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THEMATIC GUIDANCE POACHING INVESTIGATION

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Content

Executive Summary

This thematic guidance addresses the ongoing challenge of illegal killing and poaching of large carnivores in the Carpathian region, focusing on improving prevention, investigation, prosecution, and cross-border cooperation. Prepared within the LECA (Supporting the coexistence and conservation of Carpathian LargE CArnivores) Interreg Central Europe project, the document supports Strategic Objective #4 of the Carpathian Action Plan related to strengthening law enforcement against wildlife crime.

Brown bears, grey wolves, and Eurasian lynx are key components of Carpathian ecosystems, yet they remain threatened by poaching, poisoning, habitat pressures, and human–wildlife conflicts. Wildlife crime in the region is often difficult to detect and prosecute due to limited forensic capacity, fragmented institutional responsibilities, inconsistent legislation, weak information sharing, and insufficient specialised expertise.

The guidance identifies several recurring challenges across Carpathian countries:

- Limited forensic and investigative capacity;
- Inadequate training of police, prosecutors, and judges;
- Weak coordination between institutions;
- Fragmented databases and poor information sharing;
- Difficulties in collecting admissible evidence and linking suspects to offences;
- Legal inconsistencies and insufficient deterrent sanctions.

The guidance proposes a coordinated, science-based, and intelligence-led approach to combat poaching. Key recommendations include:

- **Strengthening wildlife forensic and investigative capacity** through early involvement of experts and improved use of DNA analysis, ballistics, toxicology, veterinary pathology, telemetry, and spatial analyses.
- **Developing centralised wildlife crime databases and improving cross-border information exchange** to support intelligence sharing, hotspot identification, and strategic enforcement.
- **Improving legal frameworks** through clearer legislation, harmonised evidentiary standards, stronger sanctions, and better reporting obligations.
- **Enhancing institutional and cross-border cooperation** between police, environmental agencies, customs authorities, researchers, and prosecutors.
- **Expanding specialised training and capacity building** for investigators and prosecutors, including the use of modern investigative tools such as OSINT and social media monitoring.
- **Applying data-driven approaches** to identify high-risk areas using ecological monitoring, telemetry, genetic data, and local knowledge.

- **Involving researchers, volunteers, hunters, foresters, NGOs, and local communities** in monitoring, reporting, and prevention activities.
- **Increasing public awareness** to reduce social tolerance toward poaching and improve understanding of the ecological role of large carnivores.

The guidance concludes that effective wildlife crime prevention requires an integrated and multidisciplinary approach combining forensic expertise, specialised training, strong legal frameworks, institutional cooperation, community involvement, and long-term awareness raising. Strengthening these areas will improve deterrence, support successful investigations and prosecutions, and contribute to the long-term conservation of large carnivores in the Carpathian region.

1. Introduction

Poaching represents a major challenge for biodiversity conservation because illegal wildlife exploitation is typically concealed and difficult to quantify. It creates a significant threat to endangered species (Chapron & Treves, 2016; Estes et al., 2011; Rizzolo et al., 2017) and contributes substantially to global species decline (Challender & MacMillan, 2014; Ghoddousi et al., 2017; Morton et al., 2021), disrupting ecological interactions and ecosystem functioning (Estes et al., 2011). The growing complexity and transnational nature of wildlife crime further complicate conservation efforts (Carter et al., 2017). Understanding the drivers of poaching is therefore essential for developing effective conservation policies and strategies (Montgomery, 2020; Neagu & Rozylowicz, 2025).

Poaching is driven by a combination of social, economic, and cultural factors (Carter et al., 2017; Nellemann et al., 2014), including poverty, limited livelihood opportunities (Duffy et al., 2016; Hübschle, 2017; Lunstrum & Givá, 2020), distrust toward authorities (de Juan et al., 2022), and low public acceptance of large carnivores, often linked to human–wildlife conflicts (Browne-Nuñez et al., 2015; Carter et al., 2017; Eliason, 1999, 2020). In response, some governments have introduced flexible wildlife management policies, including the liberalisation of culling of large carnivores. However, research on wolf (*Canis lupus*) management in several countries indicates that such policies may unintentionally increase poaching by reducing the perceived value of protected species (Chapron & Treves, 2016).

The Carpathian Mountains represent one of Europe's most important strongholds for large carnivores, including brown bears (*Ursus arctos*), grey wolves (*Canis lupus*), and Eurasian lynx (*Lynx lynx*). Despite their ecological importance, these species remain threatened by illegal hunting, habitat changes, and increasing human–wildlife conflicts.

In line with Strategic Objective #4 of the Carpathian Action Plan—improving law enforcement with respect to illegal killing of large carnivores—this thematic guidance focuses on strengthening investigation, prosecution, and prevention mechanisms. The illegal hunting, capture, poisoning, and trade of large carnivores remain persistent threats across the Carpathians, undermining conservation achievements and cross-border management efforts.

This report was prepared within the framework of the LECA (Supporting the coexistence and conservation of Carpathian LargE CArnivores – CE0100170) Interreg Central Europe project. The project aims to establish structured cross-border cooperation in large carnivore monitoring and conservation across pilot areas in the Czech Republic, Hungary, Poland, Ukraine and Slovakia, with reference areas in Slovenia and Romania. The present guidance forms part of a series of thematic documents designed to provide validated solutions and scalable strategies applicable at national, transnational, and Carpathian levels. In particular, the presented Thematic Guidance aims at

introducing scientifically well-founded, efficient and coordinated poaching investigation practices and tools, to be the basis for similar or identical anti-poaching regulations and procedures across the borders of the Carpathian countries.

