from the rest of the country, parts of this area are culturally distinct, having been part of different countries during historical periods centuries ago.
- ▶ Agriculture, forestry and fisheries are traditionally well-developed in the region, accounting for approximately 4% of the total GDP and employing 7% of all people working in the national economy. Livestock production provides important income to rural communities. The area holds notable contemporary husbandry centres, including the Beef cattle auction house in Sēlija and the sheep breeding and controlled feeding station in Vidzeme (Figure 2).
- ▶ The region is famous for sheep wool production. Local wool processing traditions can be explored by visiting craft markets, which are regularly held at weekends in towns across Vidzeme (Figure 3).



Figure 2. Breeding and testing of purebred sheep in various grazing conditions is one of the priorities of the Latvian Sheep Breeders Association (October 2025, Photo credit: Jānis Ozoliņš).



Figure 3. Market of ancient jewellery and wool hats at the Simjuda Fair in Valmiera town. An ironic example of coexistence - sheep farming products exhibited alongside a large carnivore pelt. (October 2025, Photo credit: Jānis Ozoliņš).

4 FARMING CONTEXT

Livestock farming has long been at the heart of Vidzeme and Sēlija regions, as well as of Latvia's agriculture more broadly, shaped by the country's grass-rich landscapes and family-farm traditions (See Figure 4). Historically, cattle, pigs, and sheep were kept in mixed systems, providing milk, meat, and manure for smallholdings. During the Soviet era, large collective farms industrialised livestock production—especially in the dairy and pig sectors—creating strong infrastructure but reducing diversity and animal welfare standards.

Following the country's regained independence in 1991, the sector shrank sharply as many collective farms collapsed. Family-based livestock farming gradually recovered, focusing mainly on dairy cattle and beef, with smaller but growing numbers of sheep and goats. Today, livestock farmers focus on both meat and dairy production, as well as breed conservation programmes (Figure 5). Through pasture farming, it is possible to manage steep slopes, dry and sandy areas, or conversely, areas that are overly wet, as well as areas with diverse micro-reliefs, all of which are very common in Vidzeme and Sēlija regions (Figure 6 - Figure 9), which would otherwise be neglected and unmanaged. This helps

to maintain the traditional rural landscape, in the preservation of which not only the local population, but also the wider community is interested.



Figure 4. Family-based livestock farming still is the most common form of ownership in Latvia (October 2025, Photo credit: Guna Bagrađe).

Main Challenges:

- ▶ Climate change—droughts affecting feed availability and diseases linked to warmer conditions.
- ▶ Competition from larger and cheaper EU producers, particular regarding the wool products.
- ▶ Local and EU regulations that can restrict economic activity.
- ▶ Demand of locally sourced meat has a distinctly seasonal nature, leading to fluctuations in procurement prices throughout the year.
- ▶ Commercial cooperation (cooperatives) amongst livestock farmers is poorly developed.
- ▶ The sector lacks both research-based knowledge and financial resources necessary to establish high-quality grasslands and ensure a reliable feed supply at the farm level.

- High risk of livestock losses due to attacks by wild carnivores or stray dogs.



Figure 5. Livestock farmers today focus on both meat and dairy production, and breed conservation programs (September 2025, Photo credit: Guna Bagrađe).



Figure 6. Beef cattle in the hilly landscape of Vidzeme (October 2025, Photo credit: Gundega Done).



Figure 7. A herd of beef cattle in the floodplains of the Dviete River, Sēlija (July 2025, Photo credit: Gundega Done).



Figure 8. A nature farm where most of the farmland is located within the Ziemeļgauja protected landscape area (Vidzeme region), part of the Natura 2000 network. The farm raises beef cattle, continuing centuries-old practices that have been essential to maintaining today's outstanding natural diversity (May 2024, Photo credit: Viesturs Lārmanis).



Figure 9. A flock of sheep in the hilly landscape of Sēlija (October 2025, Photo credit: Guna Bagrađe).

5 LOCAL CONFLICT ASSOCIATED WITH LARGE CARNIVORES

Number of attacks:

- ▶ Following restrictions on wolf hunting numbers and season duration in 2003, the wolf population has increased notably, facilitated also by the growing populations of wild ungulates. This has led to increasing predation on unattended livestock, primarily on grazing sheep.
- ▶ 23 cattle and 526 sheep were killed in wolf attacks between 2021 and 2024, whereas the largest number of sheep killed in a single attack was 40.
- ▶ The actual numbers of kills is likely to be higher because farmers are not motivated to report the loss of individual or small numbers of animals. This is because compensation fees do not exist, and damage can only be officially recorded following an inspection by a state official.

Social conflict:

Conflict is comparatively new and growing. It seems to stem from inadequate cooperation amongst relevant stakeholders and therefore requires in-depth analysis for effective mitigation.

- ▶ New Farmers, or those expanding their livestock herding, are often unaware of the risks and costs associated with this occupation (Figure 10 and Figure 11).
- ▶ The hunting system relies on voluntary participation by amateur hunters. Their efforts to cull carnivores causing livestock damage are much lower than their efforts to control predators that compete with hunters for wild game.
- ▶ Authorities do not provide efficient, informative and financial support to farmers regarding preventive measures.
- ▶ Lack of transboundary large carnivore management plans with Estonia and Lithuania.



Figure 10. After spending the night safely enclosed in a shed, this flock of sheep heads out to the pasture. Having experienced wolf attacks in the past, the herders now consider this routine the most reliable way to keep the animals safe. Vidzeme. (October 2025, Photo credit: Gundega Done).



Figure 11. Another protection measure for sheep after previous wolf attacks – a livestock guardian dog – although not yet a very common practice in Latvia (September 2025, Photo credit: Guna Bagrade).

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