

FORESTRY AND GAME MANAGEMENT RESEARCH INSTITUTE

**Wild ungulates population
dynamics: Monitoring and
possible solutions of population
control**



Jan Cukor, Lucie Hambálková, Vlastimil Skoták, Richard Ševčík

Wild ungulates in Europe

- What we know about current status of population dynamics?
- What kind of the data are available for us?
- What can we expect in the near future (following decades)



Wild ungulates in Europe

- We have collect data from hunting statistics from Central European countries

Statistika (Lesy, eAGRI). [online]. Copyright © 2009 [cit. 12.09.2022].

<https://eagri.cz/public/web/mze/lesy/statistika/>

Home Page - IBULH. NLC [online]. Copyright © 2022 [cit. 12.09.2022].

<https://gis.nlcsk.org/IBULH/PolovStat/PolovStat>

STATcube - Statistische Datenbank - STATISTIK AUSTRIA - Die Informationsmanager.

<https://www.statistik.at/datenbanken/statcube-statistische-datenbank>

Országos Vadgazdálkodási Adattár [online]. Maďarská myslivecká databáze [cit. 12.09.2022].

<http://www.ova.info.hu/vgstat.html>

Jagd- und Wildunfallstatistik | Deutscher Jagdverband. *startseite* / *Deutscher Jagdverband* [online]

<https://www.jagdverband.de/jagd-und-wildunfallstatistik>



Forest regeneration – current status

- Hunting bags available for the majority of C. European countries
→ hunting bags are considered as the most reliable data from the game management statistics
- Numbers of counted individuals in Czech Republic + Slovakia
- Native ungulate game species
- Introduced game species

