

STUDY AREA DESCRIPTION

RODNEI

BISTRIȚA-NASAUD & MARAMUREȘ, ROMANIA



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the European Union**

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1 INTRODUCTION

The Rodnei area spans the counties of Bistrita-Năsăud and Maramureș, stretching across the northern and northeastern slopes of the Rodnei Mountains. This mountain range is part of the northern group of the Eastern Romanian Carpathians, reaching a maximum height of 2,303 meters and stretching along a main ridge of over 50 kilometres. The Rodnei Mountains National Park covers most of the mountain massif, hosting an exceptional natural heritage. The landscapes and culture of the area bear the deep marks of transhumant shepherding. Sheepfolds, mountain roads, and toponyms have all shaped a distinct cultural identity on both sides of the mountains. The high-altitude meadows remain under the collective ownership and use of the locals and municipalities, continuing a tradition of collective land management with medieval roots. Pastoralism, subsistence agriculture, wood logging and localised mining remain the backbone of traditional life in the area.



Figure 1 Landscape of the Eastern Rodnei Mountains (Photo Credit: Mihai Pop).

2 OVERVIEW

- ▶ **Municipalities:** Ilva Mare, Ilva Mica, Lunca Ilvei, Măgura Ilvei, Maieru, Poiana Ilvei, Rodna, Șanț in Bistrița-Năsăud County; Borșa, Moisei in Maramureș County.
- ▶ **Geographical size:** 1,373.85 km², comprising mountains and high hills.
- ▶ **Human population:** 70,057 (count of 2020) with a slightly decreasing trend.

- ▶ **Number of livestock farmers (approx.):** Unknown.
- ▶ **Livestock farming systems:** Unknown.
- ▶ **Wild large carnivore species:** Brown bear (*Ursus arctos*), wolf (*Canis lupus*), lynx (*Lynx lynx*).
- ▶ **Brown bear population:** Approximately 40–50 individuals estimated in Rodnei Mountains National Park (472 km², APNMR, 2019); and a density of 11.8 brown bears per 100 km² across Bistrița-Năsăud and Maramureș, estimated using genetic analysis (INCDS, 2025).
- ▶ **Wolf population:** Approximately 10–20 individuals estimated in Rodnei Mountains National Park (472 km², APNMR, 2019); roughly estimated 6–10 packs, based on density data from other regions (Iosif et al, 2025), and a mean pack size of 4.
- ▶ **Lynx population:** No data available for the region. In other regions the lynx density is 1.7/100 km² (Iosif et al, 2022).



Figure 2 Guardian dog resting after a long night (Photo Credit: Mihai Pop).

3 SOCIOECONOMIC CONTEXT

The economies of the ten municipalities bear the imprint of a mountainous territory with rich natural resources, yet they are constrained by limited market access and inadequate infrastructure, which restricts the area's true potential. The economic profiles of the Bistrița-Năsăud County municipalities and those in Maramureș differ in nuances, but their structural challenges are largely shared.

The local economy has historically been based on three pillars: livestock and subsistence farming, logging and processing, and local mining. The mining and forestry industries strongly shaped the employment structure during the communist period. The closure of these economic branches after 1990 produced a shortage of jobs that was difficult to recover from.

Tourism has been the most dynamically evolving economic sector, especially on the Maramureș slope. The city of Borșa has been at the centre of this growth, driven by two concrete investments in winter sports infrastructure (gondola and ski slope), alongside its exceptional natural setting. On the Bistrița side, agrotourism remains underdeveloped relative to its potential, despite promising possibilities in the Ilevelor Valley, the Anieș Valley and the upper basin of the Someș Mare. However, accommodation and complementary services remain fragmented and poorly promoted.

4 FARMING CONTEXT



Figure 3 Shepherd making cheese (left) and the inside of a traditional sheepfold (right) (Photo Credit: Mihai Pop).

Agriculture persists as a semi-subsistence activity, characterised by small family farms, cattle and sheep breeding, milk production and traditional dairy products. In Maramureș County, green fodder and perennial fodder crops account for the largest share of the cultivated area, with animal production contributing to over 50% of the value of agricultural production. This structure reflects the pastoral

vocation of the mountainous area, where grasslands continue to be used both within household settings and through communal property structures.

Main Challenges:

- ▶ The fragmentation of farms keeps production costs high and limits access to organised markets. The average farm remains below the break-even point for investment in own processing.
- ▶ Progressive abandonment of less productive land risks shrub invasion of grasslands and degradation of the forage base in the medium term.
- ▶ An ageing population, with those over 65 outpacing the young population aged 0–14 years, is compounding the gradual decline in the rural population.
- ▶ The pressure of large carnivores is a real constraint: damage caused by bears and wolves directly affects the profitability of sheep breeding and, to a lesser extent, extensive cattle grazing.



Figure 4 Shepherd and apprentice preparing for sheep milking (Photo Credit: Mihai Pop)

5 LOCAL CONFLICT ASSOCIATED WITH LARGE CARNIVORES

Number of attacks:

- ▶ The main conflicts of local farmers with large carnivores involve brown bears and wolves. There are no official reports of lynx attacks in the case study area.

- ▶ Between 2023-2025, brown bears were involved in 19 livestock predation incidents, causing the loss of 19 sheep and eight cattle. The scale of damage is small compared to other areas.
- ▶ Between 2023-2025, wolves were involved in five livestock predations incidents, causing the loss of seven sheep and two cattle.

Social conflict:

- ▶ Social conflicts relating to large carnivores stem mostly from a lack of trust in public institutions, politicians and resource managers. NGOs and researchers are practically absent from the lives of pastoral communities in the area, with contact between these groups and farmers being almost non-existent.
- ▶ The existing protection framework, including that associated with the Rodnei National Park, is built on the narrative that fails to account for the realities of shepherds' lives. This results in relevant stakeholders remaining poorly informed, which has an adverse effect on management decisions.
- ▶ A specific source of social conflict arises between sheepfold watchdogs and hikers, tourists and locals who use mountain trails. Dogs that are effective against predators are frequently aggressive towards humans, generating complaints, fines and community disputes. This tension has been exacerbated by the growth of mountain tourism in recent years.

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