

Combating the illegal killing, taking of and trade in birds in the EU

A review of good practices on prevention

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TABLE OF CONTENTS

Introduction	4
2. Best practices in deterrence, awareness raising and communication	8
3. Best practices in finding alternatives to the use of poison	20
4. Best practices in the use of technology to help prevent IKB	23
5. Key messages	26
6. Key policy documents	28



Introduction

Policy background

The Illegal killing, taking of, and trade in wild birds (IKB) continues to be a matter of serious concern across the EU and, in view of its scale, contributes to the observed delays in achieving the objectives of the Birds Directive (2009/147/EC).

While the implementation of the Birds Directive and the legal enforcement of bird protection regulations are primarily the competence of EU Member States, the European Commission has also a role to play as custodian of EU legislation in ensuring compliance with the provisions of the Directive. For instance, it has produced the “Guide to Sustainable Hunting under the Birds Directive”¹ that provides important information on the implementation of the Article 7 (hunting) and Article 9 (derogations) of the Directive. It also assists in co-ordinating actions within the EU and wider afield.

In September 2022, the Commission reviewed the EU action plan against wildlife trafficking. The new action plan (2022–2027²) strengthens the ambitions of the 2016 action plan, underlining the continued commitment of the EU to the fight against wildlife trafficking.

The illegal killing, taking of, and trade in birds is a complex problem which needs to be addressed through a wide array of measures. This can involve: monitoring, understanding the scale of the problem and the motivations behind illegal activities, raising awareness, providing a legal alternative to the illegal conduct, engaging people, ensuring effective enforcement of legislation and judicial procedures. Appropriate training and specialised knowledge of staff in competent authorities is also crucial.



Wardens confiscate illegal bird traps, Italy.

Purpose of this document

The Rome Strategic Plan 2020–2030: Eradicating Illegal Killing, Taking and Trade in Wild Birds in Europe and the Mediterranean region (RSP) is the joint strategic framework for the Bern Convention³ Special Focal Points against IKB and the Intergovernmental Task Force on Illegal Killing, Taking and Trade of Migratory Birds in the Mediterranean (MIKT) of the Convention on Migratory Species (CMS)⁴. The RSP calls for the development of best practice guidance⁵ on how to implement activities aimed at preventing IKB.

The current document aims to contribute to this action. It builds on the work of the European Commission as regards environmental compliance assurance⁶ which covers ways in which public authorities can promote, monitor and enforce compliance with existing rules (see box). Focus is given in particular to the first aspect of compliance assurance - prevention - prevention - while considering and referring to the other two aspects of environmental compliance assurance, where appropriate.

The document replaces the EU Roadmap towards eliminating illegal killing, trapping and trade of birds of 2017 which provided a first overview of various initiatives across the EU to combat IKB and helped to facilitate the co-ordination of actions in the EU.

Prepared through a collaborative process involving CMS experts, EU Member States’ experts, Birdlife and its partner organisations, FACE and other stakeholders, the good practice examples aim to support the work of everyone who can play a role in the prevention of IKB, e.g. national and local authorities, environmental inspectors, police officers, customs officers, hunting or farming organisations, conservation NGOs, communication experts, etc.

It is further supported by a LIFE brochure “*LIFE & Wildlife Crime*”⁸ published in 2018 which provides a set of lessons learned and best practices from LIFE projects and “Guidance on combating environmental crime and related infringements” prepared in the framework of the Environmental Compliance and Governance Forum which also showcases several examples relevant to wildlife crime, including IKB, on how to prevent and respond effectively to breaches⁹.

1 https://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/docs/hunting_guide_en.pdf

2 <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022DC0581&from=EN>

3 See objective 2 “To establish an active prevention of the IKB”, 168099315b (coe.int)

4 CMS Intergovernmental Task Force on Illegal Killing, Taking and Trade of Migratory Birds in the Mediterranean (MIKT) https://www.cms.int/sites/default/files/document/unep-cms_mikt4_doc.6_draft-mikt-workplan-2021-2025-annex_e.pdf

5 By the Bern Convention Secretariat and CMS/MIKT Coordinator, national authorities, and other stakeholders

6 https://ec.europa.eu/environment/legal/compliance_en.htm

7 European Federation for Hunting and Conservation.

8 https://ec.europa.eu/environment/archives/life/publications/lifepublications/lifefocus/documents/wildlife_crime_web.pdf

9 Guidance on combating environmental crime and related infringements

General considerations

Preventive measures anticipate and address the threats and risks a species may face. For wild bird species naturally occurring in the EU, preventive measures should also form part of the requisite measures to establish a general system of protection as required under Article 5 of the Birds Directive.

Environmental crimes have complex and combined motivations. There is rarely a single isolated motive behind a criminal action¹¹. Illegal killing, taking of and trade in birds often are driven by habits (or behaviours sometimes considered “traditional” by local cultures) and their acceptance or tolerance. Understanding the reasons that drive people to IKB-related criminal acts is therefore crucial for finding solutions to prevent IKB. Three aspects are important in that field:

- **Habit (or tradition)** covers both the perpetrators themselves and those that create a demand for illegally killed or trapped birds. The latter group is most likely to change attitude if the use of products from illegally killed, trapped or traded birds (food, stuffed birds, caged birds etc.) is made socially unacceptable.

Economic reasons and financial gain are often motivations behind traditional activities. The positive connotation of the concept “tradition” is often misused. This is the case for example when so called “traditional” methods are used to capture wild birds on a large scale.

- **Acceptance** involves those who are not personally involved in illegal activities but are aware of them and do not take any action to stop the practice (social acceptance of non-compliant behaviour, including criminal acts). Their reaction towards those who commit the crimes is very relevant, as a change of their acceptance levels can significantly affect social awareness and the continuation or discontinuation of a particular environmental crime. Reducing the acceptance among decision makers or politicians is of particular importance and is directly linked to law enforcement.
- **The recruitment** of people potentially involved in illegal activities often concerns very young people, such as children and teenagers. With this group, schools may play an important role in combatting illegal activities. Awareness raising in schools can change attitudes, ideally resulting in fewer people becoming bird poachers or buyers or users of the illegally killed, trapped or traded products deriving from birds, thus preventing the perpetuation of IKB activities.

Specific preventive actions should target each of the three aspects (habits, acceptance, and recruitment) and their concerned groups. The logic is that as soon as one target group is reduced, IKB levels can be reduced. To be effective, prevention needs to take account of the drivers, attitudes and perceptions. Therefore, a thorough analysis of the phenomenon (social and socio-economic studies) can help in this process.

Guiding principles of EU environmental compliance assurance

1 Prevent infringements and the harm that they cause (compliance promotion, awareness-raising, guidance and advice).

Prevention is a basic principle of the environmental policy of the European Union and echoes the axiom of health management that ‘prevention is better than cure’.

2 Discover, assess, and understand infringements (compliance monitoring).

This principle means collecting information about levels of compliance and providing solid evidence for enforcement. It covers routine inspections, police investigations, audits by public audit bodies, and examination of complaints from the public. Many LIFE projects targeting IKB have contributed to this process e.g. by training legal professionals and customs officials¹⁰.

3 Respond effectively to infringements (enforcement).

This principle means stopping those who disregard the rules, sanctioning them and making them rectifying the damage when possible. It covers, amongst other things, official warnings, cease-and-desist orders, administrative or criminal proceedings and application of sanctions.

¹⁰ LIFE and Wildlife Crime publication e.g. Chapter 3 Training, information exchange and evidence gathering https://ec.europa.eu/environment/archives/life/publications/lifepublications/lifefocus/documents/wildlife_crime_web.pdf

¹¹ LIFE Nature Guardians, 2020 Report on environmental crime motivation (in ES, summary in EN)

Best practice examples contributing to preventing IKB

42 examples of projects and initiatives contributing to prevent IKB are presented in the following chapters. They are grouped under three broad sections:

- awareness raising, deterring actions and communication campaigns,
- encouraging local communities to find legal alternatives to the motivation for an illegal conduct, and
- use of technology

Some examples are relevant for more than one section as shown in the following table.

