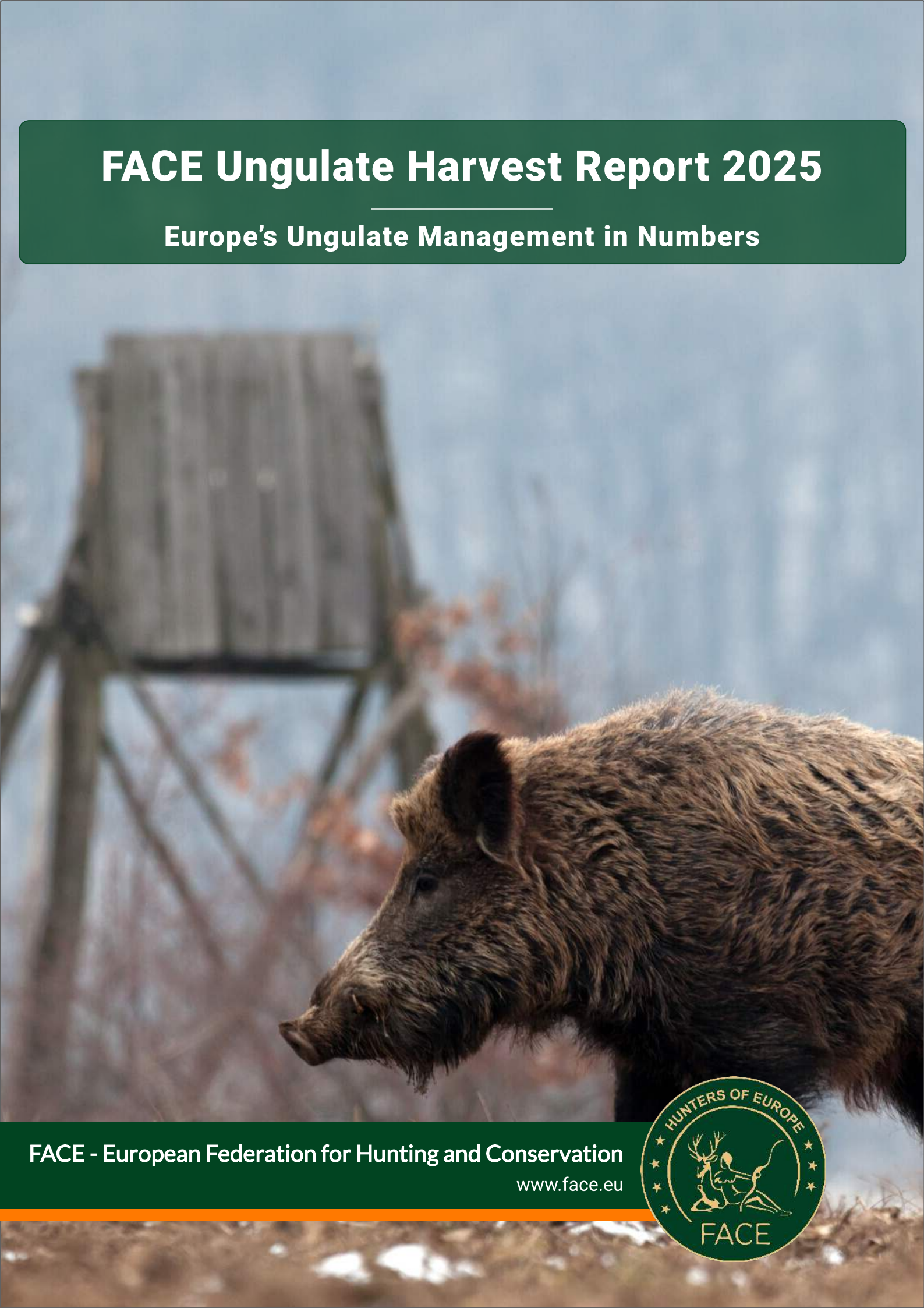
FACE Ungulate Harvest Report 2025

Europe's Ungulate Management in Numbers



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1. Summary: A sustainable use success story in Europe's wildlife management

This report highlights a remarkable and often underappreciated success story in European conservation: the sustainable management of ungulate (often termed 'big game') species through hunting. Across Europe, populations of wild ungulates have rebounded significantly in recent decades, as a result of different factors, such as land use changes and sustainable wildlife management practices with the active engagement of hunters.

Drawing on harvest data from 34 European countries, this report offers a comprehensive overview of the continent's ungulate harvest. The most widely harvested species is the Roe deer, with an estimated annual harvest of 3.7 million individuals, followed closely by the Wild boar at 3.3 million in 31 countries and the Red deer at around 1 million individuals harvested in 30 countries, underscoring these species' wide distribution and thriving populations.

Other notable species include Fallow deer, with approximately 500,000 individuals harvested across 24 countries, and more regionally restricted species such as the Moose (around 125,000 individuals harvested in 7 countries), Mouflon (60,000 in 20 countries), and Chamois (70,000 in 13 countries). Non-native species such as Sika deer (70,000 in 7 countries), Reeves' muntjac (108,000 in 3 countries), and Chinese water deer (20,000 in the UK alone) also make a notable contribution to harvest figures.

These figures are not isolated statistics; rather, they form part of long-term data sets that reflect the successful recovery of large mammal populations across Europe. More importantly, they illustrate how hunting contributes to biodiversity conservation by maintaining balanced populations, protecting habitats, and reducing human-wildlife conflict.

The data presented in this report are made possible by the efforts of hunters who develop management plans and set harvest quotas based on monitoring, and report their activities to regional and national authorities. This collaborative model of sustainable use ensures that hunting is both a tradition and a modern tool for wildlife management.

Often overlooked in public discourse, hunting serves critical ecological, social, and economic functions. Beyond being a cultural heritage, hunters' management efforts support biodiversity by preventing the overpopulation of ungulates, which can lead to habitat degradation and an increased risk of disease. Many challenges still exist, and hunting policies are subject to continuous adjustments as our environment and land use practices—especially agriculture—change. Ungulate management also provides high-quality, locally sourced wild meat with a low carbon footprint, an increasingly relevant contribution in the context of sustainable food systems.

In summary, hunting serves nature. It generates economic and social benefits, supports rural livelihoods, and promotes ecosystem health, benefiting wildlife and biodiversity at a large scale. By ensuring that wildlife populations are managed through informed harvesting strategies, hunting strengthens Europe's commitment to both conservation and responsible land stewardship.

This report is intended for hunting organisations, scientific researchers, policymakers, and other interest groups interested in wildlife management. Offering clear and accurate data on ungulate harvests supports evidence-based decision-making and encourages a balanced understanding of how hunting contributes to the sustainable use of wild ungulate species in Europe.

2. Harvest estimates

Harvest estimates are essential for the sustainable management of wildlife populations and the conservation of biodiversity. Collecting accurate data on the number of harvested individuals allows for a better understanding of population dynamics, wildlife health, and the effectiveness of existing management strategies.

These estimates not only help control the number of game animals but also serve as a fundamental tool for developing policies and plans that ensure the long-term sustainability of species and ecological balance.

In the context of hunting and nature conservation, accurate harvest estimates provide insights into regional specificities, identify overpopulated or underpopulated areas, and indicate necessary measures for habitat conservation. In addition to aiding biodiversity conservation, these estimates also play a crucial role in preventing illegal hunting and ensuring compliance with applicable laws. This report will focus on current harvest estimates, key trends and challenges, and provide recommendations for further improving wildlife population management through precise and informed strategies.

The overview of the data is provided below in the annex.

