Pop-up feature

Overview of livestock depredation in Europe

Katrina Marsden

EU Large Carnivore Platform Secretariat, adelphi consult, Berlin, Germany

Contact: lcplatform@adelphi.de

Background

The recovery of large carnivores, particularly wolves, in Europe has reignited conflicts with livestock farming, posing significant challenges for coexistence [1]. Historically, large carnivores were eradicated from much of the continent due to their depredation of livestock, but policy shifts towards protection have facilitated their return [2]. Concurrently, agricultural intensification and the abandonment of extensive pastures have led to increased forest land and prey species, further complicating the dynamics between livestock and predators. A recent report[1] by the Secretariat of the EU Platform on Coexistence between people and large carnivores[2] collates and analyses data on damage across EU Member States as well as Norway and Switzerland and provides insights into the support available through EU funding mechanisms.

Data collection and analysis

Measuring livestock depredation is complex due to variation in data availability and quality across Europe. Assessment of the population status of large carnivores at the European level relies on information compiled by the Large Carnivore Initiative for Europe[3] including data from national monitoring systems, various projects and expert surveys [3]. However, monitoring methods are not standardised across countries. Data on depredation are similarly inconsistent, with compensation systems and reporting practices varying widely among countries. For instance, the bureaucratic hurdles that must be overcome in order to receive compensation for losses discourage livestock breeders from reporting damage in some regions, while in others compensation is paid even when the cause of damage is uncertain.

[1] https://environment.ec.europa.eu/topics/nature-and-biodiversity/habitats-directive/large-carnivores/eu-large-carnivore-platform/national-large-carnivore-management_en
[2] https://environment.ec.europa.eu/topics/nature-and-biodiversity/habitats-directive/large-carnivores/eu-large-carnivore-platform_en
[3] https://www.lcie.org/

The Secretariat was asked to compile available data on large carnivores and livestock as part of our service contract supporting the EU Platform. We used a system established within the LIFE EuroLargeCarnivores project[4] to collate individual damage cases directly from national or regional management authorities in up to 21 countries[5] for each of the years 2018, 2019 and 2020 [4], to which we added new data from 2021 and assessed trends in the number of incidents over the whole four-year period.

Main findings

While impacts can be serious at the level of individual farms, we found that losses of livestock to large carnivores in Europe overall are relatively low in economic terms, as previous studies have also demonstrated [1,5]. Considering the species involved, the wolf was most often implicated and sheep were most frequently depredated, especially those in extensive grazing systems. The total reported loss to large carnivores of 17,329 sheep in 2020 represented just 0.03% of the approximately 59 million sheep in the EU and 0.05% of the ~32 million sheep slaughtered for human consumption each year.

There is wide variation between European countries in terms of the impact of wolf depredation (Fig. 1). For example, France and Greece reported several thousand head of livestock killed per year but most countries lost fewer than one thousand animals and some, like Belgium and Latvia, had very few cases.

Our comparative analysis revealed considerable variation between countries in the average number of livestock reported lost per individual wolf, from more than 20 in Belgium and Croatia to less than one in, for example, Latvia and Romania (Fig. 2). Damage levels are therefore not simply related to wolf numbers but are also influenced by other factors such as availability of wild prey, landscape features and the implementation of protection measures [1,4–7].

