

STUDY AREA DESCRIPTION

THE MARITIME ALPS

CUNEO, ITALY



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1 INTRODUCTION

The province of Cuneo (Piedmont Region, north-western Italy) has a very varied landscape, ranging from steep peaks, high mountain meadows and Alpine forests to plains dotted with farms and industrial businesses.

The livestock sector is dominated by cattle (444,959 in 2023), which benefit from the abundant availability of fodder and Alpine pastures. Sheep and goats play a relatively marginal role (approximately 17,500 goats and 35,300 sheep). The wolf has naturally returned to the area since 1996, and it is estimated that there were at least 35 breeding pairs in 2020/21. Damage to livestock, particularly sheep and goats, caused by wolves is the main challenge associated with their return, making effective damage prevention strategies essential.



Figure 1: Typical breed reared in the Province of Cuneo: Piemontese (Photo Credit: Arianna Menzano).

2 OVERVIEW

- **Municipalities:** Cuneo province, specifically Municipalities of Chiusa Pesio, Entracque, Valdieri, Sampeyre, Pontechianale, Briga Alta, Sambuco, Limone P.te.
- **Geographical size:** The whole province spans 6,895 km². The case study area is around half this size, as it encompasses only the mountainous municipalities.
- **Human population:** Approximately 8,000 inhabitants.

- ▶ **Number of livestock farmers (approx.):** 400.
- ▶ **Livestock farming systems:** Around 100,000 cows are managed through extensive Alpine grazing across 350 locations in the mountains from June to September (A.R.A. Piemonte, n.d.). The Piedmontese is the most common cattle breed in alpine pastures. It is mainly kept for meat in a cow-calf operation. Sheep and goats play a relatively minor role. They are associated with more challenging terrain, such as hills and mountains, and with less intensive farming.
- ▶ **Wild large carnivore species:** The Wolf (*Canis lupus italicus*) is the only carnivore present.
- ▶ **Wolf population:** As of 2020/21, about 35 wolf families (33 packs and two pairs) call the province home, with roughly 15 packs living within our case study area.



Figure 2: A flock of approximately 600 sheep during their journey to reach their daytime grazing areas (Photo Credit: Arianna Menzano).

3 SOCIOECONOMIC CONTEXT

- ▶ Nestled in the southwestern Italian Alps, this mountainous case study region rises from 920 to 1970 metres above sea level. The landscape is predominantly forested, with open habitats and very few urbanised areas. Part of the region falls within the Maritime Alps Protected Area (Ente di Gestione delle Aree Protette Alpi Marittime), where ecotourism thrives and visitors come to experience the wild alpine environment.

- Livestock breeders in Cuneo Province rely on seasonal transhumance to make the most of available grazing – spending summers in the mountains and winters in the Piedmont. This alpine mountain grazing represents an ancient form of pastoralism that contributes to the conservation of the mountain environment whilst producing renowned PDO cheeses.
- The Province of Cuneo has a varied alpine environment, dominated by peaks exceeding 3,000 metres and small glaciers, with vast forests of beech, chestnut, and conifer trees, and plant species typical of alpine grasslands. Livestock farming is an integral part of this alpine agricultural landscape, complementing rich wildlife, biodiversity and strong rural traditions. The climate is alpine, with cold, snowy winters, mild summers, and significant seasonal temperature variations. Precipitation varies, but tends to increase with altitude.



Figure 3: Cattle grazing at an altitude of 1,830 metres (Photo Credit: Arianna Menzano).

4 FARMING CONTEXT

In Cuneo Province, intensive cattle and sheep and goat farming is practised. Cattle farms, which are used for both meat and milk production, are mainly found in the plains. From June to September, cattle, sheep and goats traditionally migrate to mountain pastures for grazing, with the animals being managed according to their stage of rearing and species.

Alpine farming systems demonstrate a harmonious integration between land use and production, making rational use of local fodder. However, over the last thirty years, the Western Alps have experienced gradual depopulation, and the number of animals raised in valleys and mountain pastures

has decreased by almost a third. This has led to reduced grazing land and, with the sharp decline in small permanent farms, a significant increase in average herd and flock sizes.

Main Challenges:

- Declining profitability and dependency on EU subsidies.
- Difficulty in finding workers.
- Depredation by wolves and delayed compensation.
- Scarce rural infrastructure and limited public services.

5 LOCAL CONFLICT ASSOCIATED WITH LARGE CARNIVORES

Number of attacks:

Wolf attacks on livestock, mostly small livestock, have increased in recent years. In 2023, public veterinary data recorded 460 animals killed or injured in Cuneo Province (72% sheep and goats, 28% cattle) across 248 attacks, concentrated mainly in September during the grazing period. Attacks on cattle, whilst much less frequent than those on sheep, almost doubled in Piedmont Region between 2018 and 2022 (Figure 4, Menzano et al. 2023).

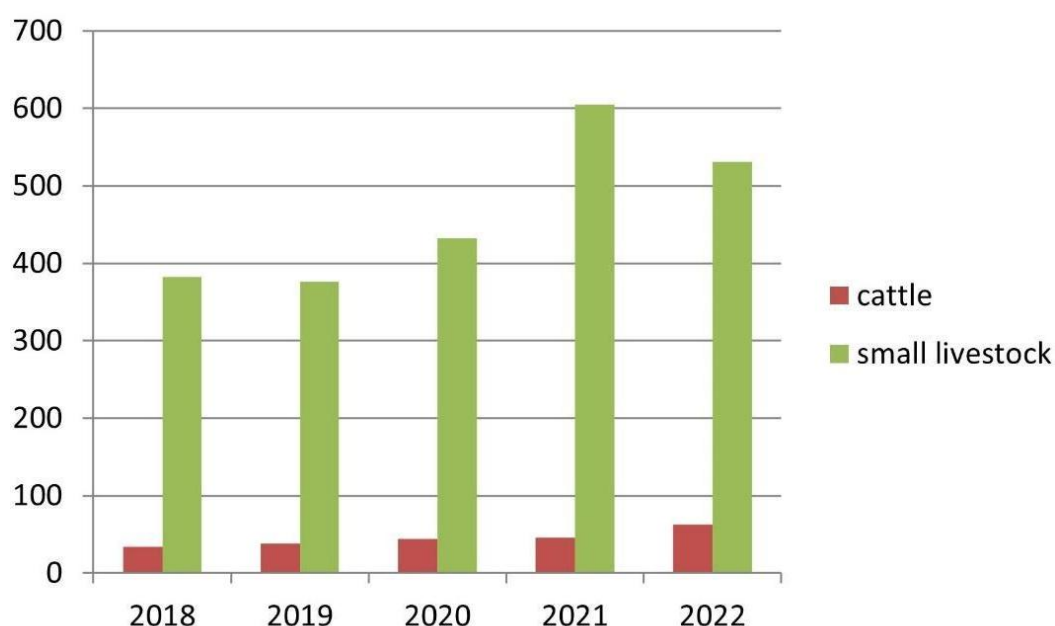


Figure 4: Wolf damage to livestock reported in Piedmont in 2018–2022.

Social conflict:

- Increased workload for farmers implementing prevention measures, and difficulties finding shepherds, especially during summer.

- Difficulties in the management of livestock guarding dog, which sometimes cause problems with tourists.
- Slow and insufficient compensation system.
- Lack of subsidies for purchasing prevention measures and for the maintaining livestock guarding dogs.

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