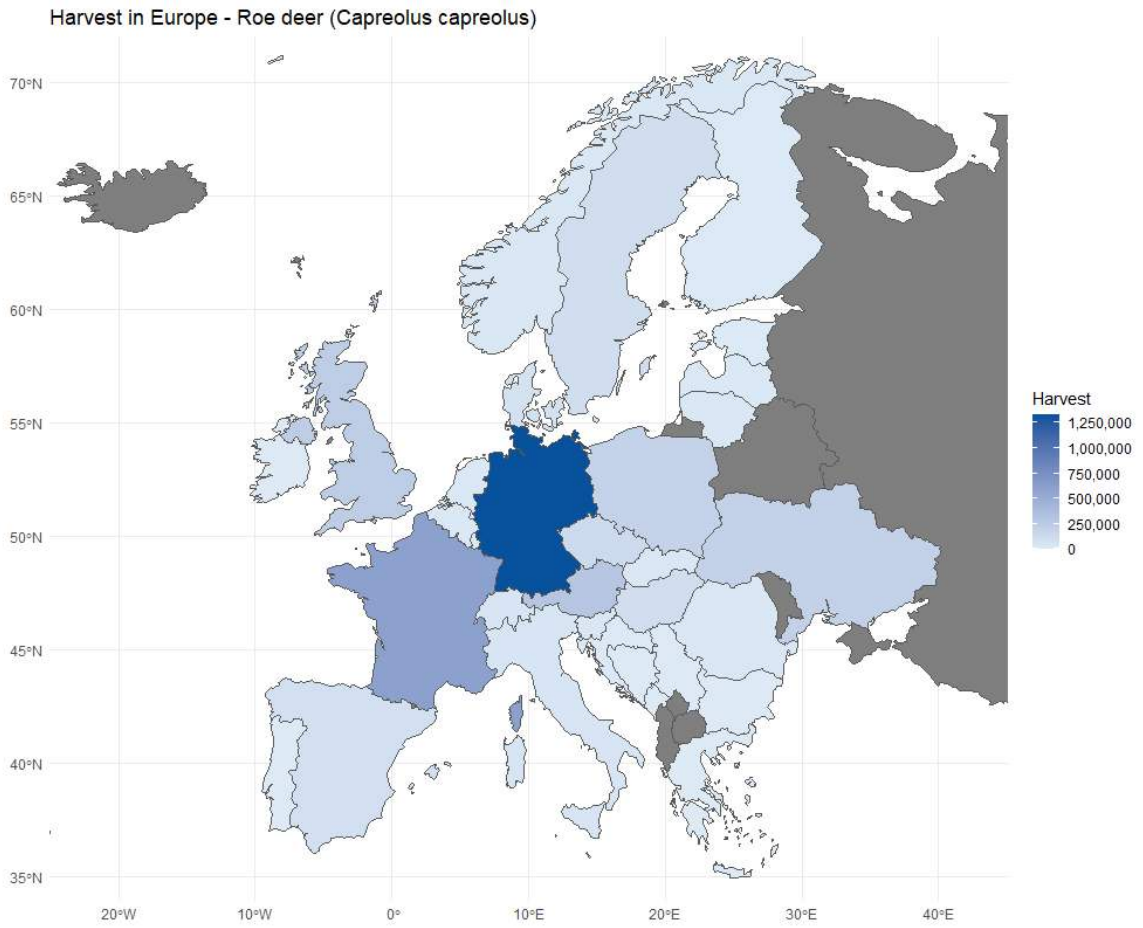
2.1. Roe deer *(Capreolus capreolus)*

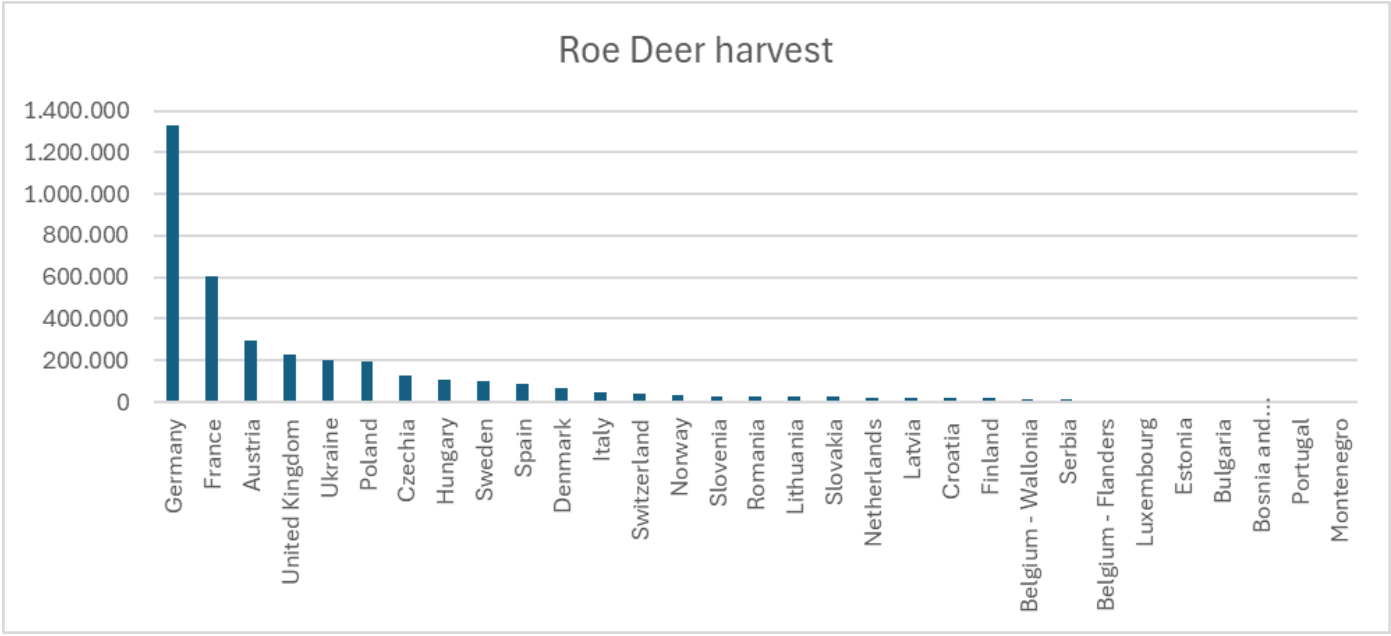
Roe deer harvest figures

The Roe deer is the most widespread and most harvested deer species in Europe, with a harvest of around 3.7 million individuals across 30 countries (of the 34 countries surveyed for this report).

A significant increase compared to an earlier review showing that the Roe deer harvest was about 1.7 million in the 1980s and about 2.7 million in the early 2000s (Burbaitė & Csányi, 2009). Germany is by far the country where most harvesting occurs, with approximately 1.3 million individuals, representing 35% of the harvest estimates gathered in this report. This share of the European harvest for Germany appears to have remained stable, as similar percentages were already highlighted for 1984 and 2005 (Burbaitė & Csányi, 2009).

Germany is followed by France, with a harvest of around 600,000. Several other countries harvest between 100,000 and 300,000, but most countries harvest fewer than 100,000 Roe deer per year. The Roe deer is not present in Cyprus, Ireland, and Malta, and is not harvested in Greece.


Harvest in Europe - Roe deer (Capreolus capreolus)
70°N
65°N
60°N
55°N
50°N
45°N
40°N
35°N
20°W
10°W
0°
10°E
20°E
30°E
40°E
Harvest
1,250,000
1,000,000
750,000
500,000
250,000
0


Roe Deer harvest
1.400.000
1.200.000
1.000.000
800.000
600.000
400.000
200.000
0
Germany
France
Austria
United Kingdom
Ukraine
Poland
Czechia
Hungary
Sweden
Spain
Denmark
Italy
Switzerland
Norway
Slovenia
Romania
Lithuania
Slovakia
Netherlands
Latvia
Croatia
Finland
Belgium - Wallonia
Serbia
Belgium - Flanders
Luxembourg
Estonia
Bulgaria
Bosnia and...
Portugal
Montenegro

Outlook and management issues

The Roe deer is the most abundant and widely distributed cervid in Europe, found from the Iberian Peninsula to Scandinavia and parts of Eastern Europe. Its populations have increased markedly across Europe in recent decades. During the 1980s and 2000s, both the Roe deer population numbers and its harvest rose significantly, from 6.2 to 9.5 and 1.7 to 2.7 million individuals, respectively (Burbaitė & Csányi, 2009). This report highlights a continued increase in harvest, with an increase from 2.7 to 3.7 million individuals in the last two decades.

