

Introduction

Illegal wildlife poisoning is a **global threat for biodiversity** and the scale of its impact on ecosystems is largely underestimated as most of poisoning episodes remain undetected.

Illegal wildlife poisoning typically consists of the placement of poison-baits in the field (e.g., small meat remains, use of animal carcasses). This illegal practice typically **arises as a response to the real or perceived negative impact of wildlife on humans and their interests**, such as predation on livestock, damage to crops, competition for game or, rarely, attacks on humans.

Illegal wildlife poisoning is a non-selective practice that affects not only the target species for poachers, but also many other animal species, including domestic pets and even humans, and contributing to severe population declines of threatened species.

There is a still a poor understanding of the real magnitude of wildlife poisoning.

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Indeed, once the poisoned animals and/or baits are found, there are **analytical limitations** detecting toxic substances in the carcasses and **difficulties in clearly assigning the cause of death** by poisoning.

Poisoning, in its various forms, is by far the most significant threat that impacts vulture species. In the context of vultures there are two broad types of poisoning: **unintentional poisoning**, where vultures are intentionally killed.

The **Iberian Peninsula represents a major biodiversity stronghold in Europe** (IUCN, 2010; Appendix S1.1) and **an area where poison use is quite common**, affecting to endangered species

Although there is no reliable information on the actual impact of poison on wildlife in Spain, it has been estimated that some 185,000 animals, including birds and mammals, may have been lost from 1992 to 2013 (Cano *et al.* 2016).

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The most widely used poison in Spain is carbamate aldicarb, a substance banned since 2007, and which appears in 40% of recorded episodes, followed by carbofuran (24% of cases), banned since 2008, and strychnine (5%), banned since 1994.

Furthermore, in Hungary, during the 2000s, **pesticide poisoning** became the **most important threat for raptors**, especially for the globally threatened Eastern imperial eagle (*Aquila heliaca*). In September 2013, with a focus on carbofuran and phorate, **the first poison and carcass detection dog (PCDD) unit was formed in Hungary** with a specifically trained detection dog and handler.

Pesticides are typically most commonly associated with wildlife poisoning incidents, primarily through accidental misuse in agriculture or intentionally prepared poisoned baits.

Accidental poisoning usually occurs when bait stations are improperly installed and/or legally banned pesticides are used in agriculture, resulting in poisoned carcass availability for predators.





Facts (I and II)

- In March 2013, a Bonelli's eagle (endangered species) was found poisoned together with a red kite, a golden eagle, six vultures griffons, a badger and a fox, among others. The Bonelli's eagle had been marked with a GPS transmitter in 2010, thanks to which it was located among with the other carcasses.
- The tracking of the **Egyptian vulture**, marked with a GPS transmitter by WWF, allowed to detect his poisoning in March 2010, in Badajoz. The immediate collaboration between technicians from WWF, SEPRONA and agents who contributed to the investigations, located the carcasses of two other Egyptian vultures, two black vultures, four griffons and two buzzards and found the perpetrators.

6. Illegal wildlife poisoning (I and II)





Issues (I)

- The Bonelli's eagle (Aquila fasciata) is a large bird of prey. This species breeds from Southern Europe, Africa on the montane perimeter of the Sahara Desert and across the Indian Subcontinent to Indonesia. In Eurasia, this species may be found as far west as Portugal and Spain, and as far east as southeastern China and Thailand.
- Despite its persistence over a large range and its continued classification as a least concern species by the IUCN, the Bonelli's eagle has declined precipitously in various parts of its range, including almost all of its European distribution, and may face potential local extinction. In Spain, the Bonelli's eagle is in danger of extinction. The species' declines are due to widespread habitat destruction, electrocution from electricity pylons as well as persistent persecution (poisoning and poaching).

