

December 2023



CASE STUDY

Livestock depredation and large carnivores in Europe: Austria - livestock damages and wolf

EU PLATFORM ON COEXISTENCE BETWEEN PEOPLE & LARGE CARNIVORES

Minimizing
Conflict

Finding
Solutions

Produced by the EU Large Carnivore Platform Secretariat (adelphi consult GmbH and Callisto) as part of the services provided to DG Environment for Service Contract 07.0202/2020/835172/SER/ENV.D. The report does not necessarily reflect the official view of the European Commission.

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Layout: adelphi consult GmbH

Photo credits: Vincent Van Zalinge/ unsplash (Cover Image)

Status: December 2023

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Austria

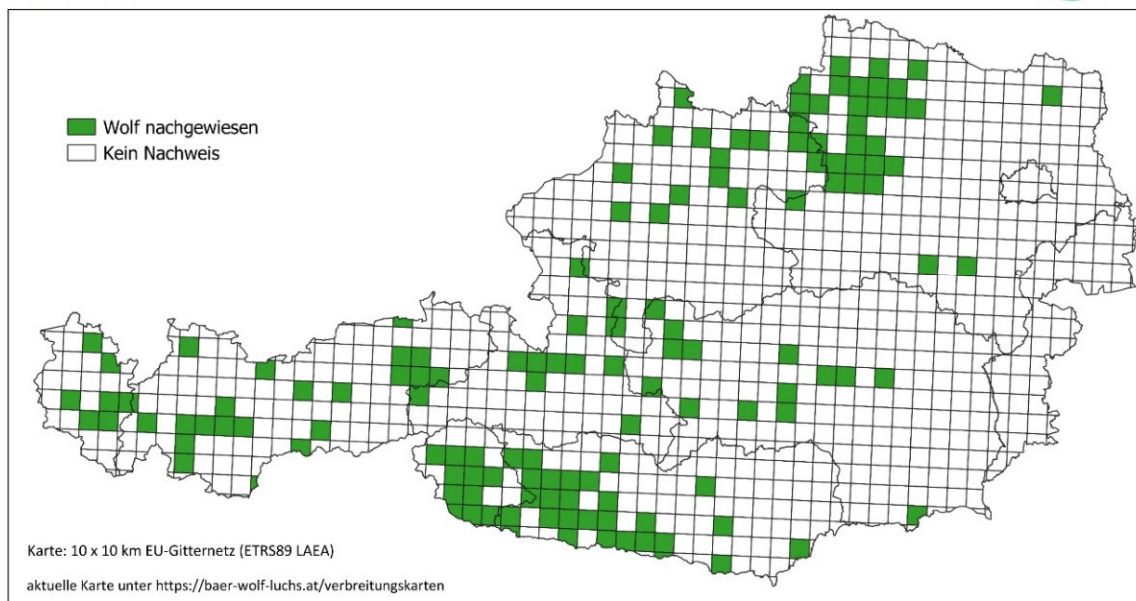
After extinction in the 19th century, at the start of the 21st century, wolves, from the growing central European and Alpine populations begun to, pass through Austria more frequently. In 2016, the first pack established in the north of Austria, with adults coming from Germany. Wolf numbers in Austria are still relatively low in comparison to other EU countries and damages are mostly concentrated in the western half of Austria (Tyrol, Carinthia) and additionally in the north-eastern part of Lower Austria, where four packs live. Nonetheless, conflict around the return of the wolf is high. This is partly because of the important cultural role of Alpine farming in Austria and concerns that wolf presence will make extensive alpine farming even more difficult than it already is.

In addition to the wolf, individual bears are also present in Austria, and they cause some livestock damages. Reproduction of lynx has been recorded in the north of Austria bordering Czechia and Germany and in the western part in Vorarlberg, bordering to Switzerland.



