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POLICY BRIEF

TOWARDS SUSTAINABLE WILDLIFE TRADE: *SOUND DATA IN SUPPORT OF DECISION MAKING*

THIS BRIEF

This brief is part of a series of three, being the result of a study conducted by the Belgian Biodiversity Platform under the initiative of Federal Public Service Health, Food Chain Safety and Environment (Belgium). Its content also benefits from the background documents, the panel discussions, and the keynote presentations from the 'Towards a sustainable wildlife trade' conference organised in Brussels on 3 and 4 December 2019 within the framework of the 'One Health' initiative on the trade in exotic animal species.

KEY POLICY RECOMMENDATIONS

- Establish coordinated National and European strategies to oversee wildlife trade.
- Develop National and European biodiversity-specific databases that allows the traceability of up-to-date detailed information on exotic species entry.
- Ensure dataflows that follow FAIR principles (Findable, Accessible, Interoperable and Reusable 18) allowing reproducible data analysis and interpretation.
- Ensure evidence-based decision making through scientific risk analysis processes relying on dataflows.



CONTEXT

- Wildlife trade of animals and plants is one of the fastest growing markets internationally. With a legal market worth €300 billion annually¹ and an illegal market whose profits are estimated between €6.5-22.3 billion per year², wildlife trade has a dynamic global scope³.
- The trade of exotic species has become a major concern for a variety of reasons. Given that a large part of species are hunted or harvested in an unsustainable manner, wildlife trade is considered as a prominent driver of species extinction^{4,5,6}. Traded exotic species, especially as part of the pet trade and the trade of ornamental plants, can also become invaders, outcompeting native species and affecting biodiversity and ecosystem functions in non-native regions¹¹. Beside conservation issues, the uncontrolled trade of exotic species poses a hazard to public health through the potential spread of animal pathogens, as demonstrated for the recent epidemics of Severe Acute Respiratory Syndrome (SARS) and highly suspected for the Covid-19 outbreak^{8,9,19}. It can also bring high risks to wildlife health, livestock and crops¹⁰. In the past decade, the issue of wildlife trade has been identified as a major concern for the international policy arena. However, there are numerous constraints and limitations to monitor and successfully tackle this problem with current policy instruments⁷.
- There is growing evidence of the key role that Europe plays in the wildlife trade. Estimates of the net value of wildlife trade in the EU alone vary widely¹². In 2013, Walley¹ estimated the EU's legal share at approximately €100 billion, whereas van Uhm¹¹ estimated this in 2016 at €38 billion with 25% of it being illegal. For decades, the EU has ranked as a top importer of wildlife¹³, being a source, processing point and destination for wildlife trade. This includes both legal and illegal trade, with a wide heterogeneity of compliance levels for the specific regulations among its Member States^{14,15}, for example with regard to the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES).
- The introduction of exotic species in a territory is subjected to several different legal frameworks addressing a wide range of concerns, including: animal welfare, animal health, wildlife conservation, public health, and invasive alien species. These legal frameworks all require the monitoring of the entry of organisms into a defined territory. So far, initiatives to regulate wildlife import have often been reactive, focusing on detecting and preventing the spread of exotic species already established, or they have been initiated as an urgent response to an emerging public health issue¹⁶.