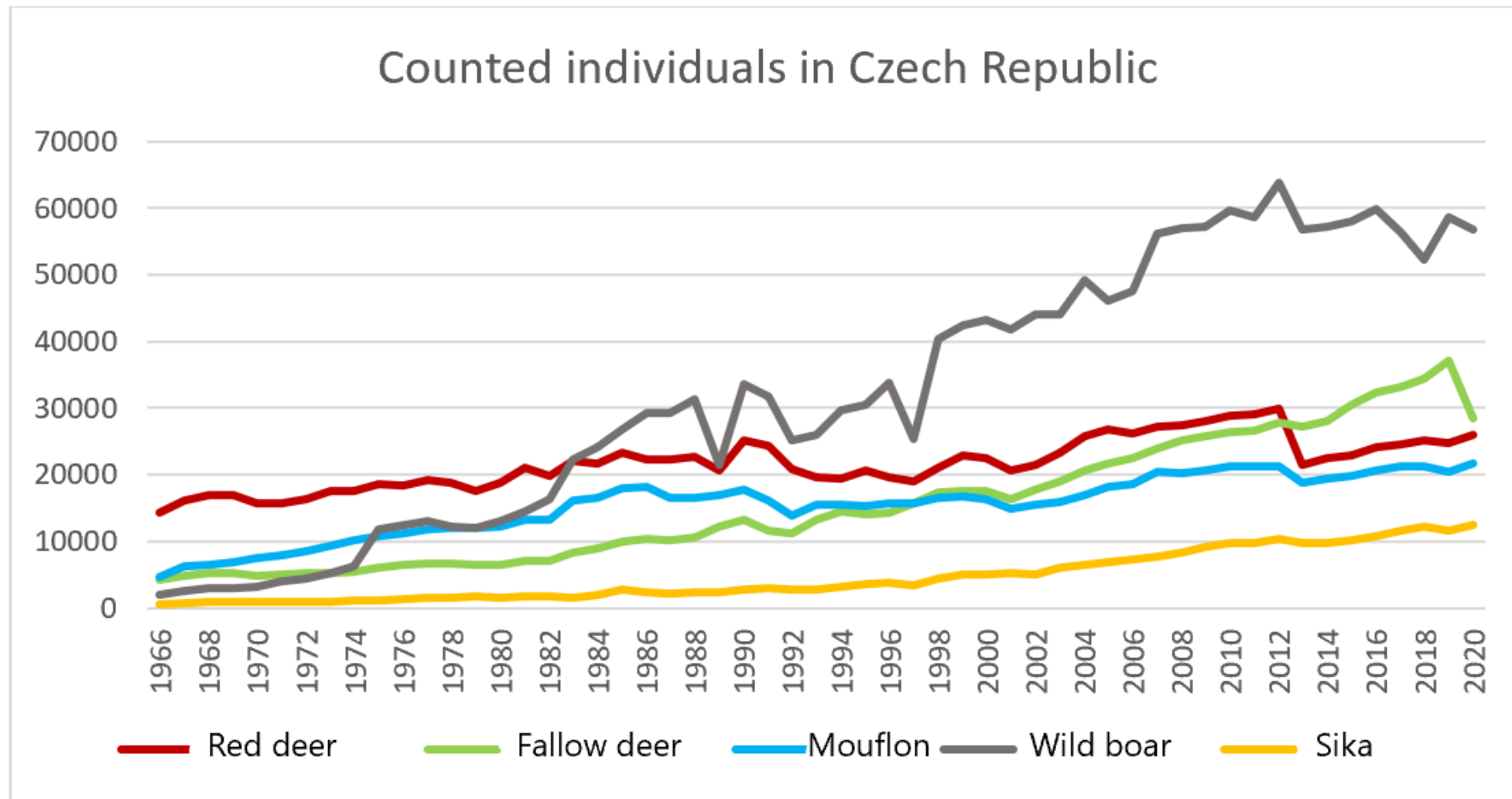


Wild ungulates in Europe

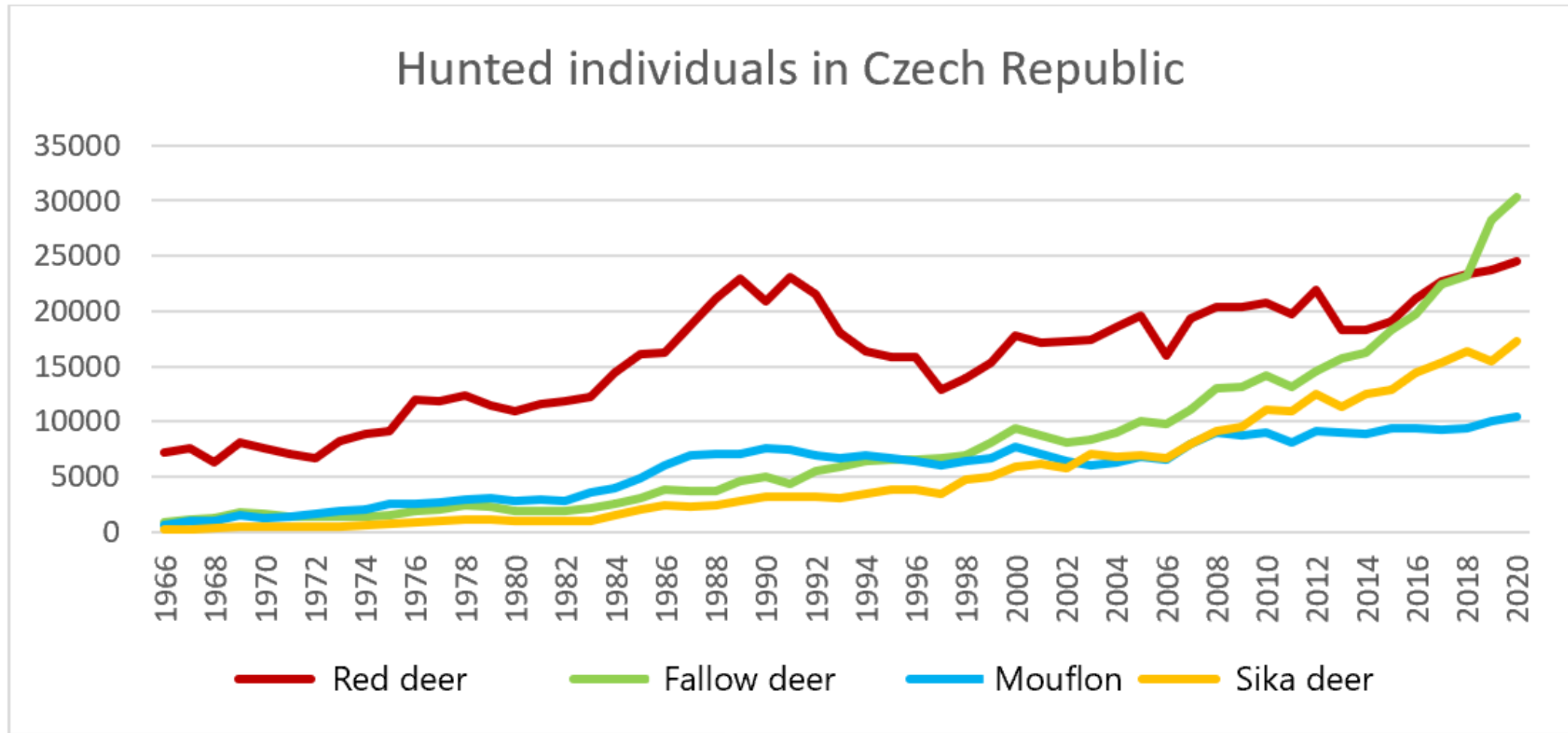
	Total acreage (ha)	Forest acreage (ha)	Hunting area (ha)	Min. acreage of hunting district (ha)
Czech Republic	7 887 100	2 689 501	6 583 464	500
Slovakia	4 903 500	2 010 435	4 454 966	Red deer 3000 Roe deer 2000 small game 1000
Germany	35 758 800	10 656 122	31 980 000	150
Austria	8 387 100	3 992 260	8 216 400	115
Hungary	9 302 500	1 767 475	8 900 000	3000