Wolfsvorkommen 2023

Stand: 16. Oktober 2023



Karte: 10 x 10 km EU-Gitternetz (ETRS89 LAEA)
aktuelle Karte unter <https://baer-wolf-luchs.at/verbreitungskarten>

Datenquelle:
Landesjagdverbände,
Landwirtschaftskammer,
Landesregierungen, FIWI

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Figure 1 Map showing signs of wolf presence in Austria¹ (C1 evidence)

¹ Österreichszentrum Bär Wolf Luchs (2023) <https://baer-wolf-luchs.at/verbreitungskarten/wolf-verbretung>

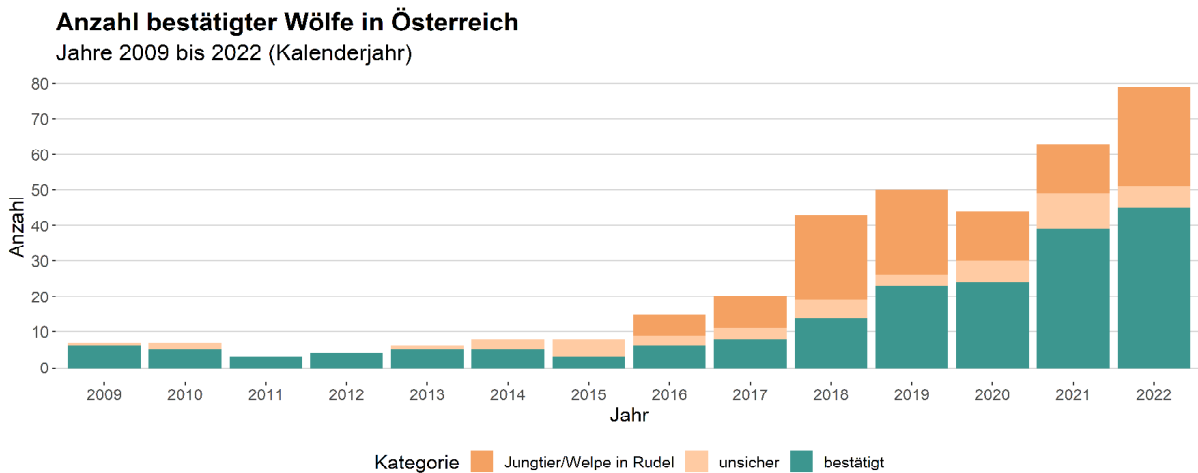


Figure 2. Number of confirmed wolves in Austria from 2009 to 2022 (young / pups in packs; uncertain; confirmed)

Institutional structure

Wildlife management is completely within the competencies of the regions and large carnivores are normally managed under hunting law or nature protection law of each region. Nonetheless, the ÖZ (*Österreichszentrum Bär, Wolf, Luchs* - Austrian centre for bear wolf and lynx) exists as a specialist body to support the regions coordinating the approach and management of large carnivores. Its aim is “to find a low-conflict coexistence with wolves based on the legal protection states as well as the interests of different land users, nature protection and the general public”. The centre acts as an association with regional ministries and the federal ministry of Agriculture and the federal ministry for Climate Action as members paying a membership fee. The members meet and work together on recommendations and publications. ÖZ has produced Wolf management recommendations² which should act as guidelines for wolf management, compensation and prevention measures in the regions.

Agricultural support is federalised and managed by the Ministry of Agriculture and Forestry, Regions and Water management (*Bundesministerium für Land- und Forstwirtschaft, Regionen und Wasserwirtschaft*).

Livestock Damages

Following the relatively recent return of the wolf to Austria, livestock damages are increasing overall with some variation between the regions.

² Österreichszentrum Bär Wolf Luchs (2023)

https://baer-wolf-luchs.at/wp-content/uploads/2022/05/OeZ_Wolfsmanagement_Empfehlungen_2021.pdf