The document is structured as a comprehensive thematic guidance on the prevention, investigation, and prosecution of large carnivore poaching in the Carpathian region. It begins with an introductory chapter outlining the ecological importance of large carnivores, the drivers and impacts of poaching, and the objectives of the LECA project and Carpathian Action Plan. The core chapters then present selected best practices and validated approaches from Carpathian pilot areas, including strengthening forensic investigations, identifying high-risk areas, developing specialised wildlife crime databases, and improving cross-border cooperation. Subsequent sections focus on case studies of successful investigations, the establishment of international networks of forensic and law-enforcement experts, and the role of seminars, surveys, and specialised training for investigators and prosecutors. The document further addresses public awareness campaigns, stakeholder engagement, volunteer monitoring initiatives, and communication strategies aimed at reducing social tolerance for poaching. Finally, the guidance concludes with a lessons learned section summarising the key risks, systemic weaknesses, and recommendations for improving legal frameworks, institutional coordination, enforcement capacity, and long-term conservation of large carnivores in the Carpathians. Each chapter also includes case studies from LECA cross-border and reference areas. At the end of the document, there is additional material related to the case studies and recommendations, for instance questionnaires we distributed among stakeholders to collect information, key findings of one of them, and proposed Operational approach to identifying high-risk areas.

2. Selected Best Practices from Carpathian Cross-border Pilot Areas in Thematic Pillar “Poaching Investigation”

In line with the strategic objective #4 of the Carpathian Action Plan (Improve law enforcement with respect to illegal killing of large carnivores), one of the main challenges is to strengthen law enforcement and investigation as well as bring effective solutions to significantly reduce illegal killing of large carnivores in Carpathians. In this context, we present the selected recommendations and practices that were validated through project activities in cross-border pilot and reference areas. Detailed results on the poaching thematic pillar from these areas can be found in the Output section: https://www.interreg-central.eu/projects/leca/?tab=outputs.

Based on these lessons, several key recommendations emerge. Although it is inherently difficult to apprehend offenders in the act of illegally killing a large carnivore or during the transport of carcasses, an important evidentiary opportunity lies in the fact that large carnivores represent valuable hunting trophies. Offenders often have these trophies processed and displayed, which can serve as critical forensic and investigative evidence linking individuals to illegal killings. Systematic attention to such post-offence indicators should therefore form part of investigative strategies.

First, the early and systematic involvement of forensic experts must become standard practice. Establishing an international network of wildlife forensic specialists, along with harmonised protocols for evidence collection, storage, and analysis, would significantly improve the quality of evidence and increase the likelihood of successful prosecution.

Second, the development of specialised and interoperable wildlife crime databases is essential. Structured data collection, combined with effective cross-border information exchange, enables the identification of patterns, geographic hotspots, and repeat offenders. This supports both ongoing investigations and longer-term strategic planning.

Third, legal frameworks should be reviewed to ensure clarity, consistency, and adequate deterrence. Sanctions must reflect the ecological and social value of protected species and be supported by clear and enforceable provisions. Establishing unambiguous criteria for assessing environmental damage, strengthening obligations for reporting wildlife crimes, and ensuring that penalties both financial and non-monetary are effectively enforced are critical elements of a credible legal framework.

Fourth, institutional cooperation should be formalised through joint training, regular coordination mechanisms, and clearly defined roles and responsibilities among enforcement bodies. Given the transboundary nature of large carnivore populations and related illegal activities, strengthening cross-border cooperation mechanisms is particularly important in the Carpathian region.

Fifth, sustained investment in training programmes for investigators, prosecutors, and judges is necessary to maintain and develop specialised expertise. Practical, case based learning, including the use of real investigative examples and exchange of best practices, has proven especially effective. Ensuring the long-term sustainability of such specialisation across institutions remains a key priority.

Finally, public awareness and stakeholder engagement must complement enforcement measures. Tools such as digital campaigns or printed materials tackling misinformation and hoaxes on large carnivores are useful. Reducing social tolerance for poaching, improving understanding of the ecological importance of large carnivores, and encouraging responsible reporting can significantly enhance prevention efforts and support law enforcement.

Current state of poaching investigation in the Carpathians

Legislative and institutional framework

All Carpathian countries have established legal frameworks for the protection of large carnivores, aligned with European Union legislation and international conventions. However, enforcement effectiveness varies significantly due to:

- Differences in criminal qualification of wildlife offences
- Inconsistent valuation of environmental damage,
- Variability in penalties and sanctions,
- Gaps in investigative procedures and evidentiary standards.

Recent legislative changes in Slovakia adopted throughout years 2024-2025 illustrate potential setbacks: reductions in penalties for poaching and a lowered "social value" of large carnivores may weaken deterrence and signal reduced prioritisation of wildlife crime. Such examples demonstrate how legal adjustments can directly affect enforcement outcomes.

Common challenges in investigation

Across Slovakia, Poland, Hungary, Czech Republic, Romania, and Ukraine, similar obstacles are observed:

- Lack of physical evidence of poached individuals,
- Limited forensic and expert capacity,
- Insufficient training of investigators,
- Fragmented databases and data-sharing mechanisms,
- Weak coordination between institutions,
- Difficulty in proving intent and linking suspects to crime scenes.

These challenges frequently result in reclassification of offences to lesser crimes or administrative violations as well as to deterrence reduction.

A. Identification of areas with high concentration or high assumption of illegal killing

Targeted and robust data is a fundamental prerequisite for effectively combating the illegal killing of large carnivores in the Carpathians. Given the vast and often remote nature of mountain landscapes, law enforcement authorities cannot rely solely on reactive responses. Instead, systematic identification of areas with a high concentration or high probability of illegal killing is essential to inform prevention strategies, prioritise resource allocation, and improve investigative outcomes. In

this context, risk identification should be understood not as a preventive measure in itself, but as an analytical process that enables more effective targeting of preventive and enforcement actions. This approach directly supports Strategic Objective #4 of the Carpathian Action Plan, which calls for strengthened law enforcement in relation to wildlife crime. We provide a more detailed Operational approach to identifying high-risk areas in the Supplementary materials section of this document.

Large carnivores such as bear, wolf, and lynx occupy extensive territories that frequently extend across national borders. Incidents of illegal killing are rarely random; they are typically associated with identifiable risk factors, including livestock depredation hotspots, areas with intensive hunting activity, regions with previous poaching records, or zones with limited enforcement presence. Identifying and analysing these factors allows authorities to move beyond isolated case handling toward a more strategic, intelligence-led approach.