Wild ungulates in Czech Republic



Wild ungulates in Czech Republic

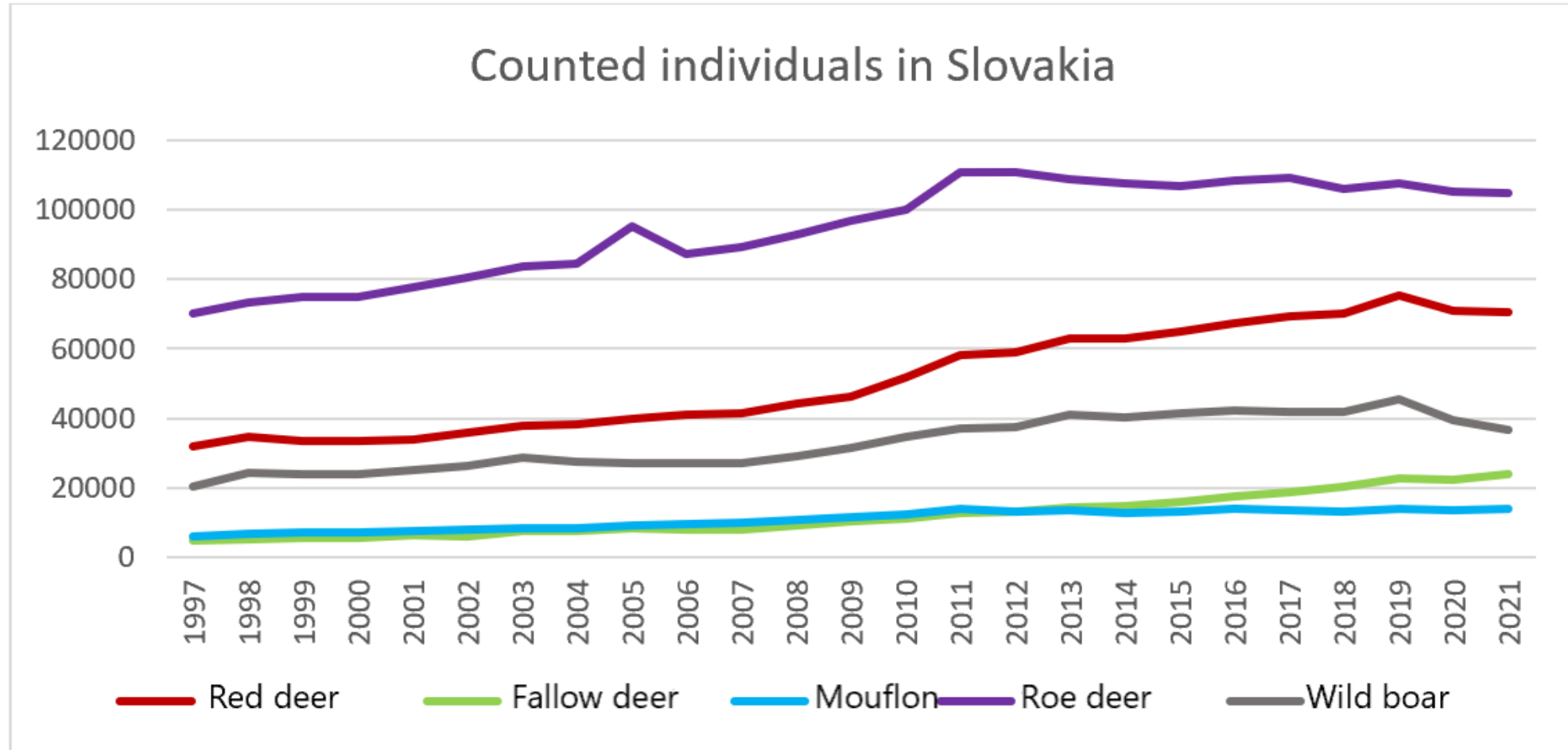


Wild ungulates in CR – current situation

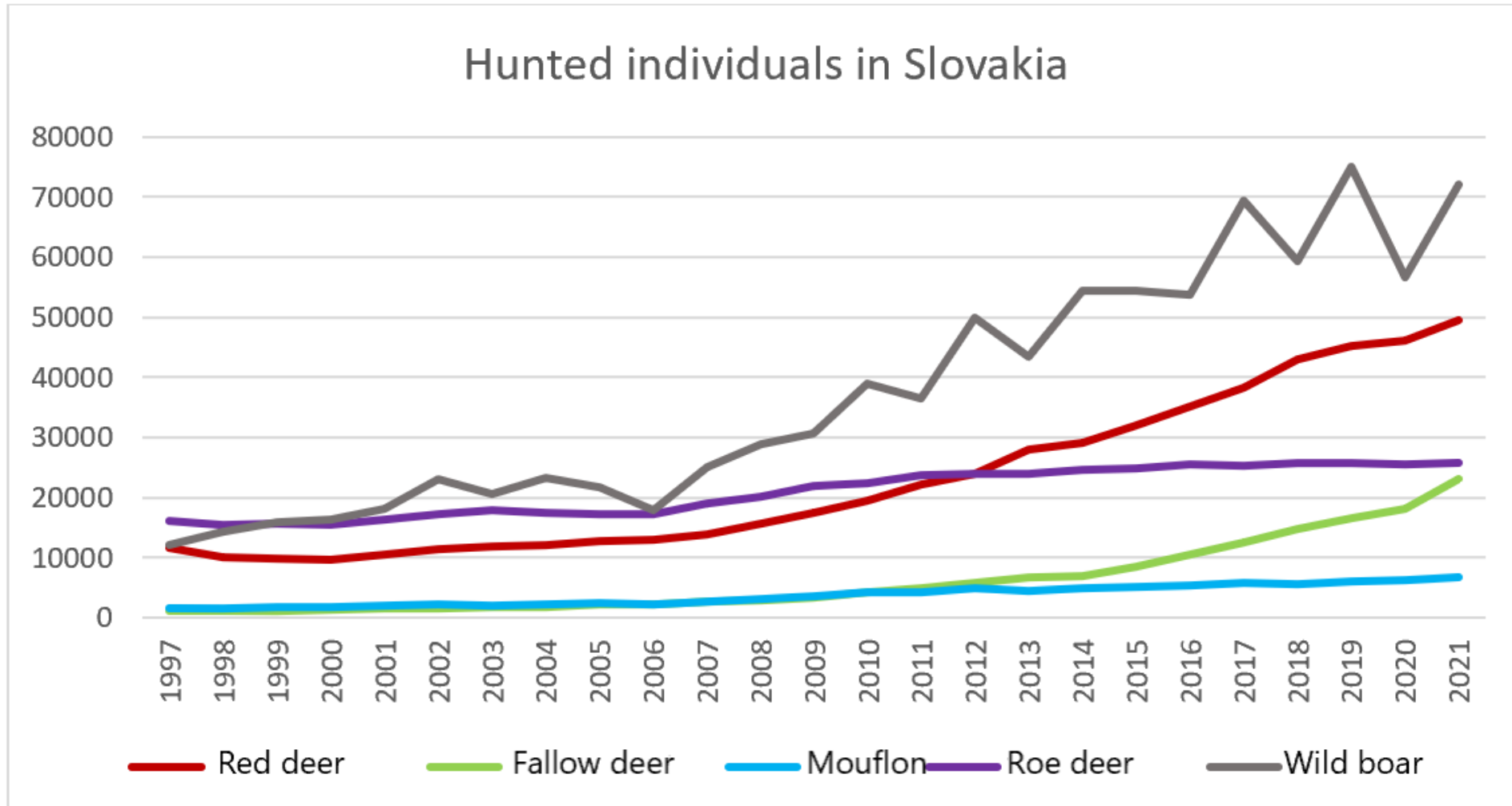
species	year				%
	1999	2009	2019	2021	
<i>Cervus elaphus</i>	15 357	20 403	23 719	29 842	194,3
<i>Capreolus capreolus</i>	99 932	131 501	99 158	105 570	105,6
<i>Cervus nippon nippon</i>	4 940	9 526	15 449	19 382	392,3
<i>Dama dama</i>	8 052	13 091	28 313	30 982	384,8
<i>Ovis musimon</i>	6 615	8 733	9 993	10 580	159,9
<i>Sus scrofa</i>	72 949	121 185	231 014	160 811	220,4