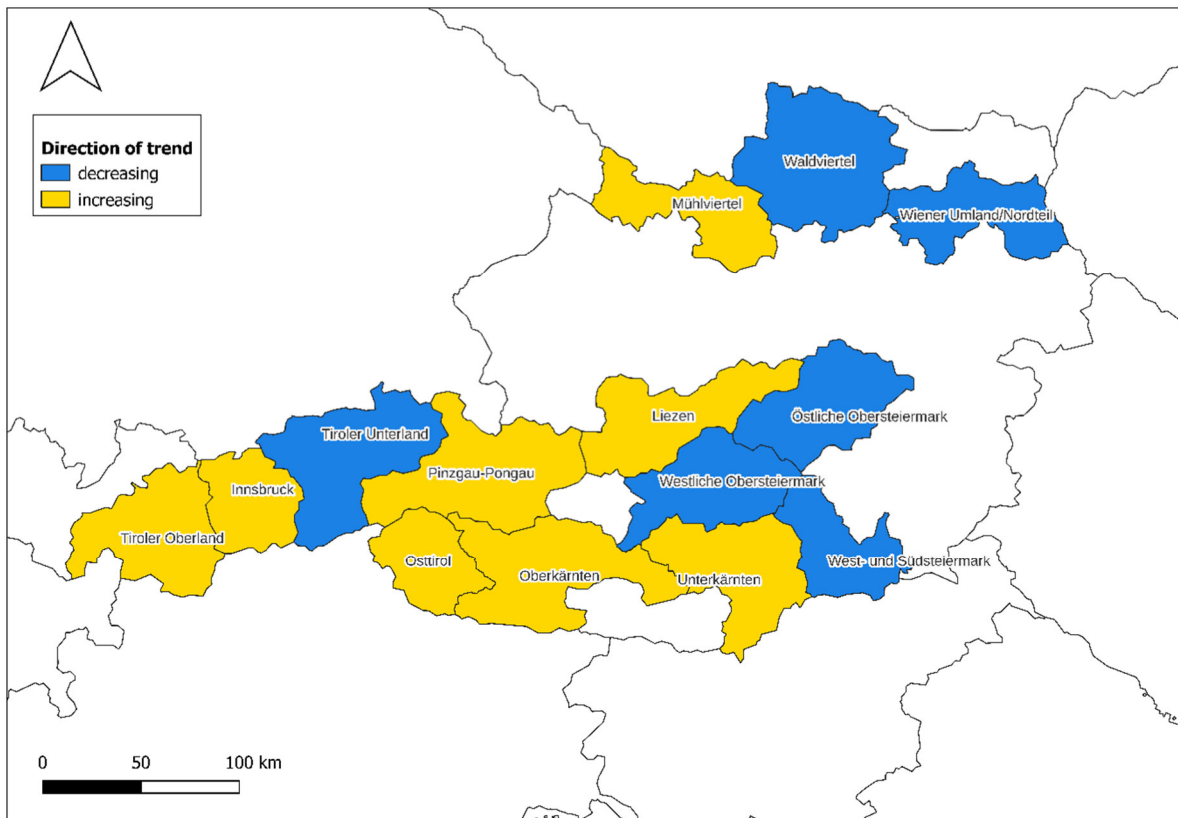


Figure 3 Trends in damages across Austria, see EU LC Platform (2023) for more information

Overall national trend: Increasing damages

Table 1. Total livestock damages in 2023 in Austria³

Large Carnivore	Livestock species	killed	injured	missing
Wolf	Sheep or goats	344	35	228
	Cattle (incl calves)	12	10	1
	Horse	1	0	0
	Fenced Game	2	0	0
Bear	Sheep or goats	28	0	6
	Bee hives	10		
Golden Jackal	Sheep or goats	9	0	13
Total		406	45	248

A detailed overview by federal state and figures from last years are available on the website of the ÖZ.

³ Österreichszentrum Bär Wolf Luchs (2023) Last update: End of August 2023, Source: Federal states, via ÖZ: <https://baer-wolf-luchs.at/monitoring/risszahlen>

Management response

Overarching guidelines on managing livestock damages have been developed by the ÖZ⁴ but these are currently followed only to a limited extent by the regions. These describe how to protect flocks, pay compensation and cull in case the above measures do not work. Agricultural prevention advisors (*Landwirtschaftliche Präventionsberater*) should work with the regional administration and the ÖZ together to recommend protection measures. An intervention team, has been established as part of the LIFE WolfAlps EU project, coordinated by the ÖZ and provided by the Agricultural Research and Education Centre Raumberg-Gumpenstein as a first response to help farmers and breeders immediately after an incident. In the case of bold wolves, or following high damage incidents, there is the possibility for implementing scaring/ deterring measures in cooperation of the respective federal administration, the Research Institute of Wildlife Ecology of the University of Veterinary Medicine Vienna (*Forschungsinstitut für Wildtierkunde und Ökologie*), coordinated by the ÖZ.

Compensation

In case an incident occurs, the livestock owner informs the appropriate administration in the region⁵. According to ÖZ guidelines, each region should have a Wolf officer (*Wolfsbeauftragte*) from the administration who is the contact person for overall wolf management. Damage assessors (*Rissbegutachter*), normally from the regional, communal or hunting administration) inspect damages, take DNA samples and assess the likelihood of damage being caused by a wolf⁶. If wolf is judged as the probable cause of death, compensation can be paid. Damage payments vary by region and come from either the regional authorities or insurance of the hunting associations.

