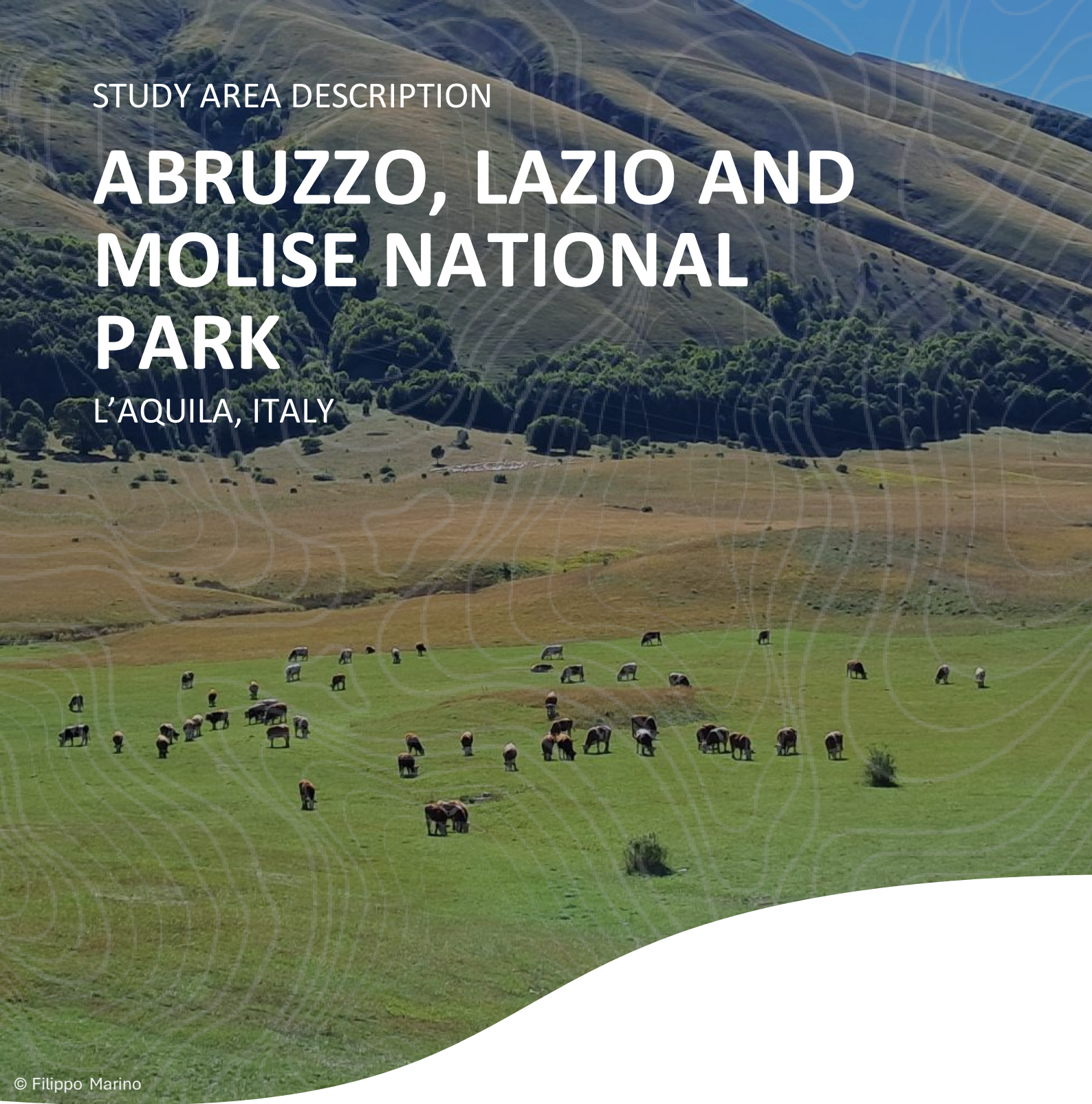


STUDY AREA DESCRIPTION

ABRUZZO, LAZIO AND MOLISE NATIONAL PARK

L'AQUILA, ITALY



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**Funded by
the European Union**

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1 INTRODUCTION

The Abruzzo, Lazio and Molise National Park (hereafter PNALM) is home to two species of large carnivores, the Apennine grey wolf and the Marsican brown bear, both of which have always been present in the area. Within PNALM, CoCo focuses on the Sagittario and Alto Sangro valleys. The mostly mountainous area features deciduous forests and alpine grasslands and meadows, and the landscape has been shaped by centuries of livestock farming. Traditional transhumant sheep husbandry, such as the use of livestock guarding dogs, sheepdogs and shepherds, as well as night shelters, has shifted towards free-ranging and unattended livestock husbandry.



Figure 1. Extensive grazing area with cattle near Passo Godi between the Sagittario and Alto Sangro Valleys (August 2025, Photo Credit: Filippo Marino).

2 OVERVIEW

- ▶ **Municipalities:** Pescasseroli, Opi, Villetta Barrea, Civitella Alfedena, Barrea, Alfedena, Scanno, Villalago, Anversa degli Abruzzi
- ▶ **Geographical size:** 450 – 500 km²
- ▶ **Human population:** 7.330 (as of June 2025)
 - Pescasseroli: 2005
 - Opi: 375

- Villetta Barrea: 597
 - Scanno: 1.679
 - Civitella Alfedena: 289
 - Villalago: 490
 - Barrea: 684
 - Anversa degli Abruzzi: 303
 - Alfedena: 908
- ▶ **Number of livestock farmers (approx.):** In 2025, within the targeted municipalities in the area, there were 44 cattle farms (1,715 cattle) and 60 farms with sheep and/or goats (5,517 sheep).
- ▶ **Livestock farming systems:** Extensive sheep, goat, cattle and horse farming. Mostly through low-input family operations that rely on natural grazing resources.
- ▶ **Wild large carnivore species:** Apennine grey wolf and Marsican brown bear.
- ▶ **Large carnivore populations:**
- Apennine grey wolf: 7/8 packs
 - Marsican brown bear: approx. 50 individuals



Figure 2. Traditional extensive grazing area between Opi and Pescasseroli in the Alto Sangro Valley (August 2025, Photo Credit: Filippo Marino).