This could confirm the earlier findings that the Roe deer population may grow despite increasing harvests, which might be linked to the underestimation of populations and careful population management (Burbaitė & Csányi, 2009).

This may also be the result of the Roe deer's social and behavioural adaptability, as it occurs in almost all natural habitats of Europe, contributing to its success in adapting to a changing environment within most man-modified landscapes (Morellet, 2011). In addition, as a primarily forest-dwelling species, the Roe deer most likely benefited from the increase in forested area in Europe over the last decades (Forest Europe, 2020).

However, the Roe deer population in Europe is influenced by a complex interplay of natural and human-induced factors and challenges such as habitat loss or the reestablishment of wolf populations may occur at national or local level.

This species is also sensitive to climate change and droughts, which can result in decreased reproduction and mortality among young individuals, eventually resulting in a cohort effect in subsequent years due to the weakening of the young individuals that did survive.

In such cases, continued research, monitoring, and adaptive management are vital to ensure the long-term sustainability of Roe deer populations and strike the right balance between human needs and ecological considerations.

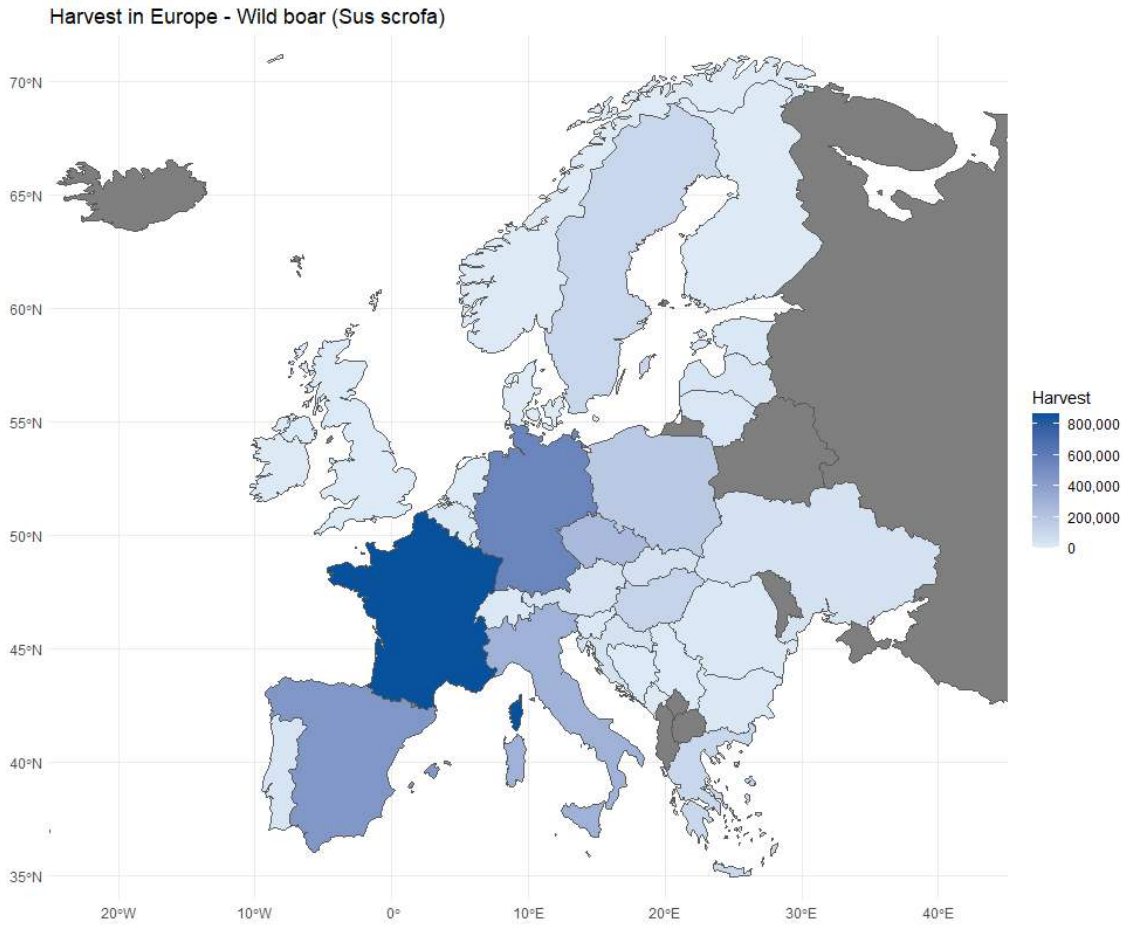
2.2. Wild boar *(Sus scrofa)*

Wild boar harvest figures

The Wild boar is the second most harvested ungulate species in Europe, after the Roe deer, with yearly harvests reaching over 3.3 million individuals in recent years across 31 of the 34 countries included in this report. In several European countries, the number of harvested Wild boars has been increasing over the past decades in response to the species' growing populations.

France is the European country with the highest harvest, with around 860,000 individuals harvested in 2023. This highlights a significant increase avec the last two decades as harvest did not exceed 440,000 before the 2000s. France is followed by Germany (550,000) and Spain (450,000).

Harvest figures range from 300 to 100,000 in Italy, Czechia, Poland, Hungary, Sweden and Greece, with lower amounts reported for other countries. The Wild boar is not present in Cyprus, Ireland, and Malta. See the table for more details.



Outlook and management issues

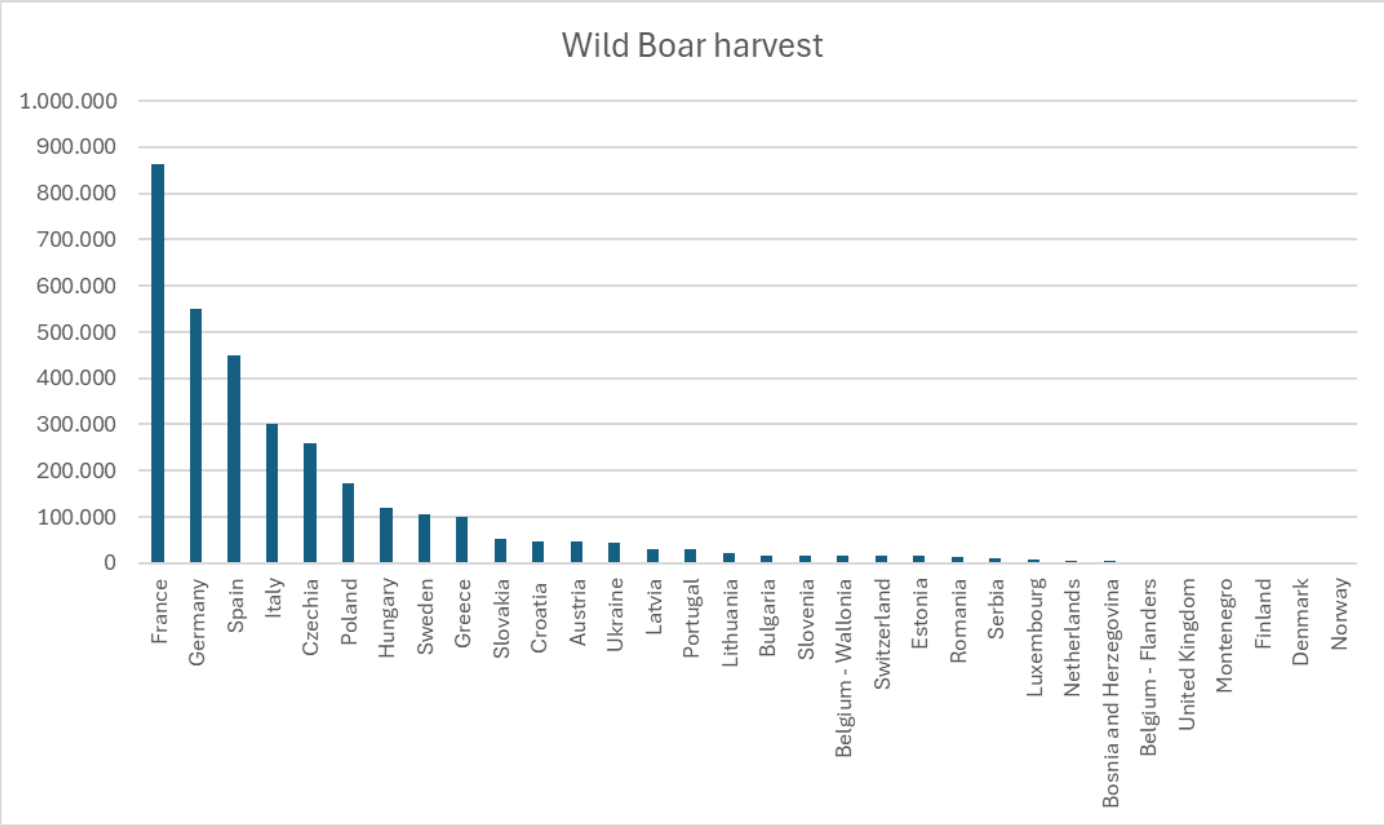
Wild boar populations are increasing in Europe (e.g., see Tack, 2018), but also worldwide (e.g., U.S.A, Canada, North Africa (Morocco, Tunisia), Turkey, Asia (Japan, China), and others).