Many of the examples presented below are also part of wider projects (e.g. multi-annual LIFE co-funded projects) covering a range of different activities such as monitoring and data collection, awareness raising, testing or implementing preventive measures, training, exchange of information, co-operation at local, national or international level and/or enforcement aspects.

Summary of projects covered in the report according to type of preventive measures			
	a) Awareness raising	b) Finding legal alternatives	c) Use of technology
Poisoning	1-8, 12-25	4, 6, 32-35	42
Illegal shooting	3, 8-25, 29, 30, 37, 40-42	9, 36-37	38-41
Illegal taking/trapping	1, 3, 10-31, 39		39-41
Illegal trade (<i>trafficking of wild birds and/or their eggs</i>)	1, 3, 11-16, 18-19, 21-31	36, 37	39-41





2.

**Best practices in deterrence,
awareness raising and
communication**

The following best practice examples illustrate the different techniques and initiatives that have been used to prevent the illegal killing of birds using deterrence methods, awareness raising and communication

1. Dog patrols deterring poisoners

Over 20 LIFE co-funded projects have demonstrated that creating dog patrols to detect poison can be an effective wildlife crime deterrent. Dog patrols (a team involving a dog handler and a dog) have identified poisoning hot spots and motivated the public to report wildlife poisoning cases to the authorities. Dog patrols not only help in finding proof of poisoning but also in raising people’s awareness that animal poisoning is a crime (i.e. help in changing attitudes). The anti-poison dog patrols go to local towns, talk to local people on the risk of poisoning wildlife and distribute information material.

Spain is one of the pioneers of anti-poison dog units; it had its first anti-poison dog unit already in 2005. Building on the work done in Spain and Italy, BirdLife Hungary created its first poison and carcass detection dog unit (PCDD) in 2013, and it has been playing a significant role in the fight against raptor poisoning ever since. In the Hungarian case, the focus was on carbofuran (pesticide) and phorate (insecticide).

A scientific review has been carried out in Hungary on the use of the trained poison and carcass detection dogs and handlers between 2013 and 2020. The review summarises the training of the dogs to sniff out all types of vertebrate carcasses, the importance of a standardised working protocol, types of searches undertaken, search methodology and data analysis. The review concludes that the dog unit played a significant role in detecting and combating wildlife poisoning incidents by deterring potential offenders and facilitating police investigations through retrieval of evidence otherwise difficult to obtain. The high efficiency of such dog units in poison detection and in other conservation applications makes

the use of this method likely to be increasingly widespread as it can address a variety of conservation and biological problems in the future both in the European countries, but also in other parts of the world.

Another example from Slovakia shows that dogs can be used also to find smuggled birds. Customs officers detected thanks to a trained dog 103 live birds in a wooden box at the border between Slovakia and Hungary in March 2017. The offender was sentenced to imprisonment, although this was conditionally postponed for a probationary period of two years.

2. Effective awareness raising activities against illegal use of poison

The Spanish LIFE project 'VENENO NO - Action to fight illegal poison use in the natural environment in Spain' (LIFE08 NAT/E/000062) has been a pioneer in Europe in the fight against the illegal use of poison. It is one of the main causes of non-natural mortality for some of the most endangered species in Europe, such as the Spanish Imperial Eagle (*Aquila adalberti*), the Bearded Vulture (*Gypaetus barbatus*), the Red Kite (*Milvus milvus*) and the Egyptian Vulture (*Neophron percnopterus*, including the Canary Islands subspecies).

The project, among other actions, performed several effective awareness-raising activities. The media campaign generated many news articles in different media. The total number of articles published in the local press increased significantly during the project. Nineteen training courses were given to over 500 police officers and forest rangers in seven different regions of Spain to raise awareness and share good practices on the investigation of the illegal use of poison. The limitation of access to legal toxic products for illegal uses and a better respect of their conditions of use were also addressed. Educational and awareness-raising activities were also organised in schools. The project initiated a Network of Volunteers against Poisoning and a SOS VENENO telephone line that made it possible for citizens to report cases of poisoning.

Overall, the project with its strategic approach succeeded in putting the issue of the illegal use of poison much higher up on the political agenda in Spain. All the Spanish Autonomous Communities have since committed to adopt or review action plans to fight against poisoning and the Spanish Ministry of Environment reconvened a pre-existing Working Group of Eco-toxicology. The project is a reference point for the fight against the illegal use of poison for other projects and all

Key messages:

- Dog patrols to detect poison have proven to be an effective wildlife crime deterrent (a deterrent effect that can lead to a change of habits).
- Dog patrols/trained dogs facilitate the work of customs officers to detect bird crime and police investigations on IKB.

Link:

- LIFE and Wildlife Crime brochure 2018
- LIFE HELICON project
- (PDF) Using detection dogs to reveal illegal pesticide poisoning of raptors in Hungary ([researchgate.net](https://www.researchgate.net))
- Report by de la Bodega *et al.* 2020 (in ES). The Slovakian example was provided by the Ministry of Environment of Slovakia.

its results are transferable to other countries. The project also demonstrates that multi-year funding (in this case LIFE funding) makes it possible to carry out major actions for the prevention, investigation and prosecution of IKB.

Key message:

→ A pioneer project with encouraging results sets a good example for other regions/countries. officers to detect bird crime and police investigations on IKB.



Link: → VENENO LIFE project

3. Awareness-raising and capacity building play a key role in combatting the bird crime

An important condition for being successful in combatting bird crime is to have the public at large on board. Targeted communication on bird crime through national and local media within the Pannon Eagle LIFE project (LIFE15/NAT/HU/000902) in Slovakia aimed to reach both local communities and the public at large. It provided answers to important questions (What indicates a bird crime? Where are cases of bird crime most common? How to report a suspicious finding and to whom? etc.). Subsequently, a large number of bird crimes were reported by the public which sent an important message to perpetrators: "Your action has not gone unnoticed". It can have a preventive effect on possible offenders. In parallel, training activities on investigation protocols and general knowledge on bird crime were targeted at the professional community, including the police, nature conservation professionals, veterinary doctors, prosecutors and state administration in Slovakia.



Blackcap (*Sylvia atricapilla*)

Key messages:

- Informing and raising awareness of stakeholders and the public at large is useful to reduce the acceptance of IKB and to change habits.
- Communication on bird crime also has a deterrent effect on the perpetrators.



Link: → PannonEagle LIFE project

4. Anti-poison network against wildlife poisoning

The 2011-2016 project 'Return of the Neophron' (LIFE10 NAT/BG/000152) implemented an effective approach for preventing illegal use of poison baits in Greece, poisoning being the main cause of mortality for the Egyptian Vulture (Neophron percnopterus). The approach included the development of a National Strategy and a Pilot Local Action Plan to combat wildlife poisoning, the coordination of a National Task Force, the creation of two Anti-poison Dog Units for the prevention of poison use, and the establishment of a network of local stakeholders.

The stakeholder network working to stop the use of poison involves farmers, livestock breeders, beekeepers and hunters. Winning the trust of local communities has been a key element for creating local anti-poison networks. A lot of time has been invested to meet people face-to-face and to listen to their problems and to find solutions (many locals have lost their dogs because of poisoning). The project provided e.g. electric fences and binoculars to members of the network, demonstrating that there are effective alternatives to the use of poison for guarding livestock.

Key message:

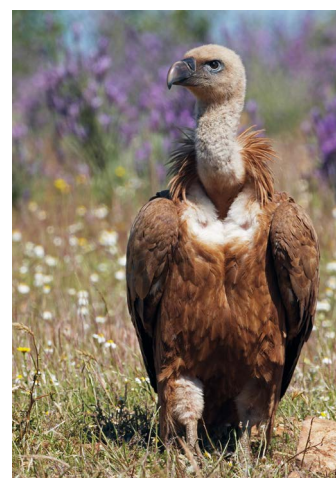
→ Winning the trust of local communities is a key element in the fight against IKB.