3 SOCIOECONOMIC CONTEXT

- ▶ PNALM, established in 1923, is one of Italy’s oldest national parks. It serves as the core area for the critically endangered Marsican brown bear population and was one of the last refuges for the Apennine grey wolf until the species was given legal protection was in the 1970s, enabling it to recolonise the Italian peninsula.
- ▶ The park’s landscape is dominated by beech forests (*Fagus sylvatica*), covering about 60% of its total area, alongside high-altitude grasslands, including meadows and clearings, that account for 30% of PNALM. These grasslands are characteristic of upper mountain zones, such as ridges and summits, typically found at 1,900-2,000 metres. Seasonal grazing is shaped by long, snowy winters and short, dry summers, although recent decades have seen drastic shifts in both seasons.
- ▶ The Sagittario and Alto Sangro Valleys are part of the inner areas of the Abruzzo Region, which are located far from major urban centres and essential services, such as healthcare, education, and transport. The areas face challenges including population decline, limited job opportunities, and weaker infrastructure. Despite this, they retain significant cultural, natural, and landscape value, which partially translates into seasonal tourism.



Figure 3. Warning sign about the presence of livestock guarding dogs (LGDs) (August 2025, Photo Credit: Filippo Marino).

4 FARMING CONTEXT

Traditional sheep farming with interregional, seasonal transhumance has largely disappeared within the last century. The ancient transhumance routes (tratturi) between the Puglia and Abruzzo regions have been abandoned. Only a few farmers continue to transport livestock seasonally between the two regions. Most now practise localised mountain transhumance over short distances.

Currently, livestock farming includes sheep, goats, cattle and horses. Livestock guarding dogs are used less extensively than in the past, and some farmers leave free-ranging livestock unattended at high-altitude pastures during summer. Local sheep breeds have largely been replaced by non-native ones, such as Lacaune, Langhe, and mixed breeds selected by farmers for dual purpose (meat and milk production), including Ile de France, Sopravissana, Gentile di Puglia, Berrichon. Cattle farming predominantly relies on Limousine (meat) and Pezzata Rossa (milk). Most farms are small, family-owned, and operated by one or two individuals.

- ▶ In the Province of L'Aquila, the total number of cattle and sheep/goat farms has declined despite an increase in the total number of animals.
- ▶ As of June 2025, in the municipalities in the study area, there were 223 sheep and goat farms (16.4% of the provincial total) managing 2,442 goats and 10,248 sheep, accounting for 32% and 15.6% of the provincial totals respectively. The sector is divided between mixed production farms (11.7% of farms, holding 56.7% of animals) and meat production farms (44.8% of farms, holding 39.2% of animals).
- ▶ The same area supported 201 cattle farms (16.5 % of the provincial total), managing 5,700 cattle (22.2% of the provincial total). Approximately 65.2% of these farms aim at meat production, accounting for around 86.4% of the total cattle population.

PNALM provides compensation payments for damage caused by wolves and bears within both the core area and the external protection zone (ZPE). Through an agreement with the Abruzzo Region, compensation has been extended to selected municipalities outside the park boundaries. However, previous research has highlighted the need to account for non-economic costs and benefits to foster greater tolerance among landholders towards large carnivores.

Main challenges:

- ▶ Herbivore grazing is reportedly making hay and cereal production unsustainable for farming practices in an area that is not particularly productive itself.
- ▶ Perceived loss of local farming identity and traditional land uses, driven by external socio-economic factors such as the Common Agricultural Policy, population decline, and local authorities.
- ▶ Lack of cohesion and cooperation amongst farmers.



Figure 4. Protest of livestock farmers in front of the headquarters of the National Park of Abruzzo, Lazio and Molise in Pescasseroli (3rd August 2025, Photo Credit: Filippo Marino).

5 LOCAL CONFLICT ASSOCIATED WITH LARGE CARNIVORES

Number of attacks:

Between 2018 and 2024, the annual economic damage averaged €282,000. In 2024, the total amount of compensation paid out amounted to €287,013.10. Within the park, wolves were responsible for 59% of cases (379 incidents), bears for 29% (189 incidents), and other species for the remaining 13%. The Sagittario and Alto Sangro Valleys accounted for approximately 49% of total compensated damage (€970,600) across 2,231 incidents, with wolves responsible for around 60% of cases and 67% of the economic damage.

Social conflict:

- Relationships between farmers and authorities have deteriorated, as have relationships amongst farmers themselves. Stakeholders hold diverse viewpoints and exhibit varying levels of trust towards one another.

- ▶ A sense of resignation exists concerning the decline and possible disappearance of livestock farming in the area.
- ▶ The compensation system, though relatively efficient within the park, is perceived as insufficient for both carnivore- and herbivore-related losses. Some farmers even see this as an encouragement not to take preventive measures.
- ▶ Non-lethal preventive measures, such as guard dogs and electric fencing, appear to be used mostly around farms. Their use seems to have decreased in high-altitude summer pastures, particularly for cattle farming, and in areas frequented by tourists.
- ▶ Large carnivores entering human-inhabited spaces, including towns and private properties, even during the day.

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