Various factors contribute to this population increase. Agricultural intensification has produced high volumes of quality food that is readily available. Climate change represents a significant factor (Fulgione & Buglione, 2022). It can lead to milder winters, resulting in a higher survival rate for juveniles, and can also cause an expansion in the species' range (northern or mountainous expansion).

Furthermore, increases in the frequency of full mast events, which produce a sudden rise in the availability of high-energy food generated by the highly synchronous production of seeds from oaks and beech (Colomer et al., 2024), can contribute to population growth (Bieber & Ruf, 2005).

Additionally, the Wild boar possesses the highest reproductive rate among ungulates (Bieber & Ruf 2005), demonstrates high habitat adaptability, and is a generalist and opportunistic omnivore (Morelle et al., 2016, Fulgione & Buglione, 2022).

In Europe, the growing numbers of Wild boars and their expansion into areas where they were previously absent—such as densely populated urban locations and landscapes dominated by agriculture—are causing ecological and socio-economic concerns (Morelle et al, 2025). This includes a wide range of issues, from economic damage (e.g., agricultural), disease transmission, human safety (e.g., urban encroachment and traffic accidents), to biodiversity damage. Areas free of hunting can also constitute Wild boar reserves, which are not subject to management, and can result in significant impact in the local surroundings.



Managing their population will require a combination of strategies, including increased research into their behaviour and improved land management, with hunting serving as a pivotal tool.

For example, a study suggests that the most effective population control could be achieved by targeting hunting pressure on juveniles in good environmental conditions, or on adult females in years with poor conditions (Bieber & Ruf 2005). More coordinated efforts will be necessary between governments, farmers, environmentalists, and hunters to balance the ecological benefits and challenges posed by these animals.