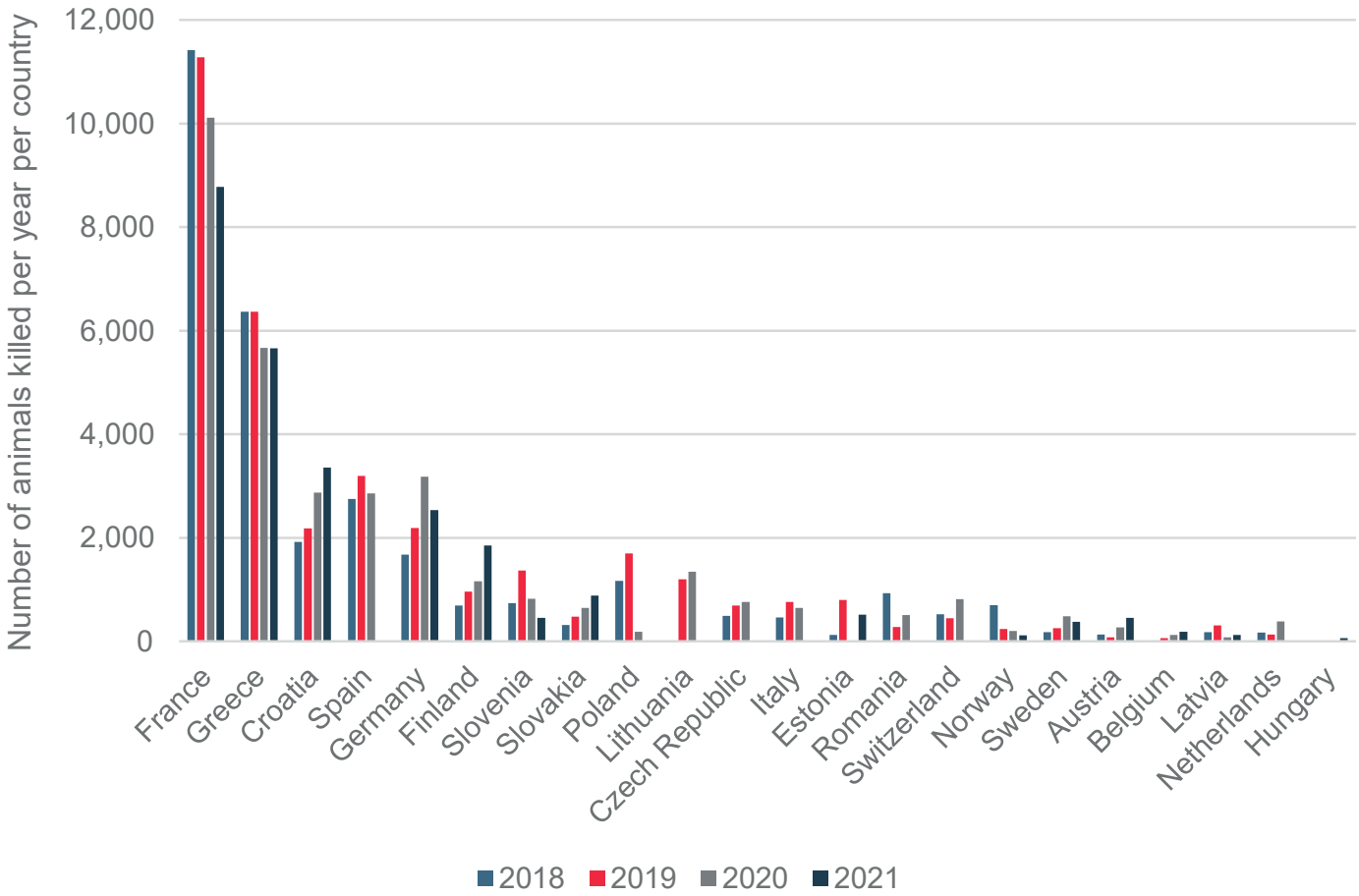

Fig. 1. Head of livestock reported killed by wolves per country per year in 2018–2021.

[4] https://www.eurolargecarnivores.eu/en
[5] Some countries did not provide data for every year.