A key component of this process is the **structured collection and analysis of data from multiple sources**. For analytical clarity and operational usefulness, data can be categorised according to its origin and purpose. *Crime and law enforcement data* including records of detected poaching incidents, types of offences, methods used, confiscated trophies, and forensic findings are essential for identifying spatial and temporal patterns, as well as repeat offences. *Biological and environmental data* such as population monitoring, telemetry, genetic analysis, and camera trapping provide important insights into population status and can help detect suspicious mortality events or abrupt signal losses that may indicate illegal killing. In particular, unexplained disappearances of individuals in areas adjacent to their known range may serve as indirect indicators of illegal activity, especially where carcasses are deliberately removed to conceal evidence.

In addition, *social and institutional data* should be taken into account. This includes information on the availability and distribution of investigators and enforcement personnel, the presence of trained field staff or volunteers, local hunting traditions, and prevailing attitudes toward wildlife protection and crime reporting. Such data help to better understand the broader context in which illegal activities occur and to identify areas where enforcement capacity or social support may be limited.

The integration of these data types enables the **development of comprehensive risk assessments**. The outputs of such analyses may include maps of high-risk areas, identification of temporal trends, and prioritised zones for intervention. Linking enforcement data with conservation monitoring systems further enhances situational awareness and supports early detection of potential offences.

Local knowledge also plays a critical role in risk identification. Residents, forestry workers, hunting associations, and conservation practitioners often possess valuable information about suspicious activities. **Establishing structured communication channels and confidential reporting mechanisms** increases the likelihood that such information is shared with competent authorities. Building trust between law enforcement and local communities is therefore essential for improving both intelligence gathering and reporting rates.

Cross-border coordination is particularly important in the Carpathian region, where wildlife populations and illegal activities frequently transcend national boundaries. The exchange of

information on high-risk areas, recurring incidents, and known or suspected offenders enables a more coordinated response among neighbouring countries and reduces the risk of displacement of illegal activities across jurisdictions.

Importantly, the identification of high-risk areas should not lead to the stigmatisation of specific regions or stakeholder groups. Rather, it should be applied as an analytical tool to support more efficient and targeted deployment of preventive measures, enforcement activities, and awareness-raising efforts. Transparent communication about the purpose and use of risk-based analysis is essential to avoid misunderstandings and to maintain public trust and cooperation.

Report of suspected poaching (Informal reporting)

Researchers and field experts who conduct long-term monitoring of large carnivores within a specific area often have a detailed understanding of the individuals present and their movement patterns. Such knowledge can be highly valuable for the early recognition of potential illegal killing incidents.

If a researcher notices the prolonged and unexplained absence of a known individual and suspects that this could be related to poaching, but does not have sufficient evidence (e.g.,, absence of a carcass or other material evidence or confirmed signs of illegal activity), the situation may not meet the threshold for formal reporting. Nevertheless, it is advisable that the researcher shares this concern with a trusted contact person within law enforcement, provided that such cooperation has been established.

This informal communication does not replace the official reporting procedures when adequate evidence is available. However, it can support a more proactive enforcement approach, enabling authorities to focus monitoring or investigative efforts on specific locations where the likelihood of illegal activity may be higher. To ensure that such information can be used effectively, researchers should provide relevant contextual details whenever possible, such as:

- Identification of the individual (photographs, camera-trap images, genetic samples or analysis, collar data etc.),
- Last known locations and dates of observations (GPS coordinates and timestamps),
- Monitoring method used (e.g., telemetry, camera traps, collar monitoring, direct observation),
- Relevant environmental or situational context (e.g., increased human activity, known conflicts).

Establishing clear communication channels and mutual trust between researchers and law enforcement authorities is essential to ensure that such sensitive information is used appropriately and in line with data-protection and confidentiality requirements.

Box 1. Minimum standard measures to identify poaching hotspots

Collect basic data from multiple sources. Include law enforcement records, wildlife monitoring data, and local context information.

Maintain records of illegal activities. Track past and recent poaching incidents, including methods and locations.

Use simple mapping to identify hotspots. Visualise where incidents cluster to detect high-risk areas.

Include biological monitoring data. Use camera traps, telemetry, and field observations to track animal presence.

Record indirect indicators of illegal killing. Note sudden disappearances or unexplained absence of animals.

Gather information from local stakeholders. Engage forestry workers, hunters, and local communities.

Enable safe reporting mechanisms. Allow anonymous or confidential sharing of information.

Share key information across borders. Exchange basic data on incidents and risk areas with neighbouring countries.

Box 2. Recommended measures (best practice) to identify poaching hotspots

Combine all data sources into one system. Integrate enforcement, ecological, and social data for a complete overview.

Use advanced hotspot analysis. Overlay multiple datasets to identify patterns and high-risk zones more accurately.

Systematically analyse indirect evidence. Treat missing animals or signal loss as early warning signs. Cross-sectoral communication between law enforcement and institutions collecting data on LC populations is key.

Apply structured social scientific methods. Use questionnaires and interviews to collect local insights.

Cross-check different data types. Validate findings by comparing biological, social, and enforcement information.

Plan patrols based on risk. Focus enforcement efforts on identified hotspots and high-risk periods.

Strengthen cross-border coordination. Share detailed intelligence and coordinate responses between countries.

Develop centralised databases and tools. Ensure data is accessible, structured, and regularly updated.

Communicate clearly with the public. Share general findings using simple visuals and examples.

B. Development of specialised national database and exchange of information

Effective investigation and prosecution of large carnivore poaching in the Carpathians require reliable data, structured documentation, and timely exchange of information between competent authorities. One of the most significant weaknesses identified through project activities, surveys, and stakeholder consultations is the **fragmentation of information related to wildlife crime.** Records are often dispersed across institutions, stored in incompatible formats, or not digitised, which limits analytical capacity and weakens cross-border cooperation. The development of a specialised national database and improved information exchange mechanisms on the national level is therefore a strategic priority for strengthening law enforcement under Objective #4 of the Carpathian Action Plan.