2.3. Red deer *(Cervus elaphus)*

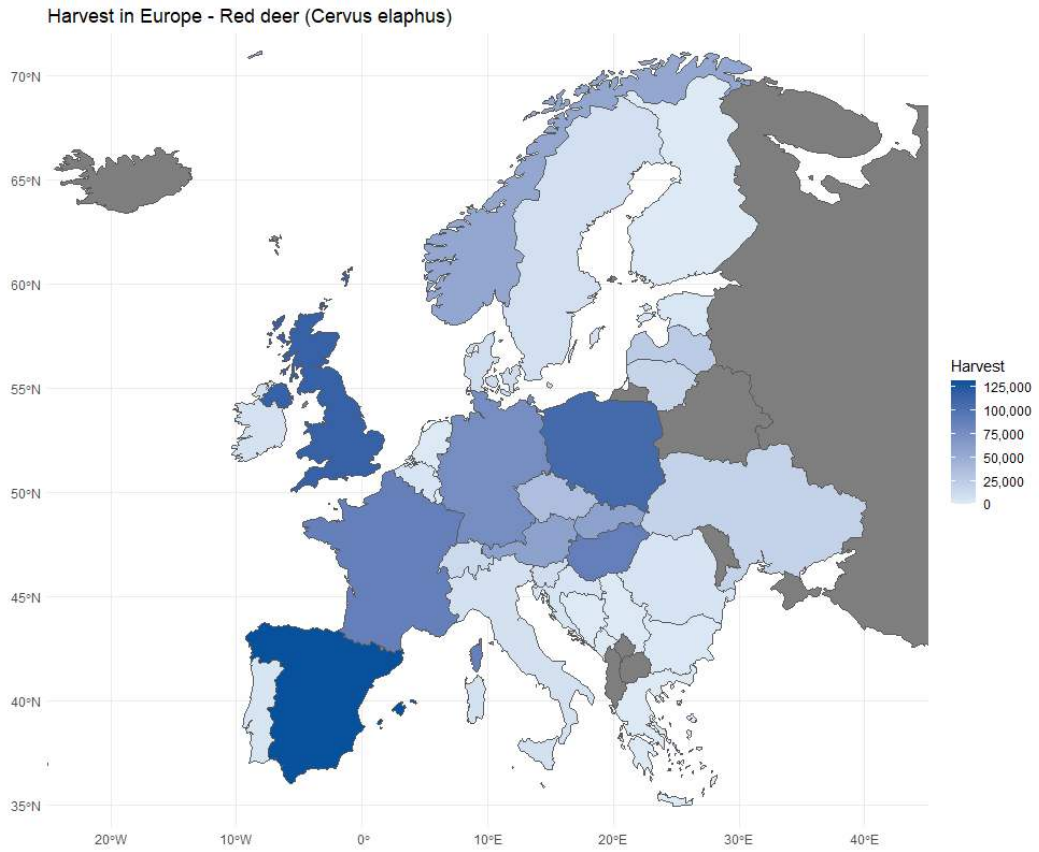
Red deer harvest figures

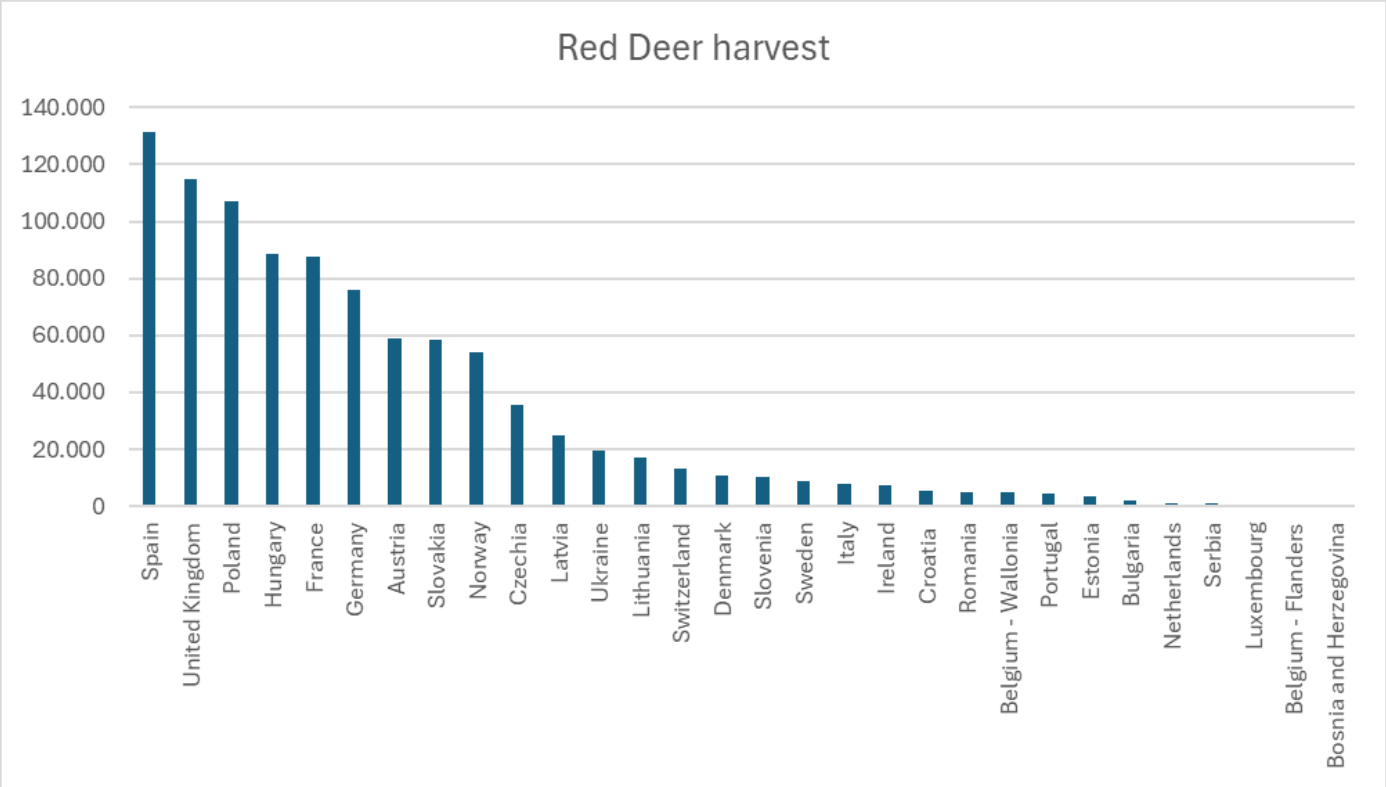
The Red deer is the third most significant large game species in Europe, with a total harvest of approximately 1 million individuals in recent years, across 29 countries (out of the 34 countries included in this report). Spain, the UK and Poland are the three countries with the largest harvest (100,000 to 130,000). Other countries can be grouped by harvest quantities ranging from 50 to 90,000 (6) and harvests of 35,000 or fewer (20).

Like the Roe deer and Wild boar, the Red deer is widely distributed across Europe and has increased in both abundance and geographical range throughout Europe (Milner et al., 2006).

In an earlier review of published data for 1984 and the early 2000s, an increase in population numbers from 1.1 million to 1.7 million and in harvest from 275,000 to 429,000 individuals was highlighted (Burbaitė & Csányi, 2010). This report further highlights a continued increase in harvest, which appears to have doubled in the last two decades, namely from less than 500,000 individuals in the early 2000s to approximately 1 million in 2023.

The Red deer is subject to careful management plans in European countries, which play a vital role in maintaining a good balance between population levels and habitat quality. Overabundant Red deer populations may significantly impact forest ecosystems and forestry, potentially resulting in damage to biodiversity and local economy.





Outlook and management issues

Scientific research has offered detailed insights into the distribution and genetic structure of Red deer throughout Europe.

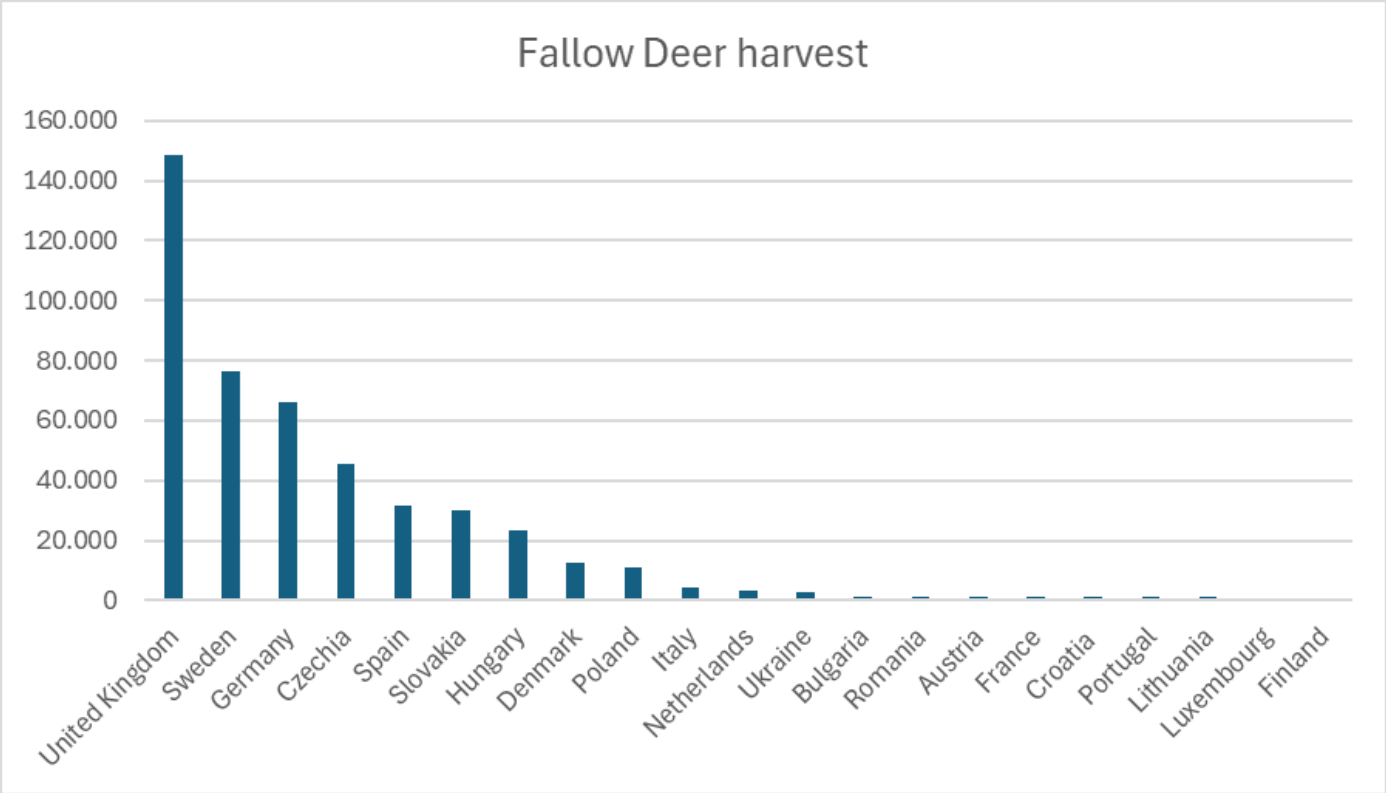
A previous study (van Beeck Calkoen et al., 2023) encompassing 492 study sites across 28 European countries assessed the factors influencing Red deer density. The findings indicated that hunting and land use have a more significant impact on Red deer populations than large predators such as wolves, lynx, and brown bears. While large carnivores can reduce Red deer densities, their effect is less pronounced in landscapes dominated by humans. Genetic bottlenecking can be an issue for Red Deer in Europe, particularly in populations that have been isolated, reintroduced from a small number of individuals, or heavily managed. This can lead to reduced genetic diversity, making populations more vulnerable to disease, environmental changes, and reduced reproductive success.

Red deer are regarded as a keystone species in forest ecosystems. As such they remain essential to the ecosystem well-being, assuring diverse ecosystem services such as grain transportation, maintenance of open areas, and more. However, their browsing behaviour can result in significant alterations in vegetation composition, favouring certain plant species over others. This selective feeding can impact forest structure and biodiversity.

2.4. Fallow deer *(Dama dama)*

Fallow deer harvest figures

Although to a lesser extent than the Red and Roe deer, the Fallow deer is also a widely distributed game species, with a total harvest of approximately 500,000 across 24 countries. The United Kingdom accounts for a good part of the total harvest (with 148,500), followed by Sweden, Germany, Czechia, Spain, Ireland, Slovakia, Hungary, Denmark, and Poland, each with harvests ranging from 10,000 to 80,000. Other countries harvest less than 5,000.