Other causes of livestock deaths remain much more common than damage by large carnivores. In response to a parliamentary question on fallen stock, figures for the number of livestock dying by other causes were given from 2010-2017. In 2017, for example, 30,468 sheep and goats of more than 1 year were collected whereas the death, injury or disappearance of 21 sheep in that year⁷. Under Alpine conditions, livestock dies due to a range of reasons due to the harsh climatic conditions and rough, dangerous terrain. However, most deaths are not compensated, thus figures are not publicly available in the same way.

Protection

It is the responsibility of the livestock breeder to decide whether to adopt protection measures. The ÖZ recommends that these be financially supported through public funds. It is up to the regions to decide whether they finance such measures. The technical guidelines developed by ÖZ describe the type of mobile and permanent electrical fencing (min 90cm, voltage 3500V) to use as well as additional temporary measures (electric net to 105cm), barrier tape and fox lights. Night fencing is recommended and the use of livestock guarding dogs (LGD). The actual implementation of protection measures varies. Salzburg funds fencing, purchase of livestock guarding dogs and GPS trackers whereas Carinthia and Burgenland do not provide financing for protection measures⁸.

⁴ Österreichzentrum Bär Wolf Luchs (2023) https://baer-wolf-luchs.at/wp-content/uploads/2022/05/OeZ_Herdenschutzbrochuere.pdf

⁵ Österreichzentrum Bär Wolf Luchs (2023) <https://baer-wolf-luchs.at/hilfe-bei/riss>

⁶ Österreichzentrum Bär Wolf Luchs (2023) <https://baer-wolf-luchs.at/hilfe-bei/riss>

⁷ GZ: BMASGK-90110/0004-IX/2018 Anfrage Nr. 859/J der Abgeordneten Elisabeth Feichtinger betreffend Falltiere

⁸ Österreichzentrum Bär Wolf Luchs (2023) Prävention – Förderung: <https://baer-wolf-luchs.at/hilfe-bei/praevention-foerderung>

In addition to regional funding for purchasing of infrastructure and dogs, certain measures are carried out on a national level. For the first time, in 2023, protection measures were included in the Austrian CAP, specifically under intervention *Animal welfare: Herding* as well as *Alpine pasturing*. The former intervention is the precondition for the second. With both, it is possible to apply for an optional supplement for the use of LGDs. 700€ is paid as a lump sum per dog for a maximum of 5 dogs per pasture. This is intended to cover increased labour costs, feed, veterinary visits, as well as insurance costs. The costs of buying the dog are not covered to avoid overlaps with state funding programmes. The scheme requires LGD to stay for the entire duration of the time the herded animals are on the alpine pasture (at least 60 days) and dogs must be certified by the ÖZ. Damage caused by LGD must be covered by liability insurance⁹, however these measures are only being developed currently meaning the measure is not immediately implementable.



Figure 4. Sheep flock with herding and guarding dogs © LIFEstockProtect

The certification scheme for breeding and use of LGD is being developed, within the project LIFEstockProtect. In autumn 2022, the ÖZ became the responsible body for the certification of livestock guarding dogs. At the general meeting of the ÖZ November 2022, an internal working group on LGD was commissioned to better develop this certification. The first dog was certified in July 2023 on a Tyrolean alpine pasture.

Another barrier for the use of LGD is current animal welfare regulations¹⁰ which require dogs to socially interact with humans at least two times per day and have fixed shelter, requirements incompatible with Alpine working conditions. Additionally, liability and insurance for incidents are unclear especially in touristic areas. The ÖZ is working on changes in these regulations, but opposition from animal welfare groups remains high.

CAP funds are also being used to establish an Austrian LGD Network. The European Wilderness Society will implement the scheme following the certification by the ÖZ. The ÖZ will also have an

⁹ Landwirtschaftskammer Österreich (2023) <https://www.lko.at/15-tierwohl-behirtung-%C3%B6pul-2023+2400+3587362>

¹⁰ Bundesrecht konsolidiert: Gesamte Rechtsvorschrift für 2. Tierhaltungsverordnung, Fassung vom 13.12.2023 <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20003860>

advisory role. A total of 6 LGD centres will participate in the initial phase of the new Network. The project Budget is 300,000€ of which 50% is financed by the RDP and it runs from November 2023 until July 2025.