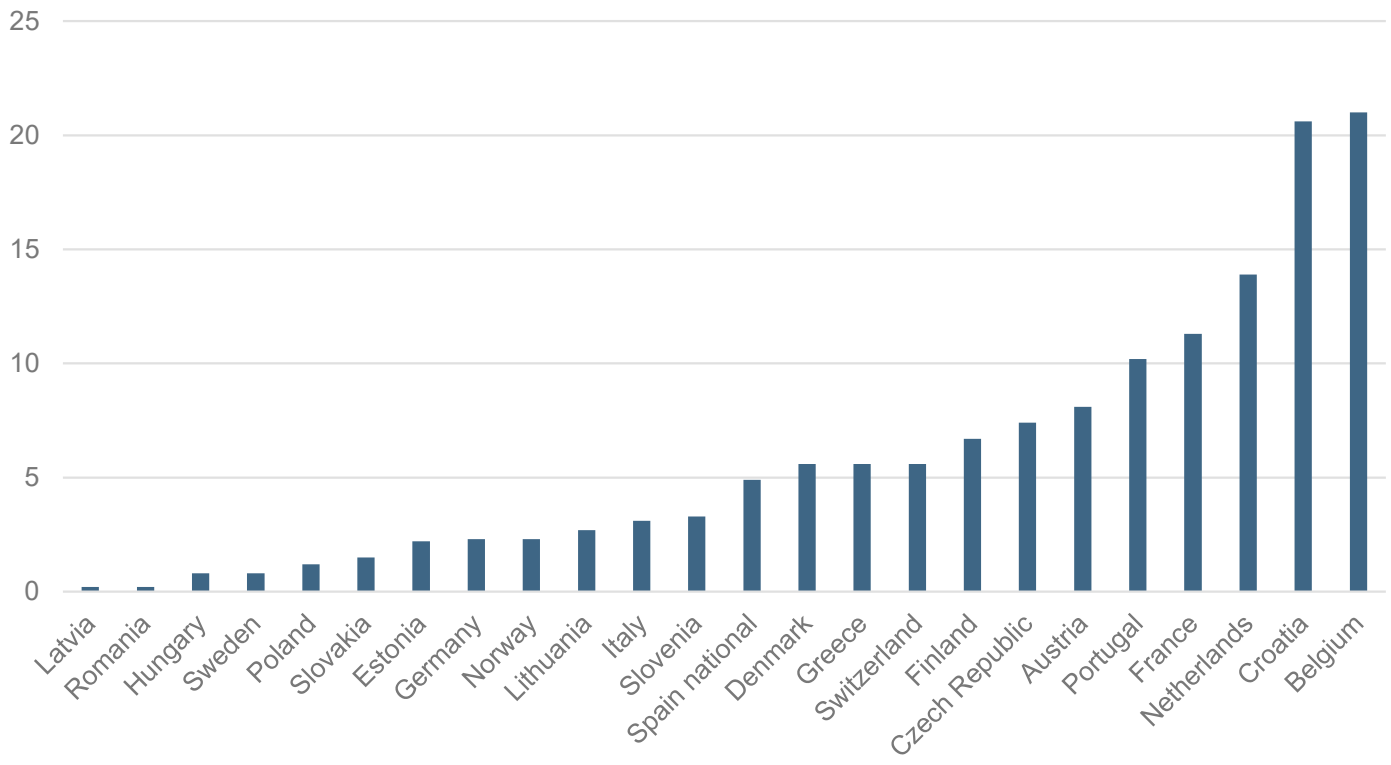

Fig. 2. Comparison of the mean number of livestock depredated per wolf in 2021.

Interestingly, areas with a longer history of large carnivore presence and abundancy of wild prey, such as in the Carpathians and Baltic states, tend to have lower depredation rates despite significant overlap between large carnivore populations and high sheep densities, suggesting that coexistence strategies may improve over time after the wolf 'recolonisation front' passes. Moreover, reported losses showed a decreasing trend during the period 2018–2021 in several countries and regions including some with relatively high damage levels, notably France (Fig. 3).