- LIFE Return of Neophron project (Layman's report)
- LIFE brochure on wildlife crime 2018

5. Maps on poisoning hotspots

Poisoning incidents can occur frequently in particular locations. These locations are considered poisoning hotspots. Knowing them helps to prioritize actions. The most common motive behind this harmful practice is the intentional placing of poison baits to kill carnivores or other feral and domestic animals that are thought to cause damage to livestock or game species. However, vultures or other birds of prey are often the unintended victims of poisoning.



Griffon vulture (*Gyps fulvus*)

Poisoning hotspots have been mapped in many countries. For example, the Balkan Anti-Poisoning project¹² has defined

key vulture and wildlife poisoning hotspots in the Balkan countries and the on-going 'BalkanDetox' LIFE project 2020-2025 (LIFE19 GIE/NL/001016) continues to identify new hotspots in order to direct conservation efforts. The project raises awareness of the problems and dangers that poisoning poses to animals, humans and to the entire ecosystem. This is done for example through targeted workshops in these hotspots.

Key messages:

- *Training of community members to raise awareness is an effective approach in reducing IKB.*
- *Raising awareness is a key issue to reduce acceptance of IKB and to change habits.*

Link: → *Article by Birdlife*

6. Training volunteers from the wildlife poisoning hotspots

Wildlife poisoning is the main cause of vulture deaths in Africa (over 60 % of the cases). Nature Kenya has used a citizen science approach, and has recruited and trained 65 vulture volunteers from villages that are known as wildlife poisoning hotspots. These volunteers collect data on poisoning cases, make their communities aware of the adverse effects of wildlife poisoning on vultures and teach them of the importance of vultures in their environment. Also preventive measures are in place, such as the introduction of predator-proof bomas (fenced enclosures) to minimise livestock predation in homesteads, or the application of best herding practices to counter livestock predation in grazing fields.

Key message:

- *Mapping of poisoning hotspots/modelling probability of poisoning occurrence helps to direct conservation efforts in a more efficient way.*

Links: → *Wildlife Poisoning Map (lifeneophron.eu)*
→ *BalkanDetox project (website)*

7. Action plan to prevent illegal poisoning of wildlife

A proposal for an EU Action Plan to prevent illegal poisoning of wildlife was developed by the European Network against Environmental Crime (ENEC) in December 2015. The purpose of this Action Plan is to set guidelines to eradicate the use of poison-baits in the countryside.

The plan includes five objectives and provides practical measures to reach this target:

- Increase and improve available information on the illegal use of poison-bait and its consequences,
- Work towards the prevention, deterrence, and surveillance of the illegal use of poisoned-bait,
- Increase prosecution efficacy,
- Control the sale of toxic substances likely to be used for preparing poison-bait and
- Ensure administrative action to protect natural heritage and improve coordination and liaison between all stakeholders involved in the fight against the use of poison in the countryside.

Key message:

- *EU level guidelines help to decide on the most effective measures.*

Link: → *Proposal for an EU Action Plan*

8. Best-practice protocols, bird-crime database, satellite tracking and nest guarding to save eagles

The conservation status of the Eastern imperial eagle (*Aquila heliaca*) in Hungary is seriously threatened by the exponential increase in deliberate killings by poisoning and shooting, most often to "protect" small game or farm animals. The main objective of the LIFE projects 'HELICON' (LIFE10 NAT/HU/000019) and 'PannonEagle' (LIFE15 NAT/HU/000902) was to improve the conservation status of the Eastern imperial eagle population in Hungary by significantly reducing non-natural deaths caused by persecution.

The projects' key measures that led to the decrease in persecution incidents were the following: creating best-practice protocols for investigating cases and establishing a bird-crime database; conducting satellite tracking of eagles and nest guarding at key Natura 2000 network sites (SPAs); providing safe feeding places and constructing artificial nests. HELICON also established a first multi-partner collaboration (among others with hunters and farmers), an anti-bird-crime action group and the first field dog unit for Central Europe to detect, investigate and mitigate wildlife crime, particularly illegal poisoning.

Key messages:

- *A combination of different actions is often needed to be successful.*
- *Long-term funding is important to succeed with the measures to combat IKB.*

Link: → *PannonEagle LIFE project*

9. Demonstrating the seriousness of illegal shooting and developing strategies against it

The illegal killing of raptors was recognised as a major issue in Germany more than a decade ago. This triggered the establishment of the “EDGAR”¹⁴ project by CABS in 2015 to extend the fight against IKB across the whole country. It was funded by the Ministry for Environment and then through donations. Thanks to regular monitoring that recorded all cases of the illegal killing of raptors since 2005, the project demonstrated that nearly all raptor species that occur in Germany were concerned¹⁵.

The perpetrators are mostly hunters or keepers of pigeons or other domestic birds who consider birds of prey as competitors and therefore kill them deliberately.

The activities of the EDGAR project cover, among others, education and awareness-raising, training on measures to prevent predation by raptors, and active awareness raising work. On the basis of the knowledge gained through EDGAR, CABS provided recommendations to the competent authorities, for instance, that attention should be paid to ensure that the means used by the offenders are either no longer available on the market freely (e.g. hawk baskets) or more traceable (poison).



A haul of illegally shot birds.

Key message:

→ Increased cooperation and work between competent authorities and NGOs helps to fight against IKB.

Link: → Project EDGAR

¹³ Committee Against Bird Slaughter

¹⁴ Erfassungs- und Dokumentationstelle Greifvogelverfolgung und Artenschutzkriminalität (Registration and documentation center for the persecution of birds of prey and crime against species protection)

¹⁵ Between 2005 and 2017, 890 cases of birds found dead concerned the Common Buzzard (*Buteo buteo*), 200 the Red Kite (*Milvus milvus*), and 157 the Goshawk (*Accipiter gentilis*).

¹⁶ Bird Conservation International (2016) 26 :1 – 28 . © BirdLife International, 2016

10. Raising awareness of hunters

In 2016, it was estimated that Italy was one of the countries in the Mediterranean basin with the highest number of illegally killed birds¹⁶. The Italian government adopted a national action plan for combating offences against wild birds in March 2017. The action plan consists of 32 specific measures aiming to achieve several objectives, including the reinforcement of prevention and of direct and indirect fight against illegal activities affecting wild birds.

One of the actions aims to improve hunters’ awareness about certain widespread but illegal and harmful behaviours (use of electronic calling devices, non-respect of hunting bag limits, hunting outside allowed times) and about the need to respect the relevant rules to ensure sustainable wildlife management. These measures are to be carried out by regional and provincial administrations and by hunting associations. All Italian hunting associations are actively involved in the implementation of the Plan. They are represented in the Steering Committee in the Ministry for Ecological Transition. A special attention is given to seven areas identified as “black-spots”.

Key message:

→ Targeted actions to raise people’s awareness on IKB are important to reduce acceptance of IKB and to change habits.

Links:

→ National Action Plan for combating offences against wild birds
→ Hunting associations against poaching

11. National strategy against trafficking and international poaching

Spain adopted an Action Plan against illegal trafficking and international poaching of wildlife species (Plan TIFIES), including bird species, in 2020. It is an adaptation of the European Action Plan against wildlife trafficking to the national framework. One of the three objectives of the Plan is about preventing trafficking and addressing its root causes. The planned actions relate to the preparation and distribution of awareness-raising information and materials to the relevant Ministries and to the launching of campaigns with NGOs to raise awareness among consumers about the acquisition of illegal wildlife products.

Key message:

→ Targeted awareness campaigns among consumers on illegal wildlife products help to stop the sale of wild birds.