Culling

Culling of wolves under derogation is decided upon on the regional level within the respective hunting law and decrees based upon those laws. In general, in Austria the right of hunting is strictly linked to the ownership of land. Land over a particular size can be leased for hunting as a whole, smaller plots are brought together into bigger management units. The right to hunt also entails the obligation to manage game in regard of the interests of agriculture and forestry.

Table 2. Hunting laws online (German only)

Region	Hunting law
Burgenland	https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrBgld&Gesetzesnummer=20001124
Kärnten	https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrK&Gesetzesnummer=20000013
Niederösterreich	https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrNO&Gesetzesnummer=20000559
Oberösterreich	https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LROO&Gesetzesnummer=10000063
Salzburg	https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrSbg&Gesetzesnummer=10000930
Steiermark	https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrStmk&Gesetzesnummer=20000850
Tirol	https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrT&Gesetzesnummer=10000088
Vorarlberg	https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrVbg&Gesetzesnummer=20000567
Wien	https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrW&Gesetzesnummer=20000437

These rights and regulations have to be considered, when a wolf is to be removed. The federal states argue that authorising the removal of a wolf by means of a decree rather than an official decision is faster, more efficient and seen as only possibility to help the affected farmers within reason. In approving a removal order, a distinction is made between human safety and causing excessive damages to livestock.

Zoom-in: Tyrol

Tyrol makes up a part of the mountainous west of Austria spanning mountain ranges such as the Ötztaler Alps, Stubaler alps, Lechtaler alps, Karwendel Alps, Kitzbüheler Alps as well as the steep river valleys in between. Tyrol shares Austria's highest peak Großglockner (3798m) with neighbouring Carinthia. In 2020, 24% of the land area is used for agriculture and around 50% for forestry. Of the agricultural area, 96% is pasture and 55% alpine pasture¹¹.

¹¹ Land Tirol (2023) <https://www.tirol.gv.at/statistik-budget/statistik/landwirtschaft/>



Figure 5. Mahdbergalmin Tyrol, Goats and LGD and shepherds © LIFEstockProtect

Tyrol provides a lot of information on large carnivores in general, on recent sightings and general help, also including reports of the pilot project on their website¹².

Compensation

Tyrol first produced guidelines on compensation in 2012. Currently, both direct and indirect damage caused by large carnivores is compensated by Tyrol changing the previous rules where direct damage caused by a carnivore was compensated by the insurance of the Tyrolean Hunters' Association. Compensation is paid by Tyrol in cases where no direct evidence can be provided, but the kill was likely caused by a large carnivore. This probability based on the damage assessment and all other available data.

Tyrol applies standardised cost rates for compensation. These are based on annually updated auction and market prices. Since 2019, additional feeding costs incurred in the event of premature round up from the alpine pastures have been compensated in the event of repeated killings. Support is also provided for necessary animal recovery and veterinary costs. Compensation payments are processed and paid out by the province of Tyrol.

Protection

In 2019, Tyrol commissioned a feasibility study for livestock protection¹³ examining four Alpine grazing areas in different, representative locations. The study found that livestock protection was technically possible and compatible with tourism but that for certain locations, costs could be (initially prohibitively) high.

¹² Land Tirol (2023) Große Beutegreifer in Tirol <https://www.tirol.gv.at/landwirtschaft-forstwirtschaft/agrar/rechtliche-bestimmungen-in-der-landwirtschaft/beutegreifer/>

¹³ Land Tirol (2023) https://www.tirol.gv.at/fileadmin/themen/land-forstwirtschaft/agrar/LWSJF/Grosse_Beutegreifer/Herdenschutzstudie_lang.pdf



Figure 6. LGD and tourists in Tyrol © LIFEstockProtect

Since then, a pilot project¹⁴ has been established carrying out funded protection measures in 5 different Alpine meadow locations. The aim is to test in practice whether and with what management adjustments the risk of sheep being killed by large carnivores can be reduced. At the same time, the effects of these changes of practice on shepherd's work, costs, animal health, weight development, movement patterns and sheep losses, as well as on vegetation, are investigated. The detailed study of these 5 locations shows a significant increase in costs and workload which if carried by the livestock breeders themselves would be prohibitive. Other side effects are more positive, in particular, animal health was significantly improved by the care of a shepherd and no depredation occurred. The salaries negotiated the shepherds with the responsible person of the respective alpine pasture/pasture cooperative and totalled at around €3,000/month after tax, during the grazing season. A key factor here is the proximity to Switzerland, where actual wage level is higher, also for shepherds. In relation, the salary is in relation to other work higher, as it is only for the pasturing season.

