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# Large Carnivore Monitoring in the Carpathians

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# Sustainable large carnivore management should....

...be based on reproducible and transparent methods  
to estimate population status



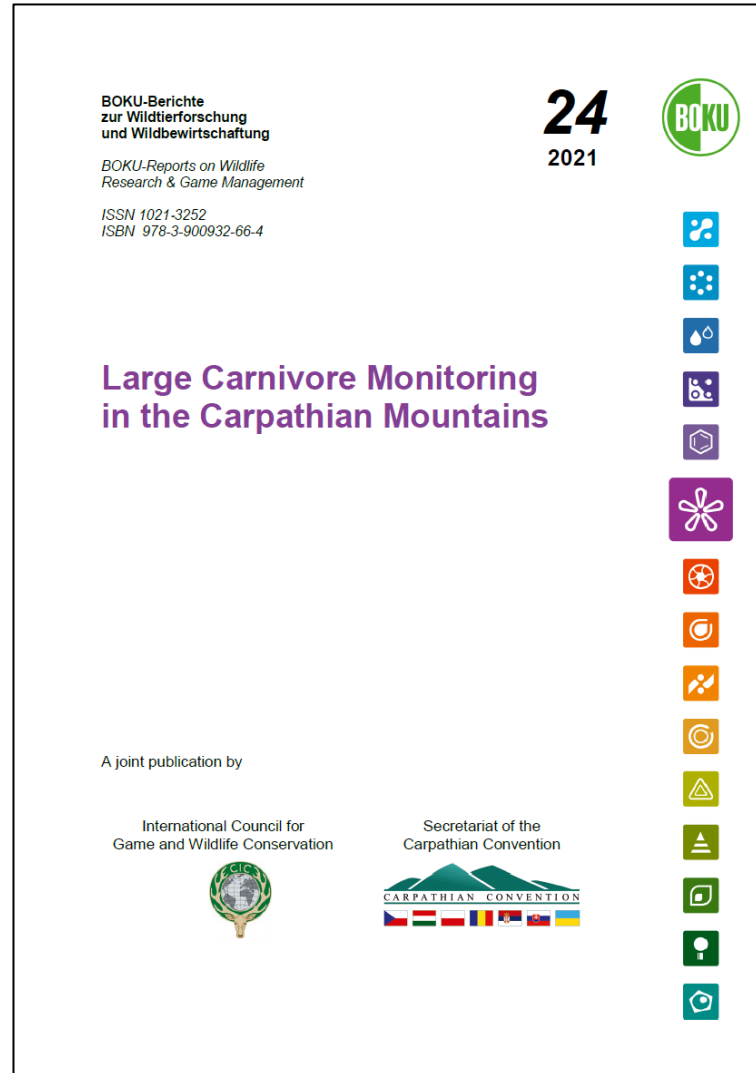
# Rationale of the project

1. Describe all current national large carnivore monitoring procedures in English, for the first time
2. Compare the pros and cons of national methods and picture future perspectives
3. Discuss minimum standards for a Carpathian-wide population estimation



# Now available

[https://boku.ac.at/fileadmin/data/H03000/H83000/H83200/Publikationen/BOKUBerichte\\_zur\\_Wildtierforschung\\_24.pdf](https://boku.ac.at/fileadmin/data/H03000/H83000/H83200/Publikationen/BOKUBerichte_zur_Wildtierforschung_24.pdf)



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# Special thanks to national corresponding authors



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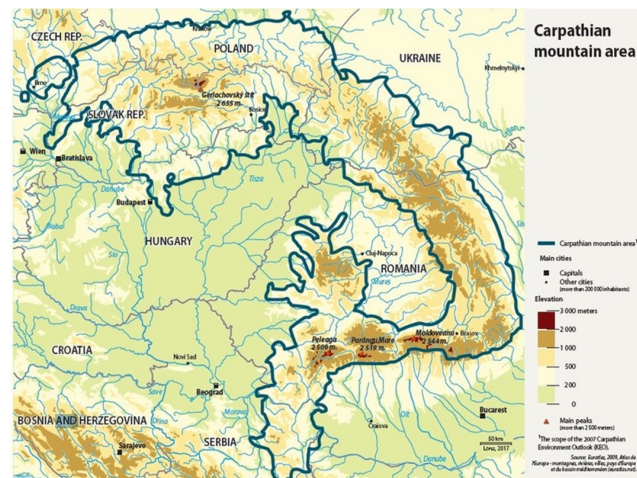
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# Key facts on large carnivore monitoring across the Carpathians

- Motivations for monitoring, involved institutions, and methods used differ between countries to a great extent
- Some methodological approaches lack scientific evaluation, reproducibility and transparency
- Monitoring intensity and thus accuracy strongly depends on motivation, financial and personnel capacities
- The use of hunters as data collectors is underestimated





# The involvement of hunters

- Hunters are not involved in CZ and HU, where monitoring is managed by an NGO or protected area authorities, respectively
- Hunters are involved in all other countries where monitoring is coordinated by state authorities (e.g., ministry, hunting department, state nature conservancy)



(Jennifer Hatlauf)

## However, in most countries....

- ... hunters are not supervised by institutions in charge
- ... hunters are not fully recognized as reliable sources due to intransparency of methods
- ... hunters estimations are not classified based on SCALP criteria



(Blanco 2007)



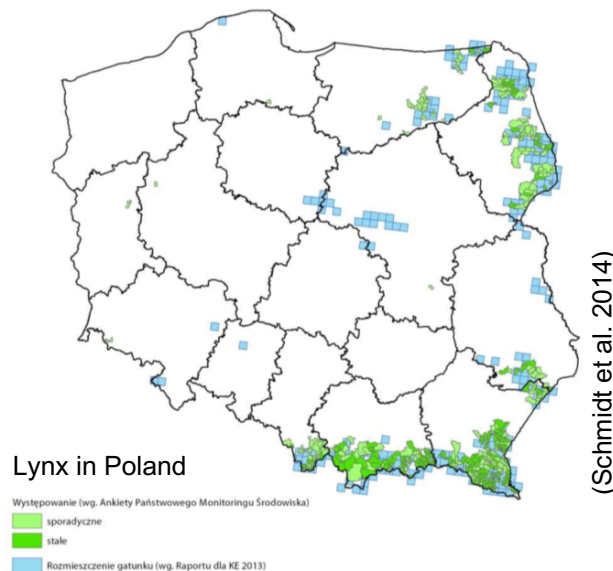
# Indication or evidence?

## SCALP Criteria

- C1 “hard facts”: verified and unchallenged observations such as dead individuals, live captures, genetic proof from faeces, hairs or saliva, telemetry locations or clear photos
- C2 “confirmed observations”: observations controlled and confirmed by an expert such as killed prey (wild or livestock), tracks or other field signs, e.g. dens
- C3 “unconfirmed observations”: all observations of C2 signs not confirmed by an expert

# General challenges

- *Methods*: Agreement on minimum standards will be difficult as methods differ between countries due to different traditions, depend on large carnivore densities (less accurate when abundant) and conservation status (more precise when strictly protected)
- *Coordination*: estimates neglect habitat use across administration units or national borders
- *Mapping*: not all countries provide occupancy in 10x10 km grids



# Next steps to do

- discuss the “why”, “what” and “how” of monitoring,
- reach an agreement of the projection and grid system for providing maps,
- assigning the different observation categories (e.g., livestock carcasses, snow tracks, DNA) used in each country to Carpathian-wide SCALP criteria,
- agree on common genetic methods for C1-observations, and finally
- establish a database for a sustainable data management.





# Thank you!

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