Link: → Plan TIFIES

12. Publicity helping to prevent IKB

Awareness that a wildlife crime is a crime is still low in some parts of Europe. The ‘LIFE for Eagle Forests’ project (LIFE12 NAT/BG/001218) carried out a campaign for five years to raise awareness on wildlife crimes in Bulgaria, as part of a drive to ensure the protection of the Lesser-spotted Eagle (*Clanga pomarina*). This globally threatened species suffers from people robbing their nests and trafficking birds and eggs as well as poaching and poisoning. The campaign raised the attention of the public on this topic. Awards were offered to several people, focusing on their personal stories about preventing a crime e.g. robbery of nests and eggs. The awards provided recognitions for their efforts to prevent IKB. So far 56 people have received the award ranging from members of the general public to journalists, forest inspectors and customs officers.

Key messages:

- Campaigns to raise people’s awareness on IKB are important to reduce acceptance of IKB and to change habits.
- Long-term funding is important to succeed with the measures to combat IKB.

- Links:**
- LIFE 3.0 - LIFE Project Public Page (europa.eu)
 - LIFE brochure on Wildlife Crime 2018

13. The European nature protection toolkit

This Toolkit has been created for use by educators of students aged 13 to 16 years old across the European Union. It can be used in schools as well as in non-formal settings, e.g. in centres for environmental education.

The toolkit helps students understand why Europe’s nature is of great importance on so many different levels. The Toolkit helps find answers to questions such as “What is biodiversity?”, “What is a species?”, “What is a habitat?” and “What is an ecosystem?”, as well as “How do they work?” and “Why are they important?”. The impact of IKB on local and European biodiversity can be addressed within these questions. The students learn to communicate about nature as well as about Europe’s shared natural heritage.

Key message:

- Addressing IKB in a wider context of biodiversity protection can be an effective way to raise awareness on the subject.

- Link:**
- The European nature protection toolkit 2022



Kids watching animals and birds from a hide.

14. Engaging schoolchildren in reducing IKB

Organising activities in schools has proven to be an effective way to raise awareness on IKB. For example, the LIFE project ‘A safe haven for wild birds’ (LIFE11 INF/IT/000253) used this approach to highlight the importance of biodiversity and to address the problem of poaching birds. The idea was to have young people spread the message that protected species should be respected, and this would hopefully reduce recruitment of future poachers. The project produced educational teaching kits for each of the three countries involved (Greece, Italy, and Spain) which focused on the migratory journeys of birds and the threats they face.

Key messages:

- Education in schools can have a multiplier effect and help diminish the number of future poachers.
- Addressing IKB in a wider context of biodiversity protection can be an effective way to raise awareness on the subject.
- Communication without finger pointing can help in reaching bird conservation targets.

- Link:**
- LIFE 3.0 - LIFE Project Public Page (europa.eu)

15. Promoting zero tolerance towards IKB among hunters

FACE (European Federation for Hunting and Conservation) promotes zero tolerance towards IKB among its members. As many hunters live, or have their roots in the countryside, they can play an important role in raising awareness and communicating on the importance of combating illegal killing or taking of wild birds and in reporting incidents of IKB.

Key message:

- Umbrella organisations can reach millions of people and have a key role and responsibility to raise awareness among their members to fight against IKB.

- Links:**
- Web page on wildlife crime
 - a presentation by FACE

16. Raising awareness on the work of the wildlife crime investigating officers

Well-documented, published reports on illegal activities can change people's attitudes towards wildlife crime or help deter people from embarking on illegal activities. One such example is an article Peek behind scenes by a CITES officer in Czechia describing the work under the "Operation Hunter". This operation aimed at revealing the illegal activities of an organized group of hunters, poachers and traffickers in Czechia who had links to other countries as well. The article provides an insight into the work of the investigating officers. It also describes how the results of the targeted operation raised awareness of illegal activities in society and put pressure on decision makers to increase efforts to combat wildlife crime, including IKB.

Key message:

→ Publishing articles on successful police operations against IKB can potentially reduce acceptance of IKB and can have a deterrent effect.

Link: → Article in EkoList Magazine

17. Bird identification course – a smart way to empower communities and raise awareness of the dark side of IKB

The University NORD (Norway) created the "BirdID" – bird identification course as a means to promote birdwatching in countries where interest in birding is low. Civil society organisations in Central and Eastern Europe were supported to organise intensive bird identification courses. The programme was implemented in Albania, Bulgaria, Croatia, Cyprus, Czech Republic, Greece, Romania, Serbia, and Ukraine.

In Croatia, Biom Association (BirdLife Croatia) organised three editions of the BirdID in cooperation with the NORD University. During field trips and lectures on specific bird groups,

Group of birdwatchers with binoculars and stethoscope.



participants visited various types of farmland, marshland and forest habitats. Modified versions of the program were implemented locally in the Zadar County, Učka Nature Park and the IKB hotspot Neretva Delta. The programme has been a very effective way to train nature enthusiasts who are eager to learn about birds' ecology. Many of them have become active volunteers, also for monitoring illegal killing of birds.

Key message:

→ Reaching out to local people in the IKB blackspots with high quality educational material about bird identification and ecology helps to generate potential advocates for nature protection in those communities

Link: → Website of BIOM

18. LIFE brochure on Wildlife Crime

The production of attractive publications illustrating good practices to combat IKB e.g. the LIFE brochure on Wildlife Crime, can be an effective way to help prevent illegal activities. In addition, learning from the experience of others can help in finding solutions and adapting them to local or national situations.

Key messages:

- Learning from others' successes and failures can save money.
- Being informed about positive results provides important encouragement to continue combatting IKB.
- Dedicated funding instrument provides good opportunities for projects to fight against IKB.

Link: → LIFE brochure on Wildlife Crime 2018

19. Flight for Survival – a flyway-level campaign to end IKB

Launched in 2019, the "Flight for Survival" is a BirdLife campaign to raise awareness about the illegal killing, taking and trade of birds along the African-Eurasian flyway and the conservation activities needed to fight this phenomenon. Each year the campaign follows the spectacular migratory journeys of a number of iconic migratory birds and exposes the different dangers they face in some of the worst illegal killing blackspots along the African-Eurasian flyway. The campaign also shows the amazing conservation work that BirdLife partner organisations do on the ground to save migratory birds from being poached every year.

The campaign has a strong visual identity coordinated by BirdLife International/BirdLife Europe, but the stories themselves are written by partner organisations. The most

important feature is its inclusiveness: it hosts and amplifies the voice of any flyway partner working on the problem of illegal killing of birds. The articles are shared and have an intensive social media presence during the peak migration periods.

Key messages:

- Raising awareness on flyway level amplifies the voice of any flyway partner working on the problem of IKB.
- International campaigns can promote and spread information on good practises.

Link: → [Flight for Survival campaign](#)

20. Awareness and Capacity Building against Bird Crime in the Mediterranean region

The LIFE project ‘LIFE Against Bird Crime’ (LIFE17 GIE/NL/000599) covers the wider Mediterranean region and works with priority countries, such as Cyprus, Greece, Italy and Croatia, and with relevant international convention secretariats. The project aims, among other things, to expand and improve knowledge on the illegal killing of birds, to raise awareness and stimulate public demand to stop IKB, as well as to support increased international and national advocacy efforts to end IKB, and to maintain and strengthen the networks of civil society organisations and stakeholder groups working together to address illegal killing.

The project carried out e.g. an analysis of police officer attitudes on poaching of birds in Croatia. Almost 500,000 birds are annually illegally killed in Croatia (Brochet *et al.* 2016¹⁷). The results of the analysis revealed that most of the surveyed police officers only infrequently encounter illegal killing of birds in their work. They considered their lack of knowledge on bird conservation issues as a main obstacle to tackling poaching. The situation can be improved through



Eurasian blackcaps (*Sylvia atricapilla*) caught on linded stick, Cyprus

17 Bird Conservation International (2016) 26 :1 – 28 . © BirdLife International, 2016

continued topic-specific training (organised also part of the LIFE project), increased cooperation with other competent authorities and increased public awareness on poaching to encourage citizens to report poaching activities.