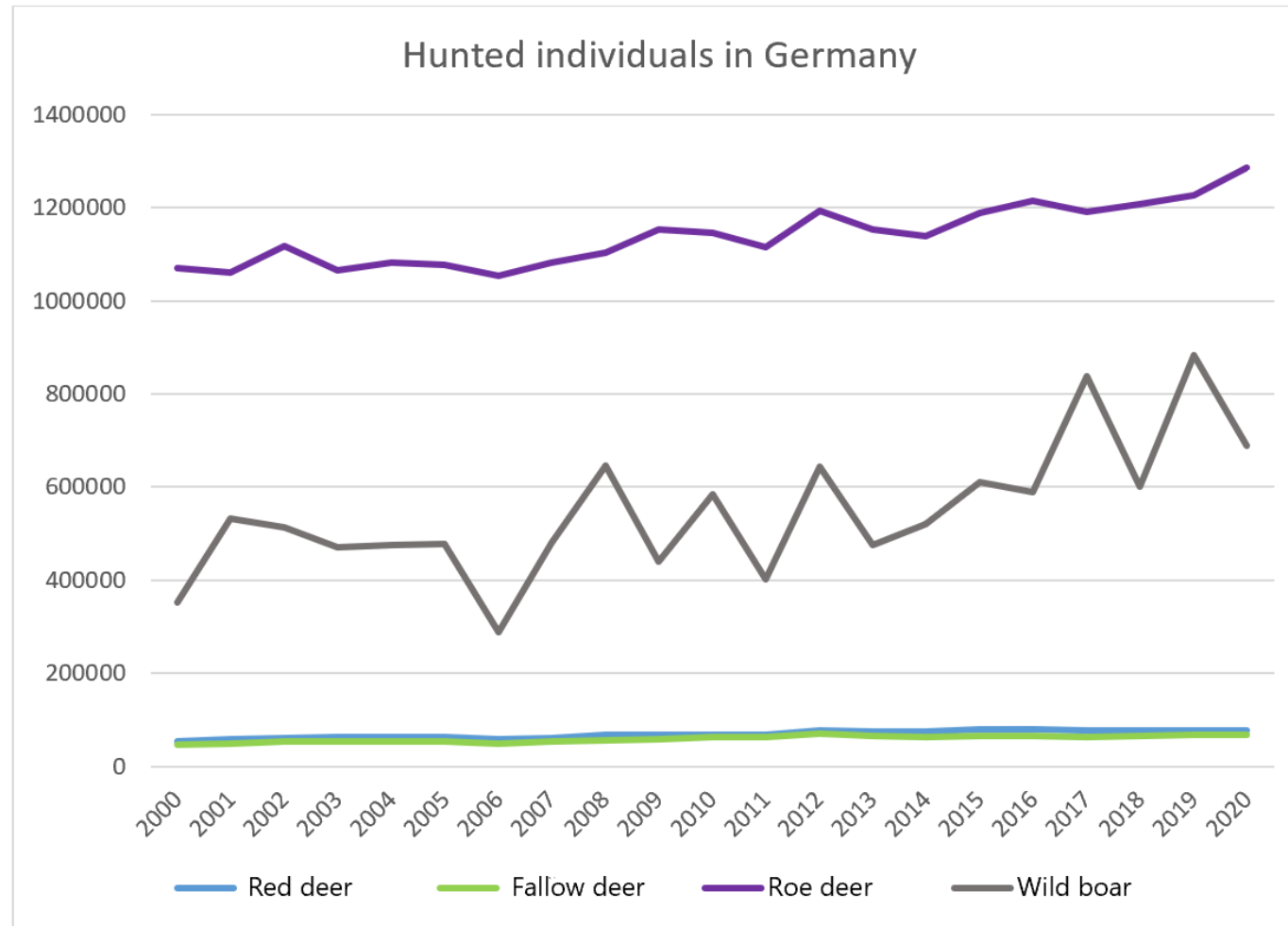
Wild ungulates in Slovakia



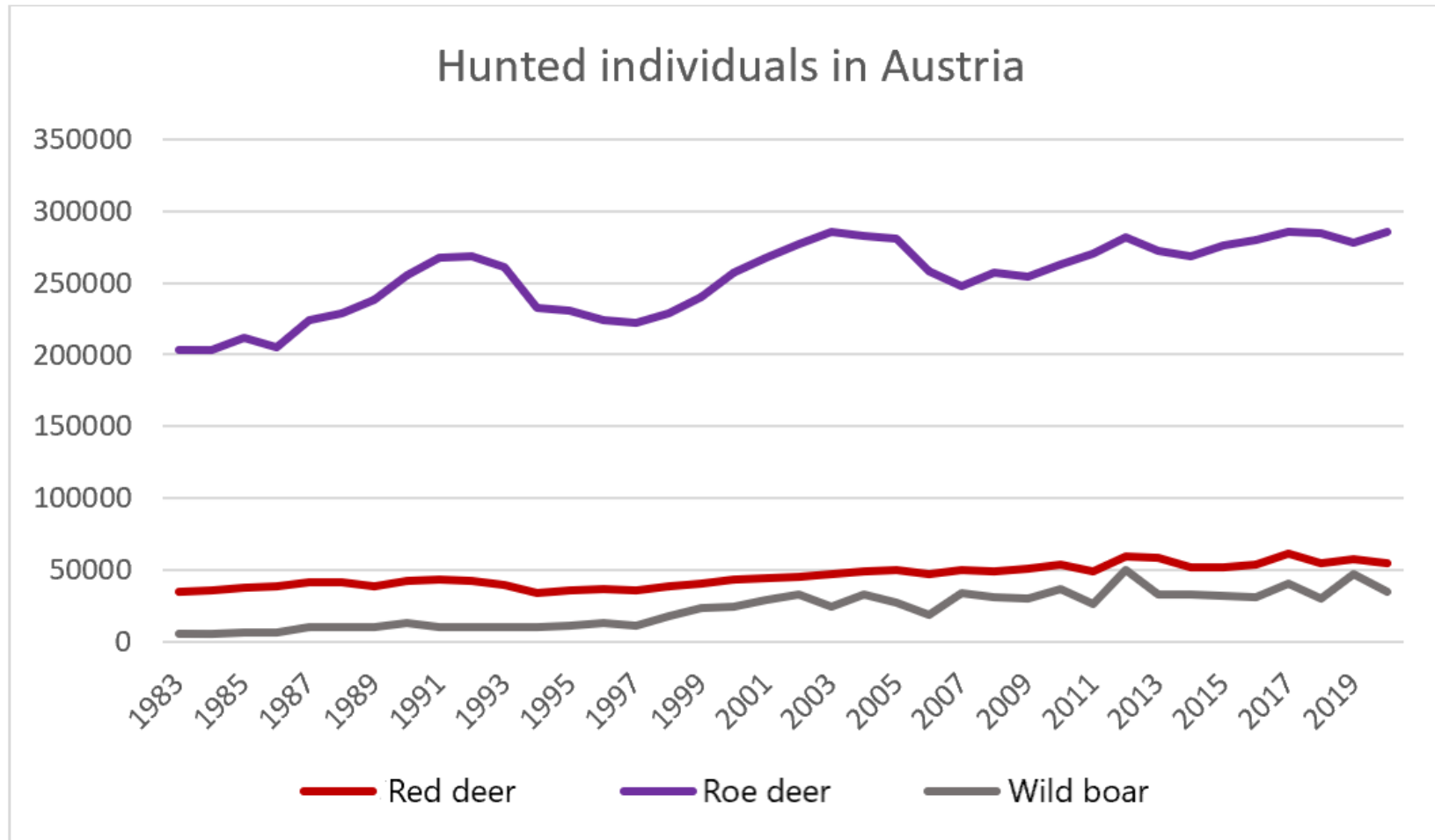
Wild ungulates in Slovakia



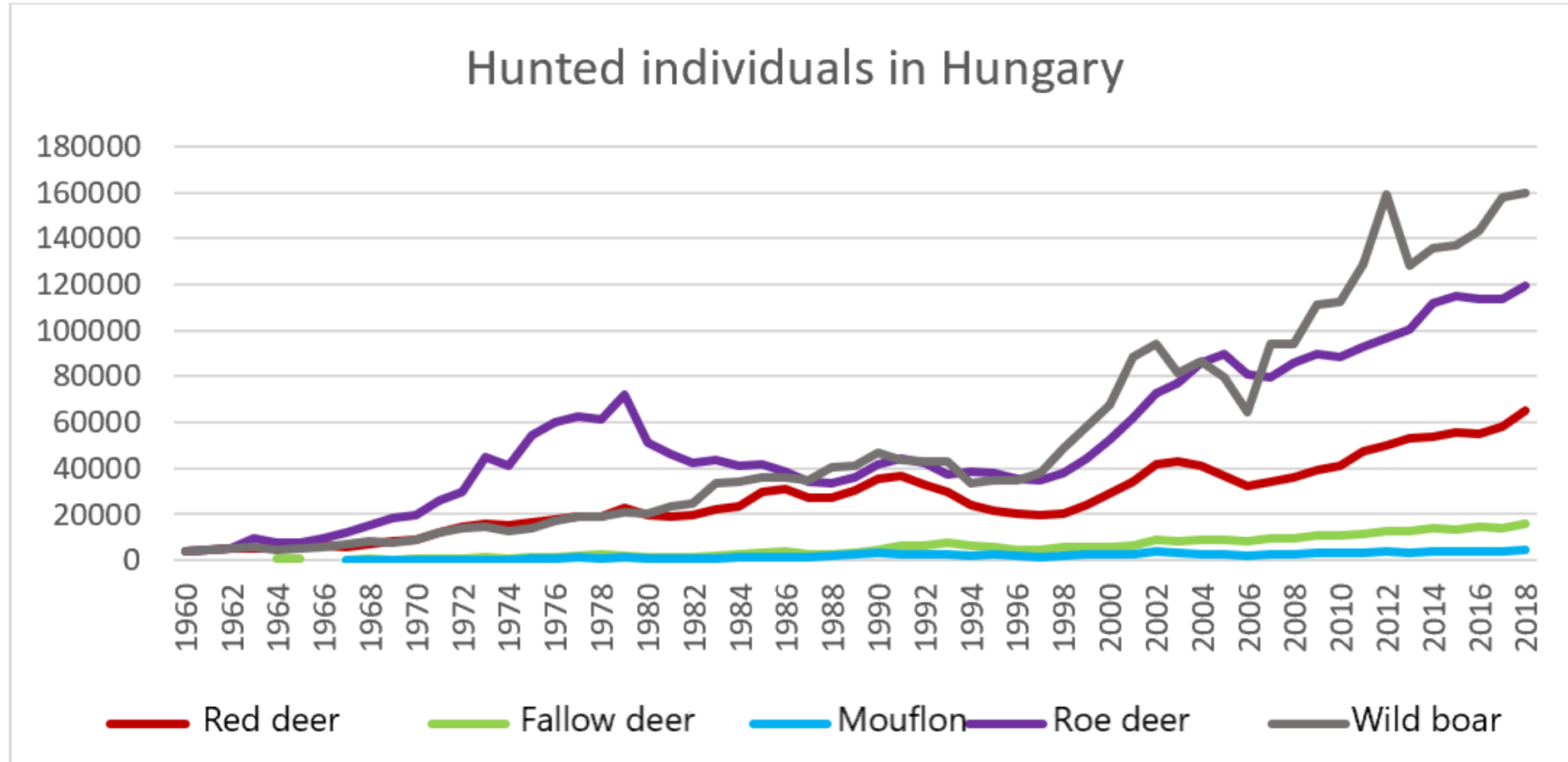
Wild ungulates in Germany



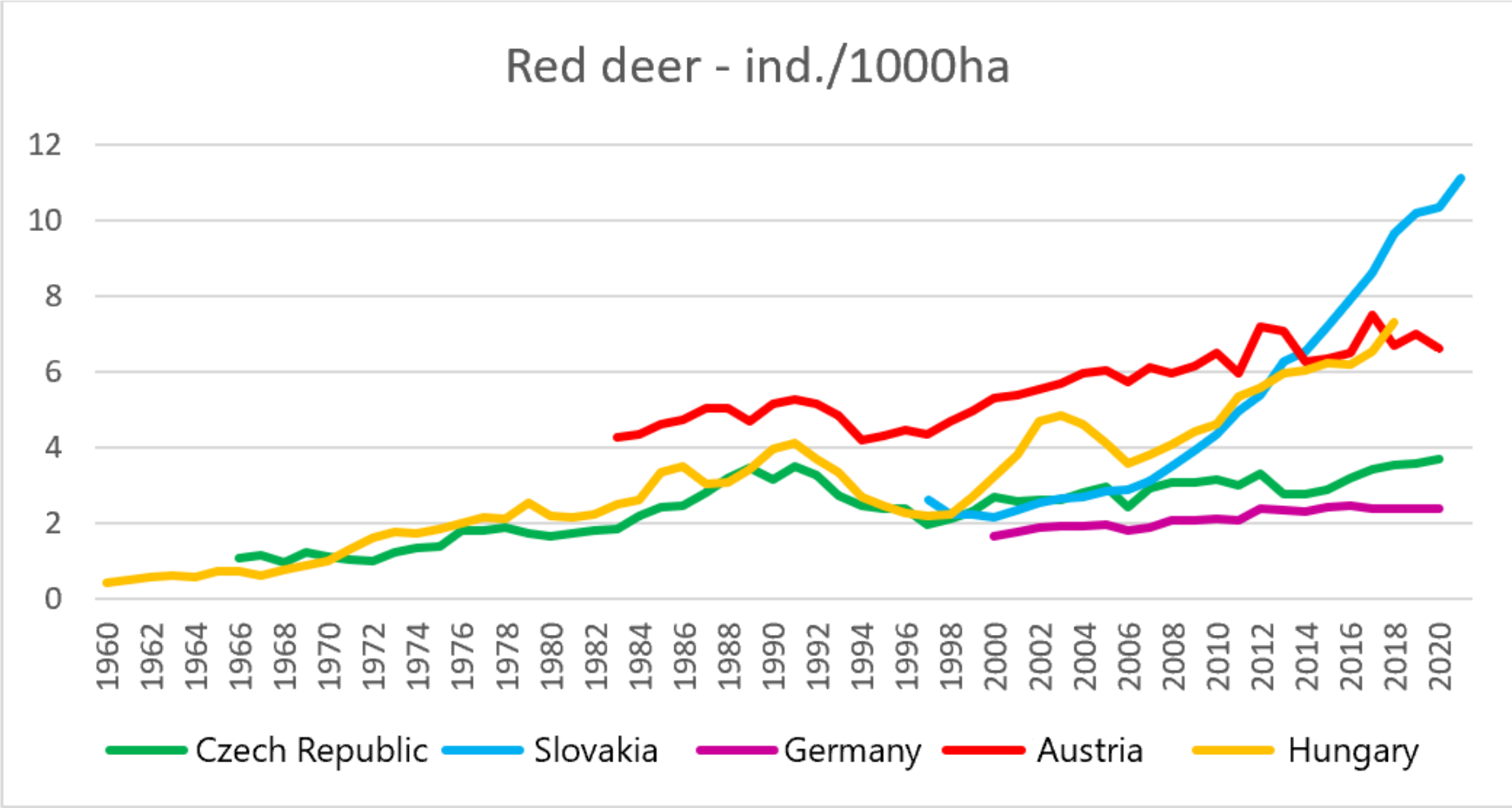
Wild ungulates in Austria



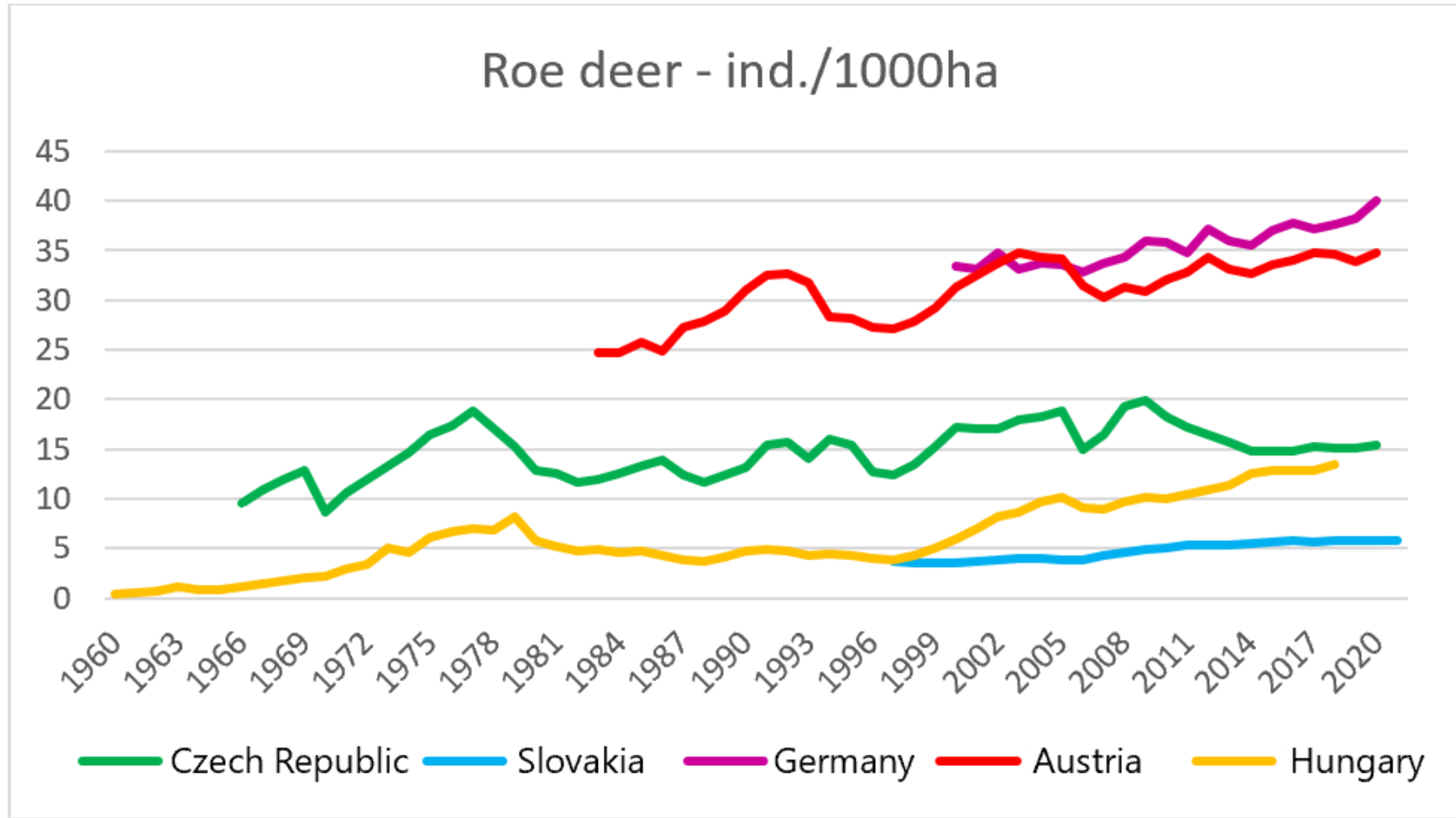
Wild ungulates in Hungary



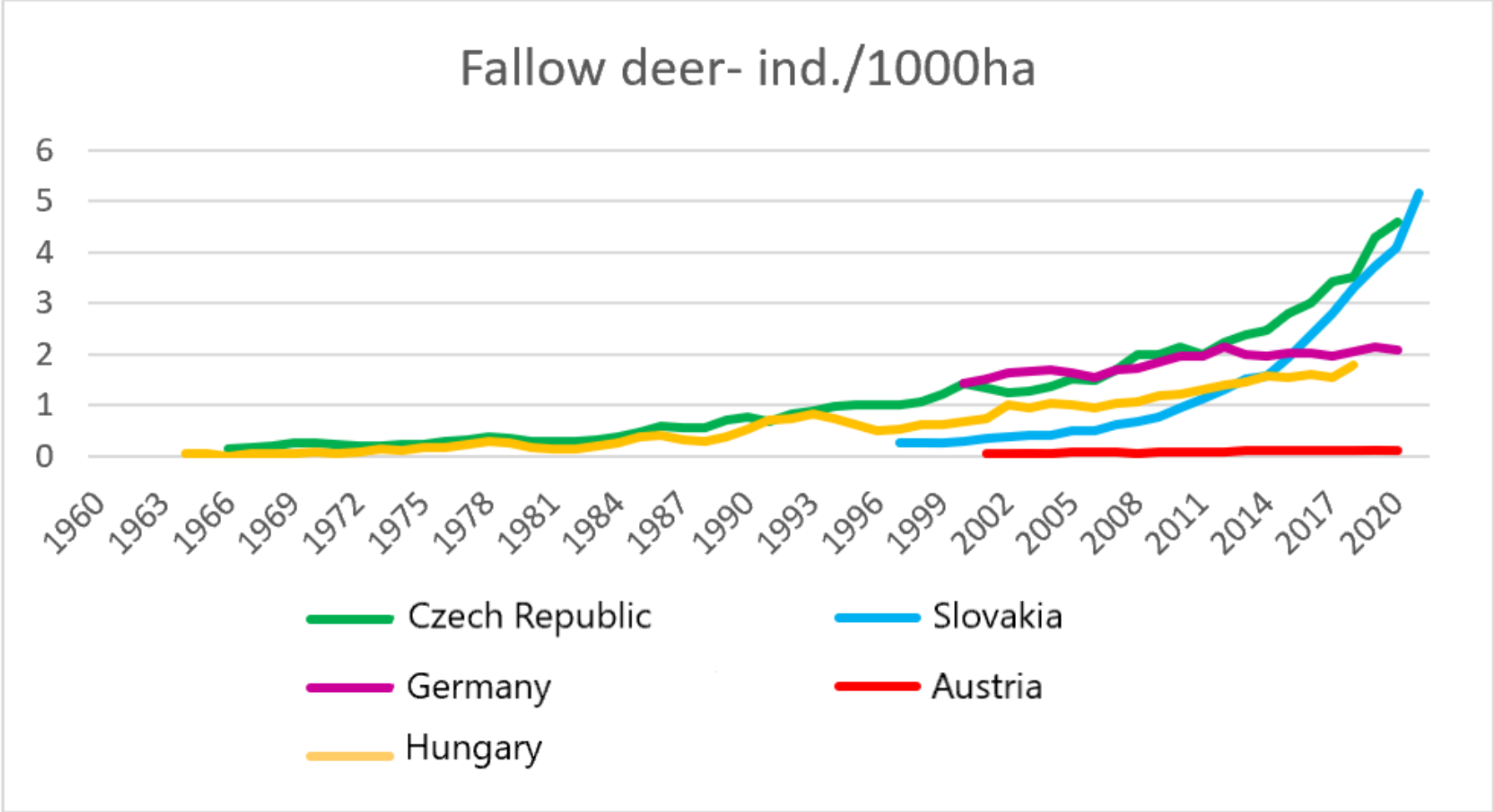
Summary – Red deer



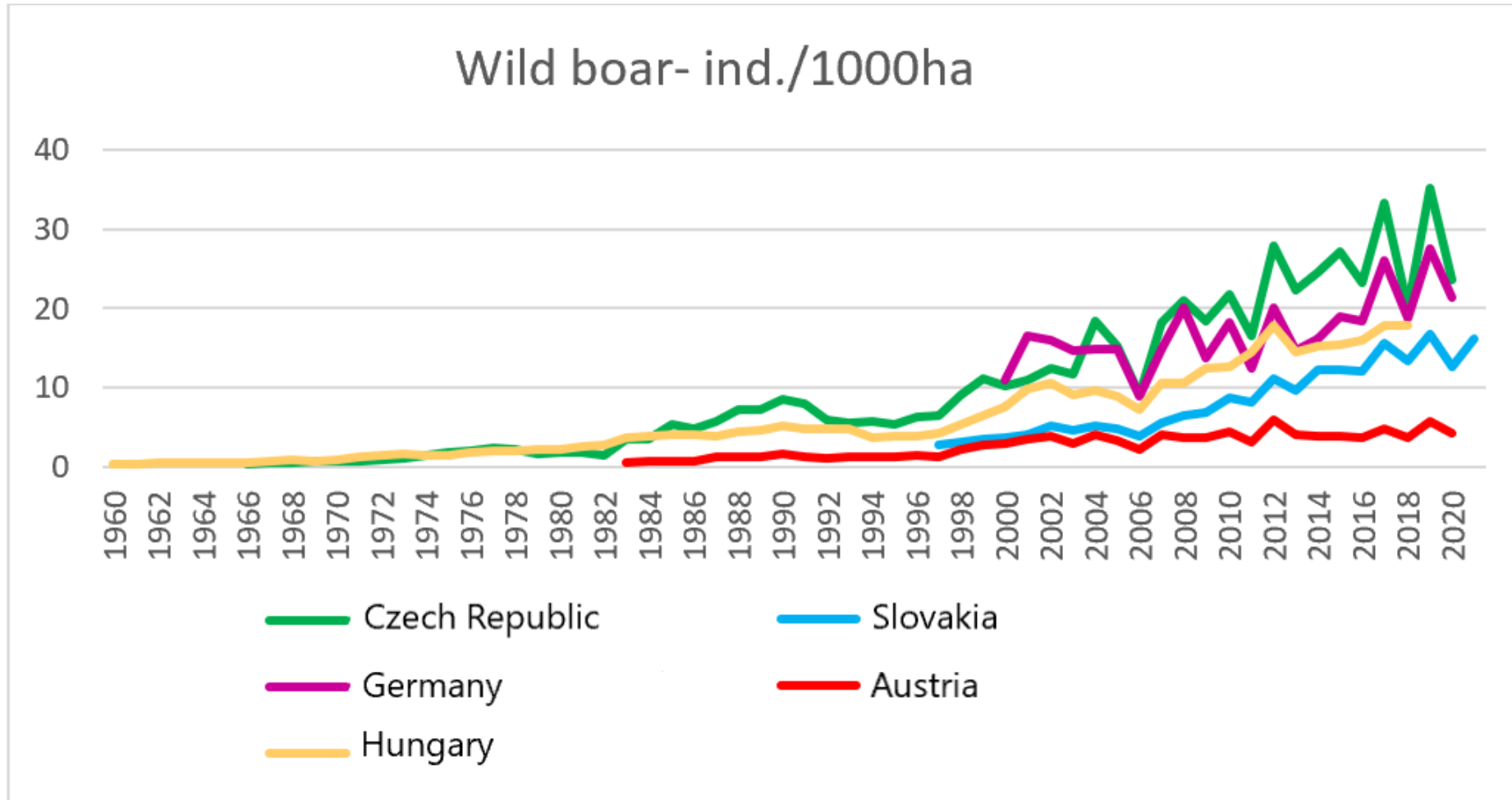
Summary – Roe deer



Summary – Fallow deer



Summary – Wild boar



Summary – European context

Description of ungulate population density also from other states

Recent publications highlighting overabundance → western European countries


Mammal Review



Mammal Review ISSN 0305-1838

REVIEW