KEYNOTE MESSAGES

- Sound data are necessary to better characterise and understand the species populations in the wild, the trade chain, the traded volumes, the sources, the species taxonomic identity, and the potential risk of exotic species on health and biodiversity¹⁷. **Understanding trade patterns and drivers is essential to mitigate the negative impact of wildlife trade** and to ensure that effective and efficient actions are taken towards sustainable wildlife trade.
- The **primary step for the implementation of legal frameworks relevant for exotic species introduction is always the listing and identification of target species**. Currently, each framework (animal health, plant health, animal welfare, invasive alien species, CITES, etc.) and associated public institution mandated for its implementation have either established dedicated species lists fitting their respective purposes (e.g. positive lists of reptiles or mammals in Belgium), or are working on exotic species pooled in a specific context (e.g. reptiles, live fowls). As a result, information is limited by narrow taxonomic focus and scattered across different sources with limited accessibility and no commonly agreed
- At present, **there is no species-specific database in Belgium or in the European Union** that allows the traceability of detailed information on exotic species entry, with the exception of the CITES database being the only one containing actionable information. And as a corollary, there is no comprehensive and synthetic reference species list available that reports all potential concerns associated with the introduction of a given exotic organism.
- The **lack of an overarching species-specific framework that could generate data on the commercial and non-commercial flows of exotic species is an important barrier to effective public policy**. This needs to be tackled in order to ease information exchange between different actors working on wildlife trade issues such as National and European policy makers and civil servants, enforcement actors (customs and other inspection services), professionals from the pet trade and ornamental plant trade, agencies for the safety of the food chain, NGO's (nature conservation, animal welfare, etc) or veterinarians.

REFERENCES

1. Walley, J. Wildlife Crime: Third Report of Session 2012–2013. (2013).
2. GEF. [Combating Illegal Wildlife Trade](#). (2018).
3. 't Sas-Rolfes, M., Challender, D. W. S., Hinsley, A., Veríssimo, D. & Milner-Gulland, E. J. Illegal Wildlife Trade: Scale, Processes, and Governance. *Annu. Rev. Environ. Resour.* 44, 201–228 (2019).
4. van Uhm, D. Monkey business: the illegal trade in Barbary macaques. 14 (2016).
5. Maxim, L., Spangenberg, J. H. & O'Connor, M. An analysis of risks for biodiversity under the DPSIR framework. *Ecological Economics* 69, 12–23 (2009).
6. Pimm, S. L. et al. The biodiversity of species and their rates of extinction, distribution, and protection. *Science* 344, 1246752–1246752 (2014).
7. Challender, D. W. S., Harrop, S. R. & MacMillan, D. C. Towards informed and multi-faceted wildlife trade interventions. (2015). doi:10.1016/j.gecco.2014.11.010.
8. Chomel, B. B., Belotto, A. & Meslin, F.-X. Wildlife, Exotic Pets, and Emerging Zoonoses¹. *Emerg. Infect. Dis.* 13, 6–11 (2007).
9. Swift, L., Hunter, P. R., Lees, A. C. & Bell, D. J. Wildlife Trade and the Emergence of Infectious Diseases. *EcoHealth* 4, 25–30 (2007).
10. Auliya, M. et al. Trade in live reptiles, its impact on wild populations, and the role of the European market. *Biological Conservation* 204, 103–119 (2016).
11. van Uhm, D. 3 Illegal Wildlife Trade to the EU and Harms to the World. 25 (2016).
12. Milner-Gulland, E. J. Documenting and tackling the illegal wildlife trade: change and continuity over 40 years. *Oryx* 52, 597–598 (2018).
13. Engler, M., Parry-Jones, R., International Traffic Network & TRAFFIC Europe (Program). Opportunity or threat: the role of the European Union in global wildlife trade. (2007).
14. Arroyo-Quiroz, I. & Wyatt, T. Wildlife Trafficking between the European Union and Mexico. *Int J for Crime, Justice & Social Democracy* 8, 23–37 (2019).
15. European Commission and TRAFFIC. Reference Guide to the European Union Wildlife Trade Regulations. (2017).
16. Smith, K. F. et al. Reducing the Risks of the Wildlife Trade. *Science* 324, 594–595 (2009).
17. Eskew, E. A. et al. United States wildlife and wildlife product imports from 2000–2014. *Sci Data* 7, 22 (2020).
18. Wilkinson, M. D. et al. The FAIR Guiding Principles for scientific data management and stewardship. *Sci Data* 3, 160018 (2016).
19. Karesh, W. B., Cook, R. A., Bennett, E. L. & Newcomb, J. Wildlife Trade and Global Disease Emergence. *Emerg. Infect. Dis.* 11, 1000–1002 (2005).