Key messages:

- Raising awareness on bird crime especially in illegal killing/trapping hotspots is important to reduce acceptance of IKB and to change habits.
- Bird crimes can be very hard to detect. Regular training of police officers on bird crime issues is important.
- Increased cooperation and work with other competent authorities and with citizens helps to fight against IKB.

Links: → [LIFE 3.0 - LIFE Project Public Page \(europa.eu\)](#)
 → [an article by Šarč Kapelj, I. Illegal-bird-hunting-in-Croatia-attitudes-and-needs-of-police-officers_final.pdf \(flightforsurvival.org\)](#)

21. Improve knowledge and awareness of the judicial authorities and enforcement chain

The objective of the 2016-2021 project ‘LIFEJustice for Nature’ (LIFE15 GIE/PL/000758) was to increase efficiency of the implementation of national and EU legislation on nature protection in Poland, as well as facilitate the enforcement of environmental law. The project raised awareness and knowledge of the judicial authorities and the law enforcement agencies (the police, prosecutors, and inspectors) on nature protection and environmental crime, including wildlife crime. The project actions included e.g. a free e-training course on nature conservation, several dedicated training seminars for the police, prosecution service, judicial authorities and environmental NGOs to improve their knowledge on nature conservation. Overall, the project reached more than 200 000 recipients through its various actions.

One project action involved a competition ‘An intervention for the nature’ targeted the police and municipal guard units. Completion of the e-learning course ‘Nature protection in law and practice’ was a precondition to enter the competition. This competition aimed to promote effective protection of nature through presentation of interventions undertaken by the participants as well as their knowledge of Natura 2000 areas. The results were made publicly available. The winners were awarded practical rewards (e.g. binoculars to be used in their service).

Key message:

- Attention needs to be paid to improving the knowledge base of the enforcement authorities and raising their awareness on nature conservation.

Links: → [Layman’s report of the project](#)
 → [Project’s website](#)

22. Reviews of the extent of IKB in the African-Eurasian flyway and Sub-Saharan region

BirdLife International carried out a first review of the illegal killing and taking of birds in the Mediterranean (2016) and a second one in Northern and Central Europe and the Caucasus (2017). These reviews quantified the approximate scale and scope of this problem, using a diverse range of data sources and incorporating expert knowledge. The combined results of these reviews provide a wider picture for the northern part of the African-Eurasian flyway and showed that illegal killing and taking of birds is still a serious global issue. It has contributed to raising awareness on the scale of IKB. The reviews also highlighted the paucity of data on IKB in the region.

In 2021, BirdLife International carried out a preliminary review of the scope of IKB and hotspot areas within relevant countries in the Sub-Saharan region. According to Birdlife, the trade of birds and their by-products could amount to a multi-billion dollar industry globally, for which Sub-Saharan Africa may contribute a substantial share. Birds in Africa are killed or trapped for food and income. According to this preliminary study, most birds are taken from the wild for illegal trade (42% of the cases), for both local and international markets. The purpose of the trade was unclear in many cases, but where identified, the main drivers were provision of pets and belief-based use. Especially large birds like vultures and parrots suffer from these cultural beliefs and practices.

Key message:

→ Reviews showing the scale and scope of IKB are effective tools for raising awareness among all relevant parties.

Links:

- Bird Conservation International (2016) 26 :1 – 28 . © BirdLife International, 2016 ,
- BirdLife International (2017) Review of illegal killing and taking of birds in Northern and Central Europe and the Caucasus
- Unravelling the scope of Illegal Killing, Taking and Trade of Birds (IKB) in Sub-Sahara Africa
- BirdLife International

23. Common methodology on species valuation in Spain and at EU level

The 'LIFE Nature Guardians' project 2018-2022 (LIFE17 GIE/ES/00063) has recently developed criteria and methods to enable the calculation of economic values for protected wild species in Spain. The methodology includes a formula which

18 The European Union Forum of Judges for the Environment

19 The European Union Network for the Implementation and Enforcement of Environmental Law

20 The European Network of Prosecutors for the Environment

can be adapted to different situations in different countries. The methodology can be a useful tool in enforcement but can also represent a preventive aspect when awareness of the economic values of protected species in wildlife crime increases.

BIOVAL, a joint project by EUFJE¹⁸, IMPEL¹⁹ and ENPE²⁰, started in 2019 and aims at creating a non-binding, practical instrument to value ecological damages in court with the aim of compensating the damage. Although valuing wildlife damage in monetary terms is a complex challenge, using such a valuation instrument in administrative, civil, or criminal procedures would provide greater legal certainty and shorter case duration. It may also lead to more equal treatment of similar cases assessed in different contexts (different regions, different courts, different procedures). The BIOVAL project has analysed cases in Europe concerning e.g. Red Kite (*Milvus milvus*) which is often a victim of poisoning and habitat destruction. After finalisation of the calculation formula and criteria for this tool, the project aims to create a website or online tool.

Key message:

→ Awareness on the economic values of protected species can have a deterrent effect by showing that 'committing a crime has a cost'.

Links:

- Report on evaluation of fauna
- LIFE Nature Guardians
- BIOVAL project

24. Study on the origin and motivations of environmental crime

In order to guide and prioritise the prevention of environmental crime, a comprehensive study has been carried out by 'LIFE Nature Guardians' project 2018-2022 (LIFE17 GIE/ES/00063) to analyse the universal motives that lead to environmental crimes in the world, with special attention on the situation in Spain and Portugal. The reasons behind the crimes are often complex and can cover e.g. economic reasons, beliefs, tradition, corruption, elitism, disagreement with norms and detachment from the natural resources affected by their actions. The project demonstrated a typical profile of a wildlife offender as well. The study showed also that almost 90% of the Spanish and Portuguese society consider environmental crime as serious as any other crime.

Key message:

→ The reasons behind IKB are often complex; hence the benefit of a comprehensive study to direct and prioritise preventive measures

Links:

- Report on environmental crime motivation (in ES with a summary in EN)
- LIFE Nature Guardians



Activist holding a Redstart (*Phoenicurus phoenicurus*) migrant male caught in spring trap.

25. Socio-economic analysis – a crucial step towards better understanding and adapting strategies to fight IKB in blackspots

To get a full insight into the root causes and potential solutions for illegal killing of birds in the Neretva Delta (Croatia), an IKB black spot, a socio-economic analysis of perceptions and causes of Common Coot (*Fulica atra*) poaching was done by Biom Association (BirdLife Croatia), as part of the Adriatic Flyway 4 Project. Biom engaged a social science company in 2021 to implement the study. In cooperation with Biom Association, 104 questionnaires were distributed randomly to a list of people from the key stakeholder groups like farmers, hunters, restaurant owners, hotel owners, touristic sector, police officers and rangers. Sociologists also conducted in-depth interviews with key stakeholders like city mayors, local councils' representatives, and chief police officers.

The socio-economic analysis has shown that the consumption of Common Coot in the Neretva Delta is most often associated with relaxed gatherings with family and friends. Coot meals are traditional at such occasions. It highlights that, in the Neretva Delta, the traditional consumption of coot creates the demand, which in turn causes poaching. Based on the socio-economic analysis, strategies to fight IKB will be adapted to better address the root causes of the problem.

Key messages:

- Socio-economic analysis on perceptions and causes of illegal killing of birds in the IKB blackspots can provide sound evidence and steer options for resolving the problem.
- Collecting data through socioeconomic analysis is useful to present to local communities their impact on biodiversity.