The Fallow deer is one of the most common deer species in Europe. It was introduced or reintroduced to most European countries for purposes such as ornamentation or meat production. There are now free-ranging populations in many European countries.

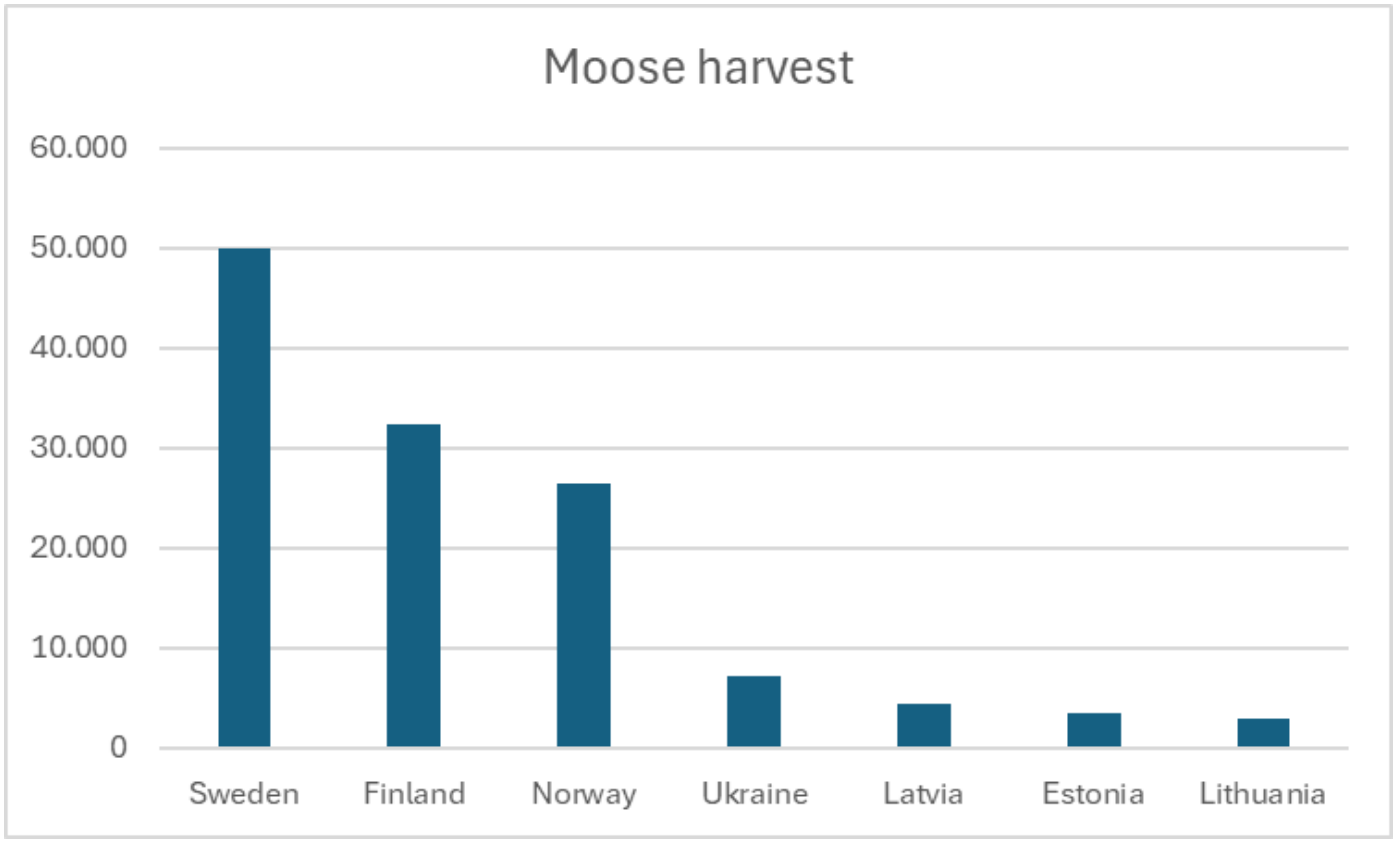
Although the diet of Fallow deer overlaps with that of other deer species, it is better adapted to foraging on grasses. High grazing pressure due to overabundant populations can negatively impact vegetation diversity and structure. As with other large deer species, population management is essential to maintain a healthy ecological balance between Fallow deer numbers and the ecosystem. To make informed management decisions, continuous and careful monitoring is necessary to implement adaptive management strategies effectively.

2.5. Moose *(Alces alces)*

Moose harvest figures

The Moose is primarily harvested in Sweden, Finland, and Norway, with numbers ranging from 25 to 50,000 individuals. To a lesser extent, it is also harvested in Ukraine, Latvia, Estonia and Lithuania, with approximately 3,000 to 7.000 individuals each year. The total harvest amounts to approximately 125,000 individuals in these 7 countries.

Moose harvest is strictly regulated, typically with yearly quotas that follow population monitoring, such as Finnish triangle wildlife monitoring (Helle et al., 2016).



Outlook and management issues

In Europe, the Moose is found in northern countries, particularly in Scandinavia, Finland, and parts of Russia. They typically inhabit forested, cold regions where they thrive in habitats with dense vegetation and access to water. The European Moose population is generally robust, but, as in other parts of the world, hunting plays a role in managing their numbers.

While Moose populations in Europe are generally stable, various ecological factors can influence their numbers. These factors include climate change, habitat loss, and traffic collisions.

The number of Moose hunted each year is carefully monitored to avoid over-harvesting and maintain balance with ecosystems. In some cases, hunting serves as a tool to reduce population densities, particularly in areas where Moose may overgraze young trees or cause damage to crops. Conversely, in certain regions, the number of Moose harvested may be restricted due to lower population numbers or environmental factors that affect the species' ability to thrive.

2.6. Sika deer *(Cervus nippon)*

Sika deer harvest figures

The Sika deer harvest totalled approximately 78,000 across seven countries, according to this report's data. The species is primarily harvested in the United Kingdom (around 40,000 in 2020) and Ireland (approximately 26,000 in 2022). Ukraine and Germany report harvests of roughly 6,000 and 3,000, respectively, while Denmark, Austria, and France each report harvests of fewer than 1,000.

Outlook and management issues

In many European countries, Sika deer populations remain relatively small and are restricted to specific areas. These herds generally arose from either accidental escapes from deer parks or farms, or from past deliberate introductions into the wild.

Interspecific competition between Sika deer and native ungulates, such as Roe deer or Red deer is likely, although the specific outcomes vary by region and are often difficult to predict. Sika deer can exert significant pressure on (semi-)natural habitats at high population densities, potentially leading to ecological impacts. Importantly, Sika deer can hybridise with Red deer, an issue affecting Red deer genetic integrity where hybridisation occurs.

At the time of writing, it is probable that the Sika deer will be included on the list of invasive alien species of Union concern in 2025, necessitating active management in areas where they are widely distributed.

2.7. Mouflon *(Ovis aries)*

Mouflon harvest figures

The Mouflon is harvested in 20 of the 34 countries surveyed in this report, with a total annual harvest of approximately 60,000 in recent years. The main countries where this species is harvested are Spain (approx. 17,000) and Czechia (approx. 11,000), followed by Germany, Slovakia, Bulgaria, Hungary, France, and Austria (in decreasing order) with harvests ranging from approximately 2,000 to 9,000. Other countries harvest fewer than 1,000 individuals.

Outlook and management issues

As a herbivore species, the Mouflon plays an important role in the ecosystems it inhabits by helping manage vegetation, contributing to nutrient cycling, and maintaining the health of grasslands and shrublands. While its grazing can have both positive and negative effects on biodiversity, it is crucial to the ecological balance of many regions. It also provides a valuable role in food webs, serving as prey for predators in areas where it exists and contributing to human economies through sustainable hunting practices.