Overabundant wild ungulate populations in Europe: management with consideration of socio-ecological consequences

Ana M. VALENTE*  Departamento de Biologia e CESAM, Universidade de Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal and Instituto de Investigación en Recursos Cinegéticos (UCLM-CSIC-JCCM), Ronda de Toledo 12, 13071 Ciudad Real, Spain. Email: anamvalente@ua.pt

Pelayo ACEVEDO Instituto de Investigación en Recursos Cinegéticos (UCLM-CSIC-JCCM), Ronda de Toledo 12, 13071 Ciudad Real, Spain. Email: pelayo.acevedo@gmail.com

Ana M. FIGUEIREDO Departamento de Biologia e CESAM, Universidade de Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal. Email: anamfigueiredo@ua.pt

Carlos FONSECA Departamento de Biologia e CESAM, Universidade de Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal. Email: cfonseca@ua.pt

Rita T. TORRES Departamento de Biologia e CESAM, Universidade de Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal. Email: rita.torres@ua.pt

Mammal Review

REVIEW

Wild ungulate overabundance in Europe monitoring and management recommen

Antonio J. CARPIO* Instituto de Investigación en Recursos Cinegéticos Ronda Toledo 12, Ciudad Real, 13071, Spain and Department of Zoology, Campus of Rabanales, Córdoba, 14071, Spain. Email: a.carpio.cama@uco.es
Marco APOLLONIO Department of Veterinary Medicine, University of Turin, 10125, Italy. Email: marcoapo@uniss.it

Pelayo ACEVEDO Instituto de Investigación en Recursos Cinegéticos: Ronda de Toledo 12, Ciudad Real, 13071, Spain. Email: pelayo.acevedo@gmail.com

Summary

- We can see some interesting trends in numbers of hunted ungulates for particular European countries
- Roe deer – most important ungulate species from the point of browsing damage, high numbers of hunted individuals in Germany and Austria (low acreage of hunting districts)
- The question is if there is so high abundance of Roe deer in Germany and Austria or the hunters are much effective than in other countries – if there is hunted higher percentage of every year population increase after reproduction



Summary

- We can see disturbing trend of increasing number of introduced ungulate species – Fallow deer/mouflon/Sika deer
- The differences in wild boar hunting bags are quite interesting, probably in relation to seed years of common broadleaf tree species (oak, beech) which significantly affects body condition and reproduction of wild boars



Summary – what can we expect?

Following population increase !!!

because of several reasons:

- Decreasing number of hunters/old hunters (Czech average \pm 60 years)
- Traditional trophy hunting which is not aiming to population density reduction, no changes in legislation
- Changes in environment \rightarrow great fodder and cover offer (energy valuable crops)



Summary – what can we expect?

Following population increase !!!

- Changes in forest stands after bark beetle calamity which affects all Central European countries
- Large areas of clearcuts will be/are afforested by broadleaf tree species → again great fodder and cover offer
- Unpossible effective hunting and population density reduction
→ → → **population explosion**
+ unsuccessful afforestation of post-bark beetle areas





Thanks for your attention