Link: → Socio-economic analysis of the causes and perceptions of illegal killing of birds in the Neretva delta – Biom

26. Green Customs Initiative

The Green Customs Initiative was launched in 2004. It is a global partnership of international entities cooperating to prevent the illegal trade in environmentally sensitive commodities and substances and to facilitate their legal trade. Its objective is to enhance the capacity of customs and other relevant border control officers to monitor and facilitate the legal trade and to detect and prevent illegal trade in environmentally sensitive commodities covered by relevant trade-related Multilateral Environmental Agreements (MEAs) and international conventions.

This initiative offers co-ordinated e-learning courses and training modules for customs officers to expand their knowledge on environmentally sensitive commodities, including courses devoted to the Convention on Biological Diversity, the international trade in endangered species of wild fauna and flora.

Key messages:

- Illegal trade of wild birds is a transboundary problem. Coordinated training for customs officers is essential to enhance their capacities to detect and prevent illegal trade of wild birds.

Link: → Green Customs Initiative

27. Handbook for customs officers to prevent bird trafficking

The LIFE project 'Return of the Neophron' (LIFE10 NAT/BG/000152) published a practical and easy-to-use manual for customs officers on preventing trafficking of endangered species, especially birds of prey. The manual is available in Bulgarian, Greek and Albanian. Such a handbook is expected to increase the knowledge of enforcement officials on legislation that protects wildlife and on the identification of species, which should in time lead to a better detection of crimes involving birds.

Key message:

- Easy-to-use manuals for regular customs officers to identify bird species (including eggs) and to know the applicable legislation increase chances of detecting bird crime.

Links: → LIFE Return of Neophron project (Layman's report)
→ LIFE brochure on wildlife crime 2018

28. Wildlife cybercrime - It takes a network to defeat a network

Online marketplaces have been, and continue to be, the dominant mechanism for trading in wildlife and their products on the internet. The International Fund for Animal Welfare (IFAW) has carried out a study on online wildlife trade in France, Germany, Russia and the United Kingdom. The report raises awareness of the scale and nature of the trade in protected live animals and their body parts via online marketplaces and social media platforms. It highlights that wildlife trade on social media platforms is growing e.g. on closed groups in Facebook. According to the study birds are featured frequently; over 2 800 specimens were offered for sale in 1 650 advertisements and posts. Overall, birds were the second most common species group featured across all advertisements and posts in every country studied.

To reduce online wildlife trafficking, IFAW has been working with online technology companies, law enforcers, governments and policy makers, academics and other NGOs. They have also worked closely with online marketplaces and social media platforms to provide them with the information and training to identify and combat criminals who seek to abuse their platforms in order to profit from illegal wildlife trade. According to the report online marketplaces that have adopted strong policies on wildlife trade can help to reduce illegal trade.

Key message:

→ Co-ordination between key stakeholders from both the private and public sector is crucial to be able to reduce illegal wildlife trade in an ever-changing and growing online market environment.

Link: → Report on online wildlife trade in France, Germany, Russia and the United Kingdom

29. Active awareness raising campaigns to reduce poaching and sale of wild birds

The general objective of the project “Free Wings” (founded by the Swiss-Romanian Cooperation Programme) was to decrease the number of wild birds caught and traded illegally in the markets of Bucharest. Awareness was increased through the numerous presentations held in schools and through a media campaign including radio broadcasts and commercials posted on buses reaching the major markets. Volunteers monitored the markets and reported the detected illegalities. Informative materials were distributed in the major markets in Bucharest in

21 https://birdlifecyprus.org/wp-content/uploads/sites/3/2022/02/BirdLife-Cyprus_Autumn_2021_Trapping_report-FINAL_for-publication.pdf

order to inform people and discourage the illegal trade of wild birds. A guide containing illustrations of bird species which are poached and sold, methods of capturing birds but also specific legislation helped the authorities to act quickly and efficiently.

Key message:

→ Public information campaigns help stop the sale of wild birds.

Link: → Project Free Wings

30. Changing people's perceptions

The LIFE project ‘Return of the Neophron’ (LIFE10 NAT/BG/000152) implemented satellite tagging for almost 30 Egyptian vultures (*Neophron percnopterus*) thereby considerably improving knowledge on migration routes of this species as well as on bottlenecks, mortality hotspots and wintering areas. The satellite telemetry data showed for the first time the entire flyway and wintering grounds of the Balkan population.

The transmitter of one vulture provided especially interesting information about the life and threats to the species. The partners of the LIFE project in Niger (Sahara Conservation Fund, SCF) and in Nigeria (Ornithological Research Institute APLORI) discovered that the vulture had been killed by a traditional vulture hunter who regularly travelled from Nigeria to Niger to hunt vultures in order to sell them to customers in Nigeria for traditional ‘magic’ ceremonies. A big market for vulture parts, as well as for other bird species, was discovered in south-west Nigeria. In Niger, the Egyptian Vulture is protected but considered a pest and a traditional hunter is an official job.

The NGO in Niger worked with the wildlife authorities and local communities to change perceptions towards the vultures. A public awareness campaign was implemented to sensitise people on the threats to the species and on the important role of vultures in providing ecosystem services. Support from main rulers was received as well. In addition, the project increased awareness amongst the traditional hunters of which species are protected by law and which can be hunted.

Another project, Egyptian Vulture New LIFE’ 2017-2022 (LIFE16 NAT/BG/000874), is now continuing the work undertaken through ‘Return of the Neophron’.

Key messages:

→ Use of satellite transmitters can help to reveal new locations of threats along the migratory flyway.
→ Targeted awareness raising campaigns can increase people's perceptions of a “pest” species.

Link: → LIFE project Return of the Neophron
→ LIFE brochure on wildlife crime 2018

31. Civil society as watchdogs and collaborative partners

Whilst the implementation of the EU’s nature legislation is the responsibility of the competent authorities of the Member States, practice has shown that civil society, especially environmental NGOs, can also play an important role in the fight against IKB. For example, BirdLife Cyprus has been acting as a watchdog for illegal bird trapping on the island for nearly 20 years, sounding the alarm and lobbying the authorities to take greater action on this conservation issue. It has been estimated that about 357,000 birds could have been killed in the Republic in 2021²¹.

BirdLife Cyprus has a systematic monitoring programme running since 2002, recording illegal bird trapping activity and reporting any findings to the enforcement agencies for further action. The survey covers the main trapping areas of Cyprus, focusing on the areas where extensive bird trapping takes place with mist nets. Most likely, without this pressure there would be much less enforcement action on this issue.

The Police Anti-Poaching unit responsible for areas within the UK Sovereign Base Areas and NGOs (Birdlife Cyprus and RSPB) have developed a successful collaborative partnership approach which involves the NGOs supporting competent authorities on the ground. This co-operation has led to a significant decrease in bird trapping levels in the UK Sovereign Base Areas. According to Birdlife, the covert work (including installation of hidden cameras at active trapping sites), in combination with a series of other deterrent measures that the SBA Police has put in place in the last few years was a conservation success. A similar approach could be adopted elsewhere where similar wildlife issues still exist.

Key messages:

- Partnership between competent authorities and NGOs can be very successful way to reduce IKB.
- Through the partnership approach implemented, bird trapping levels within the UK Dhekelia SBA was reduced by 90% since 2016.

- #### Links:
- Report on enforcement chain (2021)
 - Report by Birdlife Cyprus (2022)
 - video made by RSPB
 - 2021 press release by CABS





3.

Best practices in finding alternatives to the use of poison

32. Alternatives to poison - simple solutions

Fuerteventura Goat herders on the island of Fuerteventura claim that some birds, like the Canary Island Raven (*Corvus corax canariensis*), the Buzzard (*Buteo buteo*) and the Canary Island Egyptian Vulture (*Neophron percnopterus majorensis*), attack new-born goats which has prompted some farmers to spread poison in order to kill the birds. To establish the real scale of this problem and come up with solutions, fieldwork was carried out by 'LIFE VENENO NO' project (LIFE08 NAT/E/000062) on 106 livestock farms (involving 42% of the island's total livestock). This involved interviewing livestock farmers and monitoring livestock herds. Farmers received a telephone to report attacks quickly.