Issues (II)

- □ The egyptian vulture (Neophron percnopterus) is in danger of extinction in Spain.
- Currently, the main threats to this species come from the illegal use of poisoned baits —to which the bird is fatally sensitive-.
- Disturbances in breeding areas or direct persecution are also a serious problem, in addition to **poisoning from agricultural pesticides**, the impact of power lines, and the loss or alteration of nesting and feeding habitat.

Issues

- The main directives for nature conservation in Europe, both Directive 2009/147/EC (on wild birds) and Directive 92/43/EEC (on the conservation of the main European habitats), **prohibit the use of massive and non-selective methods for the hunting or capture of wild animals**. Both directives reflect the spirit of the 1979 Bern Convention, with the Birds Directive obliging Member States to prohibit poison-baits (Annex IV (a)), while the Habitats Directive establishes a similar prohibition in Article 15 (Annex VI (a)).
- Other instruments include the Bonn Convention and the Raptor Memorandum of Understanding, all of which protect vultures in different ways in different geographical areas. Finally, commented species are covered by the CITES Convention and the equivalent EU Regulation. This Convention covers any movement of live or dead animals within the EU and between the EU and other countries and sets requirements for checks to be made and conditions to be met before movement. Finally, the national legislation needs to be considered as it can be tougher depending on national priorities.



Holdings (I)

Bonelly's eagle case:

- ➤ Perpetrators were **sanctioned administratively with a fine** for not reporting the existence of the poisoned species (25.000€) and for not adopting sufficient surveillance measures to prevent the appearance of poisoned baits (50.000€) **and suspension from hunting for two years**.
- > WWF was recognized as an interested party in the process.
- ☐ The case represents a good example of: (1) administrative sanction of poisoning, (2) how GPS transmitter technology is very useful in finding wildlife crimes (3) the importance of NGOs being an interested party in the process



Holdings (II)

Egyptian vulture case:

- > Perpetrators were sanctioned administratively with a fine for not reporting the existence of the poisoned species (25.000€) and for not adopting sufficient surveillance measures to prevent the appearance of poisoned baits (50.000€) and suspension from hunting for two years.
- WWF was recognized as an interested party in the process.
- The case represents a good example of: (1) administrative sanction of poisoning, (2) how GPS transmitter technology is very useful in finding wildlife crimes (3) the importance of NGOs being an interested party in the process, and (4) the importance of collaboration between the law enforcement agencies.





Facts (III)

3. In January 2020, a livestock breeder in Croatia used **poisonous bait for the hunting of wild animals** on two occasions in order to reduce the number of animals attacking his cattle, thus causing the death of foxes and strictly protected specimens **of wolf** (*Canis lupus*) and **golden eagle** (*Aquila chrysaetos*).

The Association Biom, along with the local hunting association, the nature protection inspectorate, the police, and officials from the Ministry of Economy and Sustainable Development, conducted their investigation of the signs of poisoning at the scene of the offence.

Two calf corpses were left as bait.

Inspectors found **dead wolves and foxes** in the immediate vicinity, namely with signs of diarrhea and vomiting, and it thus became clear that they had died from poisoning and in great pain. Two weeks after the first findings, authorities discovered an **eagle's corpse**, some crystals of the carbofuran poison, and a dead cow near the eagle.

By identifying the herd from which the calves and cow came, the investigators identified the suspect. Following the questioning and the presentation of evidence, the suspect confessed to the poisoning.

Issues (III)

The investigation into the poisoning was the fruit of the cooperation between the State Inspectorate, the Ministry of Economy and Sustainable Development, the Faculty of Veterinary Medicine, the Croatian Veterinary Institute, and the Forensic Science Centre "Ivan Vučetić".

The police filed a criminal charge for the criminal offence of destruction of protected parts of nature referred to in Article 200, paragraph 2 of the CC, and the criminal offence of illegal hunting and fishing referred to in Article 204, paragraph 2 of the CC.

The indictment demanded a suspended prison sentence and a compensation of damage in the amount of HRK 80,000 for the state budget. A hearing in the case is expected to be scheduled.