Apart from the CAP measures described above, Tirol finances 60% of the purchase of fences and necessary accessories for sheep and goats within the framework of investments in agricultural production (minimum investment €400€). 50% of the costs of GPS trackers via the Tyrolean sheep and goat breeders Association can be covered (up to 75€ per device, maximum 5 devices)¹⁵

¹⁴ Land Tirol (2023)
<https://www.tirol.gv.at/landwirtschaft-forstwirtschaft/agrar/rechtliche-bestimmungen-in-der-landwirtschaft/beutegreifer/herdenschutz/>

¹⁵ Österreichzentrum Bär Wolf Luchs (2023) <https://baer-wolf-luchs.at/hilfe-bei/praevention-foerderung>

Culling

In February 2023, an amendment to the Tyrolean Hunting law was passed, which enables the shooting of problematic and high-risk wolves by decree instead of official order. The regulation also applies to other large carnivores (bear, lynx and golden jackal). At the same time, certain Alpine pastures were defined as “unprotectable”. In unprotectable areas, shooting is possible if, for example, a wolf repeatedly attacks grazing animals. A shooting permit is valid for a maximum of eight weeks and within a radius of ten kilometres of the first attack. It is issued if at least five sheep or goats are killed or at least one cow, horse or donkey is killed or injured in a single attack.

Between 2022 and 2023, 4 wolves were killed in Tyrol (3 because of exceeding damages, 1 because of safety reasons).

Zoom in: Carinthia

Carinthia is the most southern Austrian region in the eastern Alps that encompasses Austria's highest mountain, Grossglockner (3789m), shared with Tyrol. It is characterized by alpine lakes and mountains.



Figure 7. Heuernte Nationalpark Hohe Tauern, Kärnten © Wikimedia commons

According to Agrarstruktur 2020¹⁶, there were 18,228 agricultural and forestry businesses in Carinthia. In contrast to the trend across Austria, the total number of farms in Carinthia has increased compared to the last full survey in 2010. The total agricultural area of 834,473 ha, which corresponds to 88 % of Carinthia's area. Almost 60 % of this is forestry land, 25 % is agricultural land including mountain pastures and the remaining 15 % is unproductive land or bodies of water.

¹⁶ Lk online (2023) Agrarstruktur – sieben Kärntner Trends: <https://ktn.lko.at/agrarstruktur-sieben-k%C3%A4rntner-trends+2400+3664359>

The utilised agricultural area (210,987 ha) is divided into 28 % arable land, 46 % permanent grassland and 26 % alpine pastures.

Agriculture and forestry in Carinthia continues to have a small structure. In 2020, the average farm cultivated 45.8 ha of total land, of which 27.3 ha was forest land, 11.6 ha agricultural land and 6.9 ha unproductive land. More than a third of farms (35.3 %) cultivate a total area of less than 20 ha.

Compensation

Until 2018, compensation payments were covered by insurance from the Carinthian Hunting Association. In 2019, the Carinthian Game Damage Fund was established under the Carinthian Game Damage Fund Act (*Kärntner Wildschadensfondsgesetz*). Killed and injured livestock are compensated under the fund. In addition, support is provided for missing livestock if it can be proven that there have been incidents directly on the pasture or on neighbouring pastures during the pasture season. If the annual resources available in the fund are sufficient to cover all damage, 100% of the damage caused by the large carnivore can be compensated. However, the fund is capped and not paid out until the end of the year once the total damage is known. A pro rata reduction in the amount of support takes place if the annual resources available are insufficient. This means that payments are delayed and vary significantly depending on the total amount of damage.

Protection

There are no subsidies for livestock protection measures.

Culling

As in other regions Carinthia distinguishes between wolves that cause damage (which have been proven to have killed several livestock) and high-risk wolves (which venture into populated areas several times). The regulations for wolf removal have been changed several times in recent years (most recently 2023), making the conditions to remove wolves easier¹⁷. Between 2022 and autumn 2023, 7 wolves were shot in Carinthia all of which were defined as high-risk wolves.

¹⁷ Landesrecht konsolidiert Kärnten: Gesamte Rechtsvorschrift für Ausnahme von der Schonzeit für den Wolf, Fassung vom 13.12.2023



Produced by the EU Large Carnivore Platform Secretariat (adelphi consult GmbH and Callisto) as part of the services provided to the European Commission and for the EU Platform Members