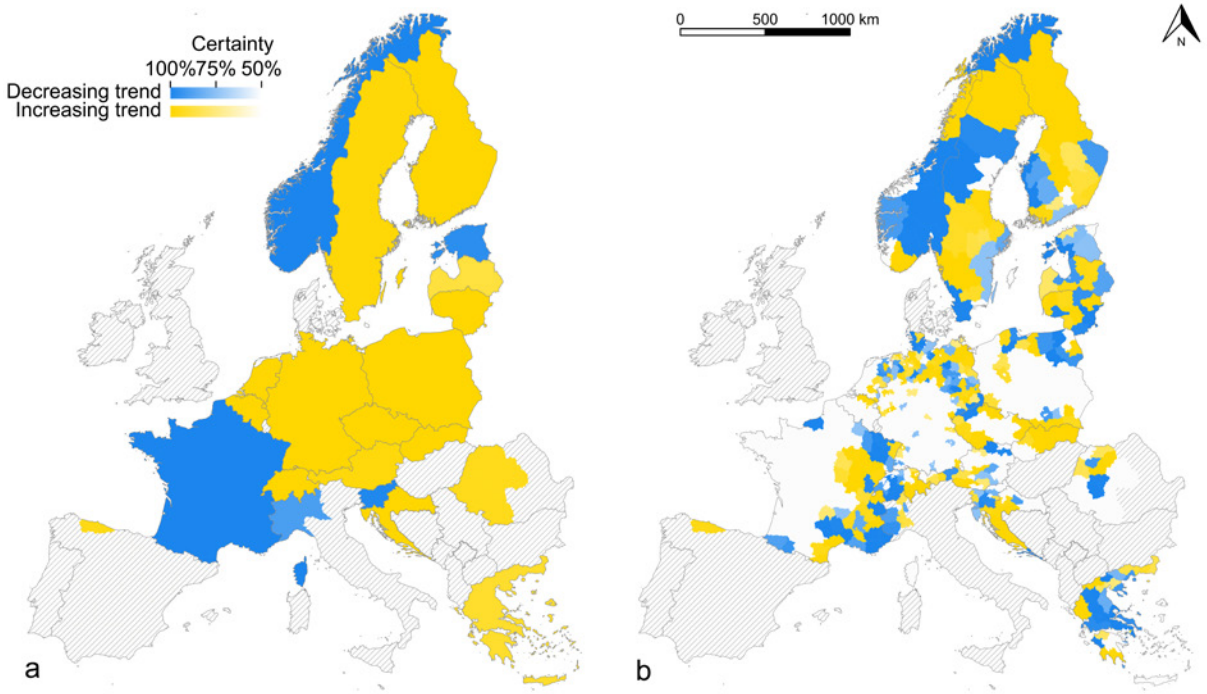

Fig. 3. Trends in reported losses of livestock to wolves based on number of incidents in 2018–2021 at (a) country and (b) regional (NUTS3) levels[6].

[6] Although the trend in Greece is shown as increasing, this is inaccurate. Some incidents in 2018–2020 were excluded because they could not be geolocated. When these cases are included, there was a decrease in overall losses in Greece from 2018 to 2021, as can be seen in Fig. 1.

Support for prevention measures

The EU's Common Agricultural Policy (CAP) provides funding for livestock protection measures through the European Agricultural Fund for Rural Development (EAFRD) and the European Agricultural Guarantee Fund (EAGF). However, measuring the impact of CAP funding is complex due to diverse implementation across Member States. For instance, France utilises CAP funds extensively for protection measures, covering the costs of shepherds' salaries and livestock guarding dogs (LGDs), while Germany relies more on national funds. Slovenia has a comprehensive set of measures funded by CAP including fencing, LGDs and shepherds. In Austria, since the most recent CAP update, CAP funds are planned to support LGDs and shepherding, but implementation issues have arisen for a variety of reasons including animal welfare legislation. Greece includes measures for electric fences and LGDs, though past uptake has been inconsistent.

The flexibility in the new CAP [*Editor's note: see Marsden (2022) in CDPnews issue 24 for details*] allows Member States to allocate funding under various interventions. While this gives them the decision-making power to respond to their own particular situation, it also makes it challenging to isolate and measure the specific impact on reducing livestock depredation by large carnivores. Unspecific reporting requirements and inconsistent reporting by Member States on the use of CAP funding for livestock protection further complicate the assessment of its effectiveness.

Recommendations

To improve data collection and management practices in order to better address the challenges of livestock depredation by large carnivores, there is a need for a standardised, case-based incident collection system to facilitate accurate comparisons over time and across regions. Such a system would enable national and regional governments to identify depredation hotspots and assess the impact of the protection measures supported. Engaging stakeholders in the data collection process and ensuring that data is publicly available and systematically analysed could enhance understanding of large carnivore impacts on livestock and facilitate more effective management strategies for coexistence. Additionally, the broader challenges faced by High Nature Value livestock breeders (Box 1) should be acknowledged and the benefits of extensive farming systems recognised.

Box 1. High Nature Value farming

High Nature Value (HNV) farming refers to agricultural systems that support and maintain high levels of biodiversity and landscape features[7]. These systems are typically characterised by low-intensity agriculture, extensive grazing and the presence of semi-natural habitats such as meadows, pastures and hedgerows. HNV farming often occurs in areas where traditional farming methods have been preserved, contributing to the conservation of rare species and habitats. It plays a crucial role in sustaining ecosystem services such as soil fertility, water regulation and carbon sequestration, while also supporting rural communities and cultural heritage. However, such farming systems are at risk due to high costs, low generational renewal and social disadvantage. They are often poorly rewarded through EU Common Agricultural Policy funding and poorly represented in political fora [8].

References

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[7] http://www.high-nature-value-farming.eu/