A centralised national database on wildlife crime should enable systematic and standardised collection of data related to investigations, detected offences, seized items, forensic analyses, court decisions, and imposed sanctions. Such a database would allow authorities to track cases from detection to final judgment, identify investigative bottlenecks, and evaluate the effectiveness of enforcement measures. Digitisation and uniform data structure are essential to ensure consistency, facilitate statistical analysis, and support evidence-based policy development. An important component of the system should also be a registry of accredited laboratories and recognised forensic experts, including their areas of competence and contact details. Providing law enforcement authorities with clear information on available analytical capacities and estimated processing times would significantly reduce delays and improve the quality of evidence presented in court. We further discuss this issue in section C of this document.

In the context of large carnivore poaching, the database should include dedicated modules for species identification, DNA results, ballistic reports, and other forensic findings. Linking these results with case files improves traceability and helps investigators detect patterns, such as repeated involvement of specific individuals, organised groups, or geographic hotspots. For example, comparing DNA samples from taxidermy specimens found in a suspect's possession with samples collected in the wild can help refute false claims and support the identification of perpetrators. Additionally, the database should also integrate information on the species' ecology, occurrence, population status as well as conservation status both at national and European level. Integration with existing conservation monitoring systems, such as population monitoring or telemetry databases, can therefore further strengthen the ability to cross-reference mortality events with suspected illegal activities.

Given the transboundary nature of large carnivore populations in the Carpathians, national databases should be designed with interoperability in mind. **Cross-border exchange of information is essential in cases where illegal killing, transport of trophies, or trafficking activities extend beyond one country.** Establishing secure communication channels and

harmonised data standards would enable competent authorities—police, customs, environmental inspectorates, and prosecutors to share relevant intelligence in a timely and legally compliant manner. Cooperation with international enforcement frameworks can further strengthen the fight against organised wildlife crime.

Regular analytical reports prepared in three-year cycles should complement the data collection and management framework. These reports should provide a comprehensive assessment of the current situation, including identified trends in wildlife crime, geographical and temporal patterns, and developments in modus operandi. They should also evaluate the effectiveness of implemented enforcement measures and identify gaps or emerging risks that require further attention.

Such reports should further include an overview of achieved results, identified challenges, and selected case studies illustrating both successful investigations and encountered difficulties. The findings should support evidence-based decision-making at both strategic and operational levels, including the adjustment of enforcement priorities, allocation of resources, and development of targeted preventive measures. Where relevant, the outputs of these reports may also inform public awareness activities and communication strategies, ensuring that they reflect current trends and identified needs.

Improved information exchange also enhances preventive enforcement. By analysing aggregated data, authorities can identify high-risk areas as we discussed above, seasonal trends, and recurring methods used by offenders. This allows for targeted patrols, strategic deployment of technical equipment, and focused awareness campaigns. At the same time, transparency in documenting cases and sanctions contributes to stronger public trust and reinforces deterrence.

To ensure effectiveness, the development of a specialised database must be accompanied by **clear institutional responsibilities, adequate data protection safeguards, and training for users**. Investigators and prosecutors need guidance on consistent data entry, evidence classification, and use of analytical tools. Without proper training and institutional support, even well-designed systems risk underutilisation.

In conclusion, the creation of a specialised national wildlife crime database and strengthened information exchange mechanisms within and across nation states represent fundamental steps toward more effective investigation and prosecution of large carnivore poaching in the Carpathians. By enabling systematic documentation, analytical capacity, and cross-border cooperation, such systems directly address one of the key weaknesses identified in current enforcement practice: fragmented and insufficient information management. A coordinated and digitised approach will enhance operational efficiency, improve judicial outcomes, and ultimately contribute to the long-term protection of large carnivore populations across the region.

Case studies from successfully resolved cases in the Czecho-Slovak region

Operation "Lovec" and wildlife poaching network

The case, centred on the Czech Customs Administration's operation "Lovec", represents a model example of how complex wildlife poaching networks can be successfully dismantled through coordinated, multi-agency investigation. Initiated in 2017, the inquiry targeted an organised cross-border group operating between the Czech Republic and Slovakia, involved in illegal hunting, trafficking, and taxidermy of protected species. Through surveillance, forensic analysis, and international cooperation, investigators uncovered extensive evidence, including 204 specimens of protected animals—ranging from lynxes and wolves to exotic species such as lions and leopards—stored as trophies, raw carcasses, or processed skins. **The evidentiary base was strengthened by genetic testing, expert zoological assessments, and verification of documentation across jurisdictions, ultimately enabling the case to be transferred for criminal prosecution.**

A pivotal breakthrough was the identification of a poached Eurasian lynx known as "Michelle", a monitored female from the Šumava region. Using long-term ecological data, camera traps, and genetic sampling, experts from conservation bodies were able to conclusively link the seized specimen to a known individual within a vulnerable transboundary population. This level of individual identification not only demonstrated the scientific robustness of the investigation but also highlighted the ecological impact of the crime: Michelle was a breeding female, and her death led to the likely starvation of her dependent cub. The ability to reconstruct the chain of events from illegal killing to transport, taxidermy, and possession proved critical in evidencing intent and culpability.

The subsequent "Kameňák" case further reinforced the effectiveness of this integrated approach. Prompted by intelligence and photographic evidence, authorities conducted targeted searches that uncovered illegally held specimens, including frozen lynx carcasses. Expert analysis confirmed the killing of at least two separate individuals, again relying on precise species identification and comparative assessment. Collectively, these cases illustrate best practice in tackling wildlife crime: sustained intelligence gathering, close collaboration between enforcement agencies and scientific institutions, and the strategic use of forensic ecology. This multidisciplinary framework not only secured substantial evidence but also set a precedent for prosecuting sophisticated poaching operations with ecological as well as legal precision.[1]

[1] Cases are described in Czech language here:
https://celnisprava.gov.cz/cz/tiskove-zpravy/2021/Stranky/Lovec-%E2%80%93-razie-celn%C3%ADk%C5%AF-a-upytla%C4%8Den%C3%A1-rysice-na-%C5%A0umav%C4%9B-.aspx;
https://www.selmy.cz/clanky/operace-lovec-maly-pohled-do-zakulisi/;
https://www.selmy.cz/clanky/celnici-rozkryvaji-rozsahly-pripad-pytlactvi-nasli-i-upytlacenou-sumavskou-rysici-michelle/.