However, like any introduced species, mouflons can also present challenges. Overgrazing and competition with other species may lead to environmental degradation, particularly in areas where their populations are not effectively managed. Conservation efforts, such as population control and habitat protection, seek to alleviate these impacts and ensure that mouflons continue to fulfil their ecological role without disrupting the balance of native ecosystems.

Mouflons also hold cultural and historical significance in certain regions, where they are appreciated for their contributions to local traditions, such as hunting and wildlife tourism.

2.8. Chamois *(Rupicapra rupicapra* & *Rupicapra pyrenaica)*

Chamois harvest figures

The harvest of Chamois in Europe is approximately 70,000, spread across 13 countries. In the French Pyrenees and Spain, the Southern Chamois (*Rupicapra pyrenaica*) is present and accounts for around 7% of the Chamois harvest (approximately 4,500). The primary harvest involves the Alpine Chamois (*Rupicapra rupicapra*), with Austria, France, Italy, and Switzerland being the countries with the highest numbers (ranging from 10 to 20,000). Germany follows with approximately 5,000, followed by Slovenia with about 2,400, and Spain with roughly 2,000. Other countries harvest fewer than a thousand individuals.

Country	*Rupicapra rupicapra*	*Rupicapra pyrenaica*	Total
Austria	20311		20311
France	12701	2494	15195
Italy	12373		12373
Switzerland	10478		10478
Germany	4847		4847
Slovenia	2406		2406
Spain		2149	2149
Romania	496		496
Croatia	152		152
Serbia	63		63
Slovakia	12		12
Bosnia and Herzegovina	1		1
Montenegro	1		1

Outlook and management issues

Europe is home to two species of the genus Rupicapra: the Alpine Chamois (*Rupicapra rupicapra*) and the Southern Chamois (*Rupicapra pyrenaica*).

The Alpine (or Northern) Chamois has seven recognised subspecies (*R. r. rupicapra*, *R. r. cartusiana*, *R. r. tatrica*, *R. r. balcanica*, *R. r. carpatica*, *R. r. asiatica*, *R. r. caucasica*) distributed across various mountain ranges and regions in Europe and parts of Asia.

It is a widespread species with a large population of just under 500,000 individuals (Corlatti et al. 2022) and, although it is declining in some parts of its distribution range, the bulk of the population (subspecies R. r. rupicapra) is found in the Alps and is currently secure (Anderwald et al., 2025). However, some subspecies (*R. r. cartusiana*, *R. r. tatrica*, *R. r. asiatica*, *R. r. caucasica*) qualify as threatened and require urgent conservation action (Anderwald et al., 2025).

The Southern chamois comprises three recognised subspecies: the Pyrenean chamois (*R. p. pyrenaica*) in the Pyrenees, the Cantabrian chamois (*R. p. parva*) in the Cantabrian Mountains, and the Apennine chamois (*R. p. ornata*) found in the Apennine Mountains of central Italy.

This European endemic species is currently increasing in numbers and range, but the subspecies *R. p. ornata* is assessed as Vulnerable as this subspecies lives in very small populations and has a restricted area of occupancy, requiring ongoing conservation measures (Herrero et al., 2024).

Each species is adapted to specific mountain ranges and possesses unique traits suited to their environments; thus, conservation efforts are vital to sustaining their populations.

By concentrating on habitat conservation and genetic diversity, these species can remain an essential part of Europe's mountainous ecosystems. However, the success of these efforts will necessitate coordinated conservation action, sound policy, and ongoing research particularly in the face of land use and climate change.

2.9. Axis deer *(Axis axis)*

The only harvest data gathered consists of 32 individuals harvested in Croatia.

In Europe, the presence of Axis deer has raised ecological and management concerns because of their invasive nature and potential impacts on local ecosystems. This has resulted in their listing on the EU IAS list.

Although Axis deer are admired for their beauty and grace, their invasive status in Europe requires careful management where they are present, relying on coordinated efforts, including the implementation of comprehensive management plans that encompass habitat assessments and population monitoring, to mitigate ecological impacts and ensure the conservation of native biodiversity.

2.10. Reeves' muntjac *(Muntiacus reevesi)*

The Muntjac is primarily harvested in the U.K., with an estimated harvest of 108,000 in 2020. A small number of individuals are also harvested in Ireland and Belgium.

Reeves's muntjac is native to China and Taiwan and is considered as an invasive alien species in Europe, that may cause significant impacts on woodlands and plants.

While primarily found in the U.K., where it is well established and on the rise, a study predicts that the species could expand its range to encompass every European country (Ward et al., 2021). Increasing reports in both the scientific and popular press have suggested that this species has established itself in continental Europe and in Japan.

Much of the Mediterranean region may become even less hospitable for muntjac than it is currently as it warms and becomes drier. Conversely, many areas of Northern Europe, particularly those countries along the north-west Atlantic coast (northern France to Scandinavia), might become more favourable, especially where increased average temperatures and rainfall continue to encourage robust growth of woodlands and forests.

2.11. Chinese water deer *(Hydropotes inermis)*

The Chinese water deer is only harvested in the U.K., with an estimated harvest of 20,250 in 2020.

The water deer is a small, solitary cervid. It is native to China and Korea, and some feral populations also inhabit Europe although the number of free-living animals is not precisely known, but is likely quite small and probably in decline.

3. Conclusions

As Europe's natural landscapes face increasing pressures from habitat fragmentation, human expansion, and climate change the role of hunters in sustainable wildlife management is more crucial than ever. In this context, hunting is a forward-looking practice—rooted in responsibility, data, and respect for nature.

Through science-based decision-making, hunters provide vital knowledge that helps maintain balanced game populations and healthy ecosystems. The accurate collection and reporting of harvest data are not merely a regulatory requirement—they are the foundation for effective wildlife management. These data contribute to the understanding of population trends, reproductive success, and movement patterns, enabling authorities to set appropriate harvest levels and anticipate ecological challenges before they arise.

In addition to their ecological importance, the large numbers of ungulates harvested each year across Europe provide a valuable source of wild meat. This naturally sourced game is enjoyed by millions of hunters, their families, and friends, supporting a tradition of sharing food directly from the field. With a low environmental footprint, wild meat contributes to more climate- and nature-friendly food systems. In this way, hunting not only helps manage wildlife populations but also promotes responsible and sustainable consumption. The value of wild meat in Europe will be better understood in the coming years through the Wild Harvest Initiative.

This report reaffirms hunters' central role as key partners in nature conservation. By working hand-in-hand with regulators, scientists and policymakers, Europe's hunting community continues to provide essential services: ensuring that game species are managed sustainably, biodiversity is safeguarded, and the natural heritage we enjoy today is passed on to future generations.

While other reports, including the Wildlife Comeback Report (ZSL., 2022), acknowledge the significant comeback of species such as Red deer, Roe deer, and Wild boar, they do not specifically highlight the role of hunters in their management in Europe.

In an era of environmental uncertainty, hunting stands out as a proven tool for resilience, where active stewardship, not passive preservation, leads the way forward.

References

- Anderwald, P., Avramov, S., Ciach, M., Corlatti, L., Farkas, A., Jovanovic, M., Papaioannou, H., Peters, W., Sarasa, M., Šprem, N. & Willisch, C. 2025. Rupicapra rupicapra (Europe assessment). The IUCN Red List of Threatened Species 2025: e.T39255A215860127. Accessed on 26 May 2025.
- Bieber, C., & Ruf, T. (2005). Population dynamics in wild boar Sus scrofa: ecology, elasticity of growth rate and implications for the management of pulsed resource consumers. Journal of Applied Ecology, 42(6), 1203-1213.
- Burbaitė, L., & Csányi, S. (2009). Roe deer population and harvest changes in Europe. Estonian Journal of Ecology, 58(3).
- Burbaitė, L., & Csányi, S. (2010). Red deer population and harvest changes in Europe. Acta Zoologica Lituanica, 20(4), 179-188.
- Colomer, J., Massei, G., Roos, D., Rosell, C., & Rodríguez-Teijeiro, J. D. (2024). What drives wild boar density and population growth in Mediterranean environments?. Science of The Total Environment, 931, 172739.
- Corlatti, L., Iacolina, L., Safner, T., Apollonio, M., Buzan, E., Ferretti, F., ... & Šprem, N. (2022). Past, present and future of chamois science. Wildlife Biology, 2022(4), e01025.
- FOREST EUROPE, 2020: State of Europe's Forests 2020.
- Fulgione, D., & Buglione, M. (2022). The boar war: five hot factors unleashing boar expansion and related emergency. Land, 11(6), 887.