Some farmers came up with simple solutions like guardian dogs and keeping livestock in stables during the period of birth. These changes in habit were put forward as alternative ways for reducing bird damage to livestock without using poison. Farms with livestock in stables are also those that record the lowest rate of new-born losses since this can be controlled and monitored to reduce perinatal mortality. Throughout the whole study period, no attacks were in fact recorded.

Key message:

→ *Changes in habits are possible if stakeholders are involved in the process and are helped and encouraged in finding alternative ways.*

Link: → *Layman's report of the LIFE VENENO NO project*

33. Working with hunters

The 'LIFE HELICON' project (LIFE10 NAT/HU/000019) worked with hunters, a key stakeholder group as regards illegal poisoning. Illegal poisoning is usually not aimed at eagles directly, but at foxes and corvids. However, the poison used is not selective and, as the eagles cover huge areas daily, they are more likely to find poisoned baits or dead animals killed by poison than mammals or smaller birds.



According to the project's final report hunters overestimate the effect of natural predators on game populations, and lack information on alternative eagle-friendly game management methods. To change the attitude of stakeholders, awareness was raised on the relative importance of different factors

affecting game populations i.e. highlighting the significance of human land use vs. predation, and about the efficiency of alternative legal predator control methods. The new game management techniques promoted by the project and the increase of the local game population are expected to help the sustainability of game management in the targeted area. Similar methods could also be applied elsewhere.

The PannonEagle LIFE project (LIFE15/NAT/HU/000902) worked with a similar approach. The perpetrators perceive raptors as "main culprits" responsible for the loss of small game (hares, pheasants, partridges) and damage to livestock. However, the project highlighted that changes in the landscape structure resulting from human action was actually the main cause of this loss in small game. Large blocks of monoculture fields have been created at the expense of extensive landscape features such as boundaries, windbreaks and fallows. Various animals lost their habitat, shelters, breeding grounds and food resources and their populations have suffered long-term population declines as a result.

Within this LIFE project, the Eastern Slovakia Power Company, in cooperation with the Raptor Protection of Slovakia, created variable open habitats along power lines in woodland areas, supporting small game and mammals, birds, insects and functioning as bio-corridors connecting intensively used farmlands. At the same time, these areas provide refuge and feeding opportunities for species that are important to local stakeholders, especially to hunters and farmers. Some sites with new habitats will be managed by those stakeholders in the future, which highly increases sustainability of this integrated power lines management and facilitates changes in stakeholder's attitudes.

Key message:

→ *Lack of information on alternative ways may act as an obstacle to change habits.*

Links: → *LIFE HELICON project*
→ *PannonEagle LIFE project*

34. Safe alternatives to poison baits


The 'LIFE BalkanDetox' 2020-2025 (LIFE19 GIE/NL/001016) highlights several existing preventive measures that can reduce the damage caused to livestock and game species by wild animals and thus helping to resolve potential human-wildlife conflicts. The project introduces and promotes preventive measures to key stakeholders who are relevant to the practice of illegal wildlife poisoning (e.g. farmers, hunters, game managers, livestock breeders) across eight countries: Albania, Bosnia & Herzegovina, Bulgaria, Croatia, Greece, North Macedonia and Serbia.

Conflict with carnivores is the most common motive behind the intentional use of poison baits across the Balkans, but also elsewhere. These preventive measures offer safe alternatives to poison baits as they do not harm nature, wildlife or public health but they require a change of habits. The following measures are most often used:

- Electric fences are considered effective and flexible, portable, affordable and easy solution.
- Foxlights is a patented device specifically designed to deter predators during the night by shining coloured lights randomly at various rates and angles to give the impression of human presence.
- A fladry system consists of red flags hanging from ropes surrounding herds or pens to deter wolves from entering selected areas. Although this measure is portable and relatively easy to install, it is a short-term solution since wolves get quickly used to it.
- The use of livestock guardian dogs is one of the most natural methods that has been used for centuries to prevent bear and wolf attacks. But widespread poison baits in the countryside pose also a serious risk for livestock guardian dogs.

Key messages:

→ Offering solutions to problems triggering illegal activities is an important prevention measure.

 Link: → Solutions – BalkanDetox LIFE


35. National Strategy against the use of poison baits

The illegal use of poisoned baits continues to be a very relevant problem for the conservation of fauna in Spain. It affects endangered species and, in particular, birds that regularly or sporadically consume carrion. Spain has a National Strategy against the use of poison baits since 2004.

In addition, the regional authorities have developed their respective action plans taking as a reference the national recommendations of the Strategy. The Strategy includes a diagnosis of the problem and a set of measures that public administrations with competences in the matter may implement to fight effectively against this illegal practice. Under the Objective "Prevention and deterrent measures", the Strategy emphasises e.g. the need to carry out communication campaigns with the message that the benefits of not using poisoned baits are greater than the impact of the poison itself and that the poison, moreover, does not solve the problems it is supposed to address.

Key messages:

- A strategic approach helps to take the most effective measures.
- The drafting of an official technical guidance document can propose the most appropriate actions to eliminate the use of poison baits, based on a good analysis of the situation.
- Lack of information on alternative ways may act as an obstacle to changing habits.

 Link: → National Strategy of Spain, 2004

36. Finding alternative livelihoods

Lack of awareness and poor understanding of the real scope of the illegal action is often a common factor in environmental crime. Improving stakeholder engagement to seek solutions can be used to help change the situation. However, in most cases it is not sufficient to stop the illegal activity, and needs to be further accompanied by both awareness raising and a search for economic alternatives²².

Nigeria Customs Service (NCF) is a partner in the LIFE project 'Egyptian Vulture New LIFE' 2017-2022 (LIFE16 NAT/BG/000874). NCF's role is to combat the use of birds in the believe-based traditional healings. It has been promoting an alternative for traditional healers. NCF is working with the Traditional Healers Association in Nigeria in drafting a Plant-based Alternative Guide for Traditional Healers.

Key message:

→ Lack of information on alternative ways may act as an obstacle to changing habits.

 Link: → Egyptian Vulture New LIFE project

37. Use a camera not a gun

Lebanon is a strategic location for migratory birds. IKB is a widespread problem across the country and one that requires specific actions considering its scale. Shooting birds is a hobby that is not motivated by subsistence. According to BirdLife International more than 2,600,000 birds are annually illegally killed in the Lebanon²³. The Society for the Protection of Nature in Lebanon (SPNL, BirdLife partner) provides other alternatives for shooters such as shooting by camera, bow and arrow, nature photography competitions, and bird watching especially during spring migration providing shooters with alternative hobbies.

Competitions and awards are organised to ensure enthusiasm and participation. An example is the Asaad Adel Serhal Nature Photography competition using camera shoot guns for bird pictures. The competition is named after a former hunter who turned conservationist. This competition has created a lot of interest from hunters, social media visibility, and has led to a change of attitude and behaviour amongst hunters towards birds.

Key messages:

- Active promotion of alternative activities helps in changing habits and decreasing IKB.
- Role models are important in the fight against IKB.

 Link: → Video on SPNL website

²² Report on environmental crime motivation (in ES with a summary in EN)
²³ Bird Conservation International (2016) 26 :1 – 28 . © BirdLife International, 2016



4.

**Best practices
in the use of technology
to help prevent IKB**

38. Smart Patrol System

The LIFE project 'Safeguard Lesser White-fronted Goose (LWfG)' established a Smart Patrol System (SPS), a novel high-tech patrolling system implemented for the first time, at least on a European level. Smart Patrol System incorporates a remote unit solar-powered surveillance camera set up in the field, a control centre where trained wardens can view and process images from remote units, and a mobile unit i.e. 4x4 patrol vehicle equipped with VHF, a GPS unit, and a tablet device with GPS tracker.

Its use has contributed to the enforcement of hunting laws at the Greek LWfG wintering sites, and resulted in zero LWfG mortality from hunting. At least 50 employees from local authorities participated in the SPS scheme. The new patrolling schemes in the Bulgarian LWfG sites also resulted in increased enforcement of hunting legislation and minimised the mortality rate of protected waterfowl. It seems that the combination of remote surveillance and human presence in the field has been behind the success of the SPS.

Another example is from Finland where waterfowl hunting can take place in areas where LWfG are staging. WWF Finland and the regional hunting authorities and associations established cooperation in the main autumn staging area of the species. Alerts (timely targeted press releases) urging extreme caution are issued to the hunting community when LWfG are present in the area during the autumn when there is also an open season for waterfowl and other geese.

Key messages:

- Combination of remote surveillance using high-tech and human presence in the field is an effective way to reduce illegal hunting and can also have a deterrent effect.
- Cooperation amongst NGOs, hunting authorities and hunting associations can be an effective way to minimize risk of illegal shooting.

Link: → LIFE 3.0 - LIFE Project Public Page (europa.eu)
→ Press release by WWF Finland

39. Camera traps

The LIFE project 'ConRaSi' (LIFE14 NAT/IT/001017) used camera traps in the field to observe Bonelli's Eagle (*Aquila fasciata*) nests in Sardinia and prevent poaching. Illegal collection of eggs and chicks is a major threat to this raptor species. Poachers are aware of the surveillance activities, which deters them.

Key messages:

- Use of camera traps is an efficient deterrent for egg and chicks collectors.

Link: → LIFE ConRaSi

40. High-tech and Social Media

Illegal hunting is a major threat to the Northern Bald Ibis (*Geronticus eremita*). 20-gram solar transmitters were used on Northern Bald Ibises through 'LIFE Northern Bald Ibis' project (LIFE12 BIO/AT/000143). Data from the transmitters are transferred to the App Animal Tracker (a free-ware application for Android and Apple). The LIFE+ project was involved in the development of this App, in cooperation with the Max-Planck Institute for Ornithology in Radolfzell and other partners. These devices register the position of the birds transmitted from the devices including acceleration data, and allowing scientists and other interested people to follow the movements of the monitored birds. Irregularities of transmitted data allows a rapid response to quickly find out what has happened to the bird and inform the police. According to the project, this App significantly increases the risk for the potential perpetrator to be seen committing a crime.

Additional information concerning the different birds was published also via Social Media (Facebook). In conjunction with the project's bird adoption program, close links with the birds are forged, which will further reduce the risk of poaching. The App is considered as a successful tool also in the adoption program, as the godparents can locate "their" bird at any time. Communication on the positions of these birds, and promoting this species as a flagship species, is expected to substantially increase the risk for poachers (monetary value of a shot bird is estimated to be 20 000-70 000 €). The position data also helps to identify poachers if necessary. For example, in autumn 2012, a hunter who had killed two Northern Bald Ibises, was identified by the GPS data. He was subsequently convicted in criminal and civil court.

Technology is developing rapidly and regularly offers alternatives in this area. For example a technological innovation to realize an "instant poaching alert system", an extension of the conventional GPS tracker, could substantially improve the chances of identifying perpetrators.

Key messages:

- Combination of high-tech, network of volunteers, extensive media presence and social media can provide an efficient way to combat IKB.
- Apps like Animal Tracker can act as a preventive tool.

Links: → LIFE project on Northern Bald Ibis
→ Project's website and LIFE
→ Wildlife brochure

41. Drone - data collection and IKB prevention

Patrolling by boat vast reedbeds or shallow lagoons that are intensively poached can be time consuming and rather ineffective. Drones help to reduce the time needed to patrol areas where IKB is taking place and to gather evidence of illegal activities (by taking photographs). Photos taken by drone are not only a good source of information for

enforcement, but also a very attractive way to present the issue to the public. Also, the presence of drones and the publication of photos signal to the poachers that they are being watched and can discourage them from poaching.

From 2018 to 2022, the Public Institution for the Management of Protected Natural Areas of Dubrovnik-Neretva County in cooperation with Biom Association (BirdLife Croatia) conducted several patrols with the use of drones in Natura 2000 sites and ornithological reserves. The patrols provided useful information and brought more attention to the problem on social media thanks to attractive pictures. Patrolling with drones also resulted in poachers immediately stopping their illegal activity and running away. There is a great potential in using technology such as drones to prevent the IKB.

Key messages:

- Drone is a quick, effective and affordable method to collect data on poaching in areas that are difficult to reach.
- Photos taken by a drone provide attractive materials that help prevent IKB
- Drones have a deterrent effect on poachers.

Links: → No weblink. This example was provided by BirdLife Croatia.

42. Intensive Satellite Tracking of Griffon Vultures in the Balkans

Many different approaches and activities have been implemented in the last two decades to combat poisoning in the Balkans, but the

problem is still present and seriously harms the remaining vulture populations in the region. In 2019, a new approach to control the problem was introduced: It tracked intensively the vultures' whereabouts with transmitter data and used the tracked individuals as "poison detectives" in the field. Over 10 Griffon vultures (*Gyps fulvus*) were equipped with GPS/GSM transmitters. The transmitter solar panels improve the charge of the batteries and thus offer the possibility for intensive tracking and frequent data load. The study states that this intensity to track the movements of vultures is a good tool to locate their whereabouts in quasi-real time, providing an essential advantage in anti-poison struggle, by fast location of problematic situations. This quick detection system for wildlife poisoning and poaching control (combined with the use of anti-poison dog units if possible) raises also awareness and may prevent illegal activities when local people know that someone is following vultures in quasi-real time.

The ongoing 'BalkanDetox' LIFE project (2020-2025) aims to equip 25 Griffon Vultures with GPS transmitters and to collaborate with different projects that tag Balkan vultures to utilize their data. All tracking data will be available in a platform accessible to all project partners, enabling them to intensively monitor bird behaviour on an hourly basis in combination with frequent field visits in places where the vultures landed and seem to have taken food.

Key message:

- Use of high-tech can help to locate poison cases quickly and can act as an efficient deterrent for poison users and poachers.

Links: → Article of 2019 in *Ecologia Balcanica*
→ LIFE project *BalkanDetox*





5.

Key messages

The following summarises the key elements of good practice that have been derived from the projects

A strategic approach in planning the awareness raising activities helps to decide on the most effective measures.

Raising awareness is a key issue to reducing the acceptance of IKB and to change habits. In addition, attention needs to be paid to improving the knowledge base of the enforcement authorities and raising their awareness on nature conservation.

Long-term funding is important to succeed with the measures to combat IKB.

Learning from others' successes and failures can save money. Being informed about positive results provides important encouragement to continue combatting IKB.

Education in schools can have a multiplier effect and help diminish the number of future poachers.

Addressing IKB in a wider context of biodiversity protection can be an effective way to raise awareness on the subject.

Increased cooperation and work between competent authorities and with citizens and NGOs helps to fight against IKB.

Umbrella organisations can reach millions of people and have a key role and responsibility to raise awareness among their members to fight against IKB.

Reviews showing the scale and scope of IKB are effective tools for raising awareness among all relevant parties. Socio-economic analysis on perceptions and causes of illegal killing of birds in the IKB blackspots can provide sound evidence and steer options for resolving the problem.

Awareness on the economic values of protected species can have a deterrent effect by showing that 'committing a crime has a cost'.

Co-ordination between key stakeholders from both the private and public sector is crucial to be able to reduce illegal wildlife trade in an ever-changing and growing online market environment.

Offering solutions to problems triggering illegal activities is an important prevention measure. Lack of information on alternative ways may act as an obstacle to changing habits.

Use of technology can be an effective way to reduce IKB and can also have a deterrent effect. Combination of high-tech, network of volunteers, extensive media presence and social media can provide an efficient way to combat IKB.

A combination of different actions is often needed to be successful.



Key policy documents

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