Illegal wildlife poisoning and importance of citizen involvement

Another case from the Beskydy Protected Landscape Area demonstrates how **early detection by volunteers can be the decisive factor in addressing wildlife crime**. The discovery of a poisoned fox and buzzard near Velký Polom was not the result of routine enforcement, but of field patrols carried out by volunteer groups known as the "wolf patrols", organised by Hnutí DUHA. These patrols, originally intended to monitor large carnivores and deter poaching, identified suspicious carcasses and promptly alerted authorities. Subsequent toxicological analysis confirmed the use of carbofuran, a banned and highly lethal pesticide, enabling the case to be formally investigated.

The critical success factor here lies in the integration of citizen-based monitoring with institutional response. Volunteers acted as a distributed surveillance network, operating in remote terrain where official oversight is inherently limited. Their situational awareness, regular physical presence, and ability to recognise anomalies ensured rapid reporting, which in turn allowed the Nature Conservation Agency of the Czech Republic and other authorities to secure evidence before it degraded. This significantly increases the likelihood of tracing the perpetrator in poisoning cases, which are otherwise notoriously difficult to prosecute due to their covert nature.

As a case study, it underscores that effective wildlife crime enforcement does not rely solely on formal policing capacity. Instead, it benefits substantially from structured volunteer engagement, particularly patrol-based systems that combine monitoring, deterrence, and rapid escalation. In regions with recurring poisoning incidents, such as the Beskydy, these patrols represent a force multiplier enhancing detection probability, shortening response times, and ultimately improving the prospects of successful case resolution.[2]

The need for specialised professionally trained policing capacity

The third case highlights systemic shortcomings in wildlife crime investigations, notably the absence of specialised capacity within the Police of the Czech Republic. Evidence gathered in 2020 by volunteer "wolf and lynx patrols" organised by Hnutí DUHA clearly indicated the illegal killing of a lynx in the Pošumaví region. However, the initial police response handled by untrained local officers resulted in contamination of the crime scene and insufficient evidence collection, ultimately preventing successful prosecution. The case illustrates that even well-documented incidents can fail without appropriately trained investigators and procedural rigour.

Crucially, the example underscores the evidentiary value of trained volunteers in detecting and documenting wildlife crime. These patrols were able to identify key field signs, secure initial biological traces, and trigger official intervention functions that are indispensable in remote environments. However, without a specialised investigative framework to build on this groundwork, such contributions remain underutilised. The case therefore demonstrates that effective

[2] The case is described in Czech language here: https://www.selmy.cz/clanky/v-beskydech-pusobi-neznamy-travic/.

enforcement depends on both: a robust volunteer monitoring network and a dedicated, expert-led policing unit capable of converting field evidence into prosecutable cases.[3]

Case study of the cross-border cooperation with involvement of research institutes

Due to the transboundary nature of large carnivore populations in the Carpathian region, national databases should be designed with a strong emphasis on interoperability. Effective cross-border data exchange is essential, particularly in cases where illegal killing, trophy transport, or wildlife trafficking extend beyond the jurisdiction of a single country. The establishment of secure communication channels and harmonised data standards enables competent authorities including police, customs administrations, environmental inspectors, and prosecutors to share relevant intelligence in a timely, coordinated, and legally compliant manner. Cooperation with international law enforcement frameworks further strengthens capacities to combat organised environmental crime.

A particularly valuable example is the cooperation between Slovakia and Czech Republic, which builds on long-term scientific monitoring of large carnivore populations. Selected research institutions and laboratories in both countries maintain extensive databases comprising genetic (DNA) profiles, telemetry data, and thousands of camera trap images. Of particular importance are DNA databases containing thousands of unique individual genotypes across the shared range, representing a critical tool for individual identification and forensic analysis.

Within the implementation of project activities, capacities from Charles University and Institute of Vertebrate Biology of the Czech Academy of Sciences were made available to support poaching investigations. However, during the course of the project, it was not necessary to utilise these genetic analysis resources, as law enforcement authorities had sufficient alternative evidence to effectively investigate the cases in question.

This approach highlights the importance of combining scientific tools, institutional cooperation, and efficient information exchange in protecting large carnivores and addressing environmental crime in a transboundary context.

[3] The case is described in Czech language here: https://www.selmy.cz/clanky/uz-zadne-dalsi-odlozene-pripady-pytlactvi-velkych-selem-by-meli-resit-specialne-vyskoleni-kriminaliste/.

Box 3. Minimum standard measures on data management and information exchange

Ensure basic data collection on wildlife crime cases. Record key information on incidents, investigations, and outcomes.

Establish simple, centralised data storage. Avoid fragmented records by storing information in one accessible system (even if basic).

Standardise core data fields. Use consistent formats for recording offences, locations, and case status.

Document cases from detection to outcome. Track investigations, evidence, and court decisions.

Digitise records where possible. Move from paper-based systems to digital formats to improve accessibility.

Include basic forensic information. Record available data such as species identification and cause of death.

Enable information sharing between national authorities. Facilitate communication between police, environmental agencies, and prosecutors.

Assign clear responsibilities for data entry and management. Define who collects, updates, and maintains the data.

Ensure basic data protection and confidentiality. Protect sensitive information and follow legal requirements.

Use data for simple analysis and reporting. Identify basic trends (e.g., locations, frequency of incidents).

Box 4. Recommended measures (best practice) on data management and information exchange

Develop a specialised national wildlife crime database. Create a comprehensive, structured system covering all aspects of investigations (including ecological data, hotspots, photographic material, DNA information, population status, conservation status on national and EU level, and social value).

Integrate full case lifecycle tracking. Link detection, investigation, forensic results, prosecution, and sanctions.

