



**Beastly  
Business**

# **Uncertain Scientific Knowledge and European Illegal Wildlife Trade**





Uncertain scientific knowledge about the status of European species contributes to illegal wildlife trade (IWT) by obscuring or facilitating the production of environmental harm.

Missing or incomplete data about the ecology and population dynamics of European species enables green-collar crimes by legally registered companies or entities and hinders collaboration between institutions. Policymakers should adopt a precautionary principle when sound scientific knowledge is lacking in order to minimize the possibility of harm to European wildlife.

### Scientific uncertainty and policymaking

Controversies over scientific assessments by authorities prompt violations of [environmental law](#), as it impairs the uniform and effective enforcement of environmental regulations.

Scientific uncertainty hinders the creation of effective management and conservation plans for protecting European species. Without reliable population data, management decisions can be taken without having the species' viability or favourable conservation status as the primary objective, making room for [commercial exploitation](#) as the main management objective.

Contention over the scientific assessment by authorities and monitoring techniques can lead to inaccurate reporting of species status, a core obligation of Member States stemming from the Habitats Directive (92/43/EEC). This can negatively impact international conservation efforts and can block transboundary cooperation in issues such as law enforcement and prosecution of wildlife crimes.

### Scientific uncertainty enables environmental harm

**Uncertain scientific knowledge impacts public trust by creating and maintaining a crisis of authority.**

Unreliable data maintain an environment in which human-wildlife conflict is presented as a crisis (of human safety, human health, etc.) that demands that solutions are taken without democratic oversight. Often conflicts arise over numbers of large carnivore populations (wolf, brown bear, etc) which can lead to long [legal disputes](#) at the national and European Union levels which undermine or halt effective species management.

**Traditional monitoring techniques are often inadequate for reaching conservation objectives.**

For example, track counting of large carnivores or bird surveys during hunting seasons do not offer data on population trends and the impacts on hunting, potentially leading to inaccurate estimations. Monitoring of wildlife as game species needs to be supplemented with techniques which offer comprehensive scientific knowledge to ground actions for conservation, such as comprehensive transboundary assessments of migratory populations.

**Over-estimations can have a long-term impact on species protection.**

The reported abundance of wildlife managed as game species can misrepresent on the ground species abundance in the absence of reliable population data. The abundance of species which are targeted for trophies or for consumption as culinary delicacies is more often [overestimated](#) than in the case of those that cannot be hunted.





## Moving forward:

1. Adopt a **precautionary principle approach** to decision making. It is important to recognise that uncertain scientific knowledge impacts decision-making in environmental matters, and aim to mitigate its impacts. By adopting precautionary measures potential environmental harms can be reduced.
2. Develop **guidelines** through a participatory process for uniform monitoring and reporting methodologies for those species about which current data is incomplete or unreliable. Such guidelines can be issued as soft law instruments.
3. Allocate **priority funding** for prompt implementation of state-of-the-art monitoring methodologies across the population range of target species.
4. Address the impacts of uncertain scientific knowledge within **practitioners' networks** working across Europe (such as the EuroLarge Carnivores platform). These platforms can unite groups with diverse **expertise and interests**. Such platforms have the potential to offer complex solutions and concrete pathways for addressing the effects of unreliable data on the species conservation and protection.
5. Acknowledge that ineffective management of European species leads to serious, but unaccounted for, **environmental harms against people and wildlife**. For example, inadequate oversight of trophy hunting can result in wildlife crime, negatively impact locals' livelihoods and undermine public trust.





## Further reading:

Iordăchescu, G., Lappe-Osthege, T., Dickinson, H., Duffy, R. and Burns, C. (2022). *Political Ecologies of Green Collar Crime: Understanding Illegal Trades in European Wildlife*. *Environmental Politics*

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Popescu, V.D., I.M. Pop, L. Rozyłowicz (2021). Trophy hunting undermines public trust. *Science* 372(6546):1049.1-1049, [doi 10.1126/science.abj4014](https://doi.org/10.1126/science.abj4014)

Popescu, V.D., K.A. Artelle, I.M. Pop, S. Manolache, L. Rozyłowicz. (2016). Assessing biological realism of wildlife population estimates in data-poor systems. *Journal of Applied Ecology*, 53(4):1248-1259, [doi 10.1111/1365-2664.12660](https://doi.org/10.1111/1365-2664.12660)

Trouwborst, A and F.M. Fleurke. (2019). Killing Wolves Legally: Exploring the Scope for Lethal Wolf Management under European Nature Conservation Law. *Journal for International Wildlife Law and Policy*, 22(3):231-273, [doi 10.1080/13880292.2019.1686223](https://doi.org/10.1080/13880292.2019.1686223)

## About the Author

Dr George Iordachescu is a Postdoctoral Research Associate at the University of Sheffield. He leads the work package Brown bear trafficking in Europe: examining the political ecologies of green-collar crime of the Beastly Business Project. Dr Iordachescu researches the politics of conservation, wildlife trafficking and green crimes in Europe.

## About the Beastly Business Project

The Project is funded by the UKRI Economic and Social Research Council, grant number ES/V00929X/1, and focuses on the political ecologies of green collar crime. Our research examines the trade in European species, especially brown bear, European eel and songbirds.

For more information on our outputs, team and research:

 [beastlybusiness.org](https://beastlybusiness.org)

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