- Helle, P., Ikonen, K., & Kantola, A. (2016). Wildlife monitoring in Finland: online information for game administration, hunters, and the wider public. Canadian Journal of Forest Research, 46(12), 1491-1496.
- Herrero, J., Lovari, S., Nores, C. & Toigo, C. 2024. Rupicapra pyrenaica. The IUCN Red List of Threatened Species 2024: e.T19771A223797365. https://dx.doi.org/10.2305/IUCN.UK.2024-2.RLTS.T19771A223797365.en. Accessed on 26 May 2025.
- Licoppe, A. (2025) Statistiques de chasse des conseils cynégétiques wallons de 2015 à 2022. Rapports Faune-Flore-Habitats de la Direction de la Nature et de l'Eau (DEMNA / SPW ARNE), n° 4, Gembloux, 62 pp.
- Milner, J. M., Bonenfant, C., Mysterud, A. T. L. E., GAILLARD, J. M., Csányi, S., & Stenseth, N. C. (2006). Temporal and spatial development of red deer harvesting in Europe: biological and cultural factors. Journal of Applied Ecology, 43(4), 721-734.
- Morelle, K., Fattebert, J., Mengal, C., & Lejeune, P. (2016). Invading or recolonizing? Patterns and drivers of wild boar population expansion into Belgian agroecosystems. Agriculture, Ecosystems & Environment, 222, 267-275.
- Morelle, K., Podgórski, T., Prévot, C., Keuling, O., Lehaire, F., & Lejeune, P. (2015). Towards understanding wild boar S us scrofa movement: a synthetic movement ecology approach. Mammal Review, 45(1), 15-29.
- Morellet, N., Van Moorter, B., Cargnelutti, B., Angibault, J. M., Lourtet, B., Merlet, J., ... & Hewison, A. M. (2011). Landscape composition influences roe deer habitat selection at both home range and landscape scales. Landscape Ecology, 26, 999-1010.
- Tack, J. (2018). Wild Boar (Sus scrofa) populations in Europe: a scientific review of population trends and implications for management. European Landowners' Organization, Brussels, 56 pp.
- van Beeck Calkoen, S. T., Kuijper, D. P., Apollonio, M., Blondel, L., Dormann, C. F., Storch, I., & Heurich, M. (2023). Numerical top-down effects on red deer (Cervus elaphus) are mainly shaped by humans rather than large carnivores across Europe. Journal of Applied Ecology, 60(12), 2625-2635.
- Ward, A. I., Richardson, S., & Mergeay, J. (2021). Reeves' muntjac populations continue to grow and spread across Great Britain and are invading continental Europe. European Journal of Wildlife Research, 67(3), 34.
- ZSL - Zoological Society of London, BirdLife International, & European Bird Census Council. (2022). Wildlife Comeback in Europe: The Recovery of Selected Mammal and Bird Species. Commissioned by Rewilding Europe. https://rewildingeurope.com/wildlife-comeback-report-2022/

ANNEX - OVERVIEW OF HARVEST DATA

Country	Year	Wild Boar harvest	Roe Deer harvest	Red Deer harvest	Fallow Deer harvest	Sika Deer harvest	Axis Deer harvest	Moose harvest	Reeves' Muntjac harvest	Chinese Water Deer harvest	Mouflon harvest	Chamois harvest	Sources
Austria	2023/2024	47.821	294.361	58.793	1.344	333					2.391	20.311	Statistics Austria 2024
Belgium - Flanders	2024	3.390	8.395	19	198				10				Agentschap voor Natuur en Bos / INBO 2024
Belgium - Wallonia	2015/16 (2022 for Mouflon)	16.158	12.737	4.925							88		Etat Environnement Wallonie
Bosnia and Herzegovina	2023	3.757	1.813	10								1	Bosnia and Herzegovina's Federal Statistical Office
Bulgaria	2024	16.743	3.180	1.977	1.462						171		Union of Hunters and Anglers in Bulgaria
Croatia	2023	48.051	17.644	5.428	1.197		32				817	152	Croatia's Ministry of Agriculture
Cyprus	N/A	0	0	0	0	0	0	0	0	0	0	0	
Czech Republic	2023	258.253	124.897	35.799	45.335						11.033		Czech Statistical Office
Denmark	2023/2024	156	68.380	10.969	12.433	604					100		Danish Environmental Protection Agency
Estonia	2024	15.546	5.488	3.645				3.551					Estonia's Environmental Portal
Finland	2023	985	17.500		205			32.345			34		Natural Resources Institute Finland
France	2023/2024	863.124	606.339	87.802	1.274	70					2.897	15.195	Réseau Ongulés sauvages OFB/FNC/FDC
Germany	2023/2024	550.551	1.328.380	75.951	66.243	3.524					9.462	4.847	Deutscher Jagdverband
Greece	2021/2022	100.371											Hellenic Hunters Confederation
Hungary	2023/2024	121.005	106.047	88.501	23.446						4.092		Hungarian Game Management Database
Ireland	2022/2023	0	0	7.306	30.402	26.442			13				Ireland's Department of Housing, Local Government and Heritage database
Italy	2005 - 2021 for Wild boar	300.000	46.507	8.000	4.424						871	12.373	ISPRA - Higher Institute for Environmental Protection and Research
Latvia	2023/2024	30.200	18.700	24.900				4.519					Central Statistical Bureau Of Latvia. For Moose, State Forest data.
Lithuania	2023/2024	23.100	27.717	17.056	1.044			2.961					Ministry of Environment of the Republic of Lithuania
Luxembourg	2023/2024	8.363	7.867	584	236						106		Bulletin technique N° 10 de l'ANF Luxembourg
Malta	N/A	0	0	0	0	0	0	0	0	0	0	0	
Montenegro	2021	1.163	13								906	1	Montenegro Statistical Office
Netherlands	2024	4.411	20.756	1.081	3.116						0		Koninklijke Nederlandse Jagersvereniging
Norway	2024/2025 (2016 for Wild boar)	140	31.500	54.216				26.384					Statistics Norway
Poland	2023/2024	173.661	193.151	107.062	10.944						473		Statistics Poland
Portugal	2021/22	29.852	94	4.218	1.069						47		ICNF - Instituto da Conservação da Natureza e das Florestas
Romania	2023/2024	13.690	29.146	5.153	1.364						4	496	Romania's Ministry of Environment, Waters and Forests
Serbia	2023	11.220	10.671	936	118						10	63	Republic of Serbia - Republic Statistical Office
Slovakia	2022	52.163	26.392	58.518	30.082						7.059	12	Statistical Office of the Slovak Republic
Slovenia	2023	16.536	29.287	10.200								2.406	Statistical Office of the Republic of Slovenia
Spain	2022	450.150	88.481	131.219	31.542						17.235	2.149	Spanish Ministry of Energy Transition and Demographic Challenge
Sweden	2023	105.010	101.415	8.960	76.522			49.959					Viltdata - Swedish Hunters' Association
Switzerland	2021	15.728	43.418	13.199								10.478	Swiss Federal Statistical Office
Ukraine	2024	44.225	204.179	19.327	2.591	6.520		7.135			970		State Forest Resources Agency of Ukraine
United Kingdom	2020	3.375	229.500	114.750	148.500	40.500			108.000	20.250			BASC - British Association for Shooting and Conservation
Total		3.328.898	3.703.955	960.504	495.091	77.993	32	126.854	108.023	20.250	58.766	68.484	