Standardise and harmonise data structures nationally and internationally. Ensure compatibility for cross-border cooperation.

Include detailed forensic modules. Integrate DNA, ballistics, toxicology, and other expert findings.

Link databases with conservation monitoring systems. Combine enforcement data with telemetry, population monitoring, and other ecological data.

Create a registry of experts and laboratories. Provide accessible information on forensic capacities and contacts.

Enable secure and efficient cross-border data exchange. Establish interoperable systems and communication channels between countries.

Use advanced analytical tools. Identify hotspots, trends, repeat offenders, and organised activities.

Support preventive enforcement through data analysis. Use insights to guide patrols, resource allocation, and awareness campaigns.

Provide training and ensure system usability. Train users in data entry, analysis, and application to avoid underuse of the system.

C. Establishment of international network of wildlife experts on large carnivore poaching to strengthen law enforcement and investigation

The effective investigation and prosecution of large carnivore poaching in the Carpathians depend fundamentally on the availability of high-quality, scientifically sound, and legally admissible forensic evidence. Illegal killing of species such as the brown bear (*Ursus arctos*), grey wolf (*Canis lupus*), and Eurasian lynx (*Lynx lynx*) often takes place in remote mountainous areas, where physical traces are limited and cases rely heavily on specialised expertise. For this reason, the establishment of an international network of wildlife forensic experts represents a strategic priority for strengthening law enforcement under Objective #4 of the Carpathian Action Plan.

Wildlife crime investigations require interdisciplinary knowledge that goes beyond standard criminal investigation techniques. They frequently involve DNA analysis for species and individual identification, veterinary pathology to determine cause of death, ballistics to link weapons to projectiles, toxicology to detect poisoning, and spatial analysis using telemetry or GIS data. As we have already mentioned in the section B of this document, in many Carpathian countries, access to such expertise remains fragmented, often dependent on informal contacts or limited institutional capacity. This can lead to delays, inconsistent methodologies, and challenges in ensuring that forensic results are fully admissible in court. Effective inter-agency cooperation is crucial for building trust between the involved actors, encouraging them to report detected cases of illegal killing, or even suspicions, to the police, who can then take appropriate action.

An international network would provide a structured and coordinated system of expertise accessible to law enforcement authorities across the region. A key component would be the creation of a **centralised registry of qualified experts and accredited laboratories**, including clear information on areas of specialisation, available analytical methods, and accreditation status. This would enable investigators and prosecutors to quickly identify appropriate experts and ensure that analyses meet required legal standards. It is also beneficial for the police and other law-enforcement authorities to have established personal and professional contacts with their counterparts across the border, allowing them, when necessary, to swiftly organise joint operations or conduct joint investigations into detected cases without unnecessary delays.

Another essential function of the network would be the **development and harmonisation of standard protocols** for crime scene sampling, preservation of biological material, chain-of-custody procedures, and reporting formats for expert opinions. Standardisation would improve the reliability and comparability of forensic results and facilitate their recognition across borders. Given the transboundary distribution of large carnivore populations in the Carpathians, cross-border recognition of forensic evidence is particularly important.

The network should also **establish rapid consultation mechanisms** for complex or urgent cases and promote joint expert cooperation in investigations involving multiple countries. In addition, it can contribute to the development and interconnection of national DNA reference databases for large carnivores. Such databases are valuable not only for conservation monitoring but also for

linking seized trophies or body parts to specific individuals and detecting cross-border illegal activities.

Close integration with police authorities, customs services, prosecutors, and courts is essential. Early involvement of forensic experts can significantly improve crime scene management and evidence collection, reducing the risk of procedural errors. Furthermore, strengthening the ability of experts to provide clear and comprehensible testimony in court will increase the likelihood of successful prosecution.

The **establishment of an international wildlife forensic network** would address one of the most frequently identified obstacles in wildlife crime investigations: lack of sufficient and admissible evidence. By improving access to expertise, harmonising methodologies, and enhancing cross-border cooperation, the network would contribute to higher conviction rates, stronger deterrence, and more consistent enforcement practices.

Ultimately, protecting large carnivores in the Carpathians is not only a conservation responsibility but also a matter of upholding the rule of law. A coordinated forensic framework at the international level is a practical and necessary step toward ensuring that illegal killing is effectively investigated, prosecuted, and deterred across the region.

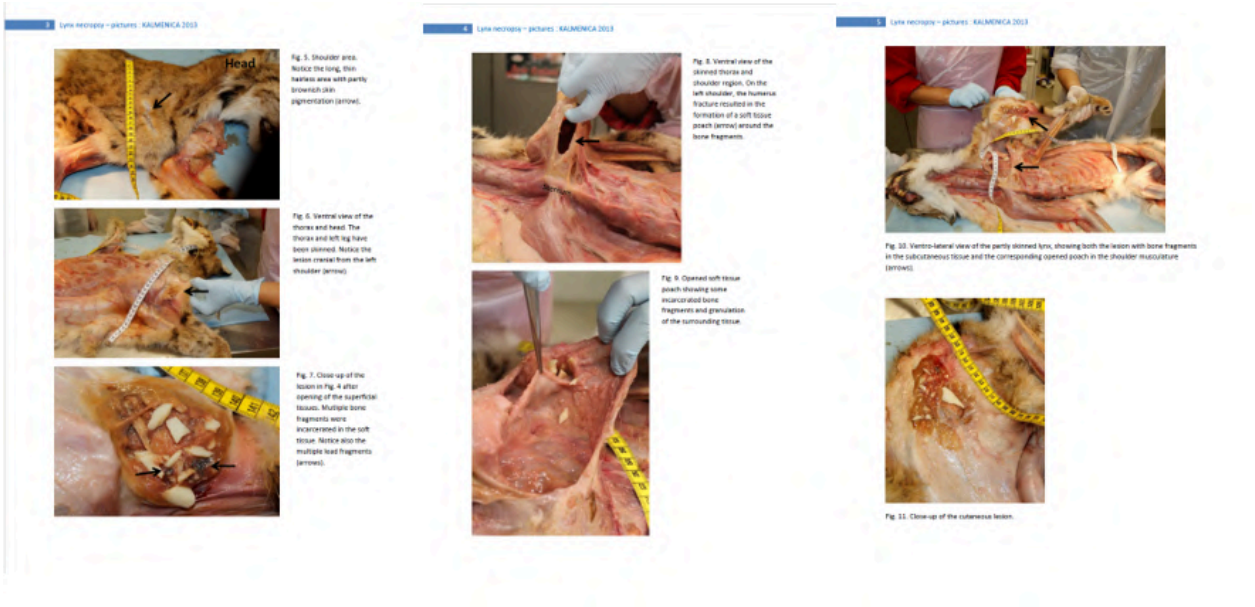


Figure 1 - Autopsy of a poached lynx. Arrows point to ammunition found in the animal's body.

Case study on seminars for law enforcement from the Beskydy-Kysuce and Tatra Mountains pilot areas

Recognising that wildlife crime often has transboundary dimensions, the LECA project organised a series of cross-border seminars in pilot areas of Beskydy–Kysuce Pilot Area (Czech Republic–Slovakia) and Tatra Mountain Pilot Area (Poland – Slovakia) to strengthen cooperation and improve investigative capacity. These seminars brought together representatives of law enforcement authorities, conservation institutions, and experts from neighbouring countries, creating a platform for knowledge exchange and joint learning.

The seminars focused on key aspects of investigating illegal killing of large carnivores, including species ecology, forensic methods (such as genetic analysis), crime scene investigation, and legal frameworks. Practical case studies of successfully prosecuted offences were an important component, allowing participants to better understand effective investigative approaches and common challenges.

A strong emphasis was placed on the early involvement of experts, proper crime scene management, and the integration of scientific methods with legal procedures to ensure that evidence is admissible in court. Participants also highlighted the importance of combining different types of expertise law enforcement, forensic science, and ecological knowledge to improve investigation outcomes.

Beyond technical knowledge, the seminars played a crucial role in building professional networks and trust between participants. Direct interaction helped establish operational contacts, which are essential for effective cross-border cooperation.

A key outcome of these activities was a shared recognition of the need to strengthen cross-border information exchange, develop joint training initiatives, and improve technical support for investigators. The discussions also underlined the importance of community engagement as a complementary tool for prevention and early detection of wildlife crime.

Box 5. Minimum standard measures to establish large carnivore poaching expert network

Ensure access to basic forensic expertise. Investigations must involve qualified experts (e.g., veterinary, DNA, ballistics) when needed.

Use legally admissible evidence procedures. Follow national rules for evidence collection, storage, and documentation.

Apply basic crime scene protocols. Secure the site, document findings, and properly collect biological and physical evidence.

Maintain chain-of-custody records. Ensure all evidence is traceable from collection to court.

Document cause of death when possible. Use veterinary expertise to determine whether death is natural or illegal.

Enable cooperation between key authorities. Police, environmental agencies, and veterinary services should exchange information.

Establish basic contacts with experts. Maintain at least informal lists of available specialists and laboratories. Conduct DNA, toxicology, or pathology analyses where capacity exists.

Allow information exchange across borders. Share essential case-related information with neighbouring countries when relevant.

Ensure expert findings are usable in court. Reports should be clear, structured, and understandable for prosecutors and judges.

Box 6. Recommended measures (best practice) to establish large carnivore poaching expert network

Establish an international forensic expert network. Create a formal, accessible system connecting specialists across countries.

Develop a centralised registry of experts and laboratories. Include specialisations, methods, and accreditation status for rapid access.

Harmonise forensic protocols across countries. Standardise sampling, evidence handling, and reporting procedures.

Ensure accreditation and quality standards. Use certified laboratories and validated methods to strengthen legal reliability.

Integrate forensic experts early in investigations. Involve specialists at the crime scene stage to improve evidence quality.

Create rapid consultation mechanisms. Enable quick expert support in urgent or complex cases.

Develop and connect DNA reference databases. Link national systems to identify individuals and trace illegal activities across borders.

Strengthen cross-border operational cooperation. Facilitate joint investigations and direct communication between authorities.

Train experts for court presentation. Improve their ability to provide clear, credible testimony.

Build strong inter-agency collaboration frameworks. Formalise cooperation between police, customs, prosecutors, and scientific institutions.

D. Surveys, lectures and seminars for police investigators

Effective investigation of illegal killing of large carnivores requires well-trained professionals who are able to recognise signs of wildlife crime, collect and secure evidence properly, and cooperate with relevant institutions and experts. In many countries, however, wildlife crime represents a relatively specialised field and is not always sufficiently covered in the standard training of law enforcement officers.

Capacity-building activities such as lectures, seminars and practical training sessions can therefore play an important role in strengthening the knowledge and skills necessary for effective investigation and prosecution of poaching cases. Among other things, they enable the sharing of experiences and networking.

Surveys, questionnaires, and interviews are valuable tools for identifying the needs and knowledge gaps of a target group. This information allows educational activities to be tailored to address the most relevant topics and improve overall effectiveness.

Questionnaire as a tool for identification of knowledge, gaps and needs

Questionnaires are a valuable tool for assessing the experience, knowledge, and training needs of law enforcement officers involved in investigating wildlife crime, particularly illegal killing of large carnivores. They provide a structured and systematic way to collect information directly from law enforcement officers involved in wildlife crime investigations. They help identify existing knowledge gaps and training needs, while also capturing practical challenges faced in the field, such as difficulties with evidence collection or inter-agency cooperation. By gathering input from different regions and institutions, questionnaires allow for comparison and help reveal common patterns or specific local issues. This makes it possible to prioritise training topics and develop targeted, evidence-based capacity-building activities rather than relying on assumptions. In addition, they give practitioners a voice, enabling them to share their experience and contribute to improving investigative practices. When used repeatedly, questionnaires can also track progress over time and assess whether training efforts are effective.

There are several surveys focusing on the general public and its perception of poaching or illegal hunting of wildlife (Kissová et al., 2003). These studies often concentrate on public attitudes toward nature conservation, the acceptance of illegal hunting, or human large carnivore conflicts. However, fewer surveys target key stakeholder groups, such as hunters, conservation professionals, or environmental crime investigators (e.g., Smolko et al., 2025).

In the Carpathian region, relevant research was conducted in the Czech Republic (Červený, Koubek & Bufka, 2002), which examined the attitudes of hunters and students of forestry and hunting toward the Eurasian lynx using anonymous questionnaires (Smolko et al., 2025). The results identified poaching as one of the main causes of the lynx population decline. A follow-up survey

conducted in 2015 showed a shift in the motives for illegal killing from damaging game species toward hunting for sport (Poláková, 2018).

Figure 2 - Illustration of the title photo of the stakeholder survey we circulated in the four pilot countries.

Case study from the Carpathians on stakeholder survey

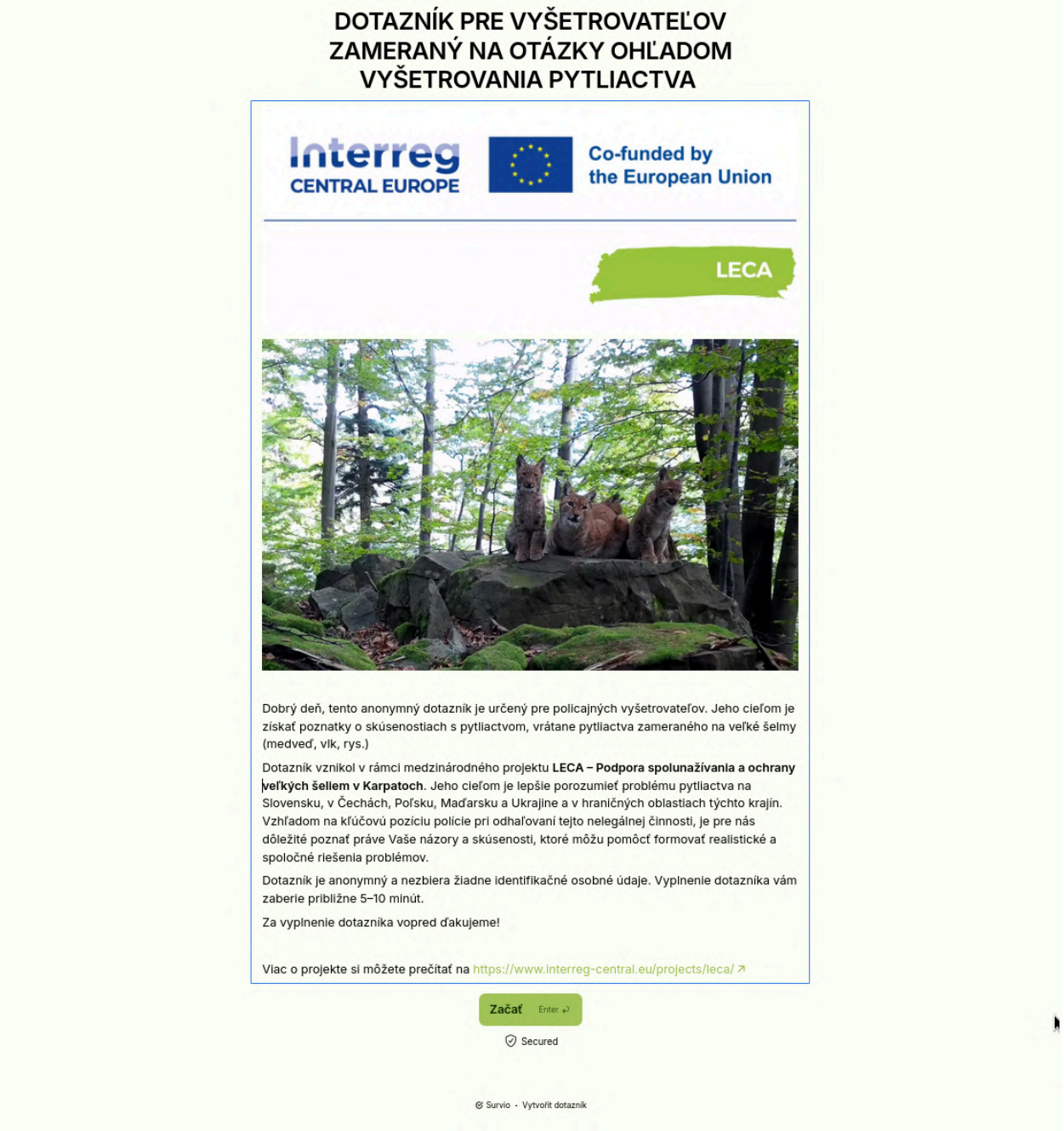
To better understand the realities faced by investigators in the field, an **anonymous questionnaire** was developed and distributed among police officers in pilot areas across Slovakia, the Czech Republic, Poland, Hungary, and Ukraine[4]. The survey was based on experience from the LIFE SWiPE project and similar studies, with AI used to refine the draft. It was also reviewed by project partners and the Environmental Police of Slovakia who provided feedback to ensure relevance and clarity.

[4] The questionnaire in English together with the key findings are available in the Supplementary material of this document.

The objective of the survey was to identify investigators' experience with wildlife crime, particularly large carnivore poaching (bear, wolf, lynx); assess perceived severity and frequency of poaching and identify common investigative challenges; evaluate cooperation with external experts and institutions; gather feedback on training needs and potential legislative improvements.

The final questionnaire was translated into national languages and distributed via the Survio application, with the exception of Slovakia, where Google Form was used due to internal technical issues. Partners disseminated the survey through institutional contacts, and, in some cases, directly through personal networks. It is useful to have a database of regularly updated contacts which serves as an initial point for distributing surveys. These were then further spread through the so-called snowball effect among more potential respondents. It was important to keep the survey anonymous since it may increase the response rate and potentially result in more candid answers.

We kept the questionnaire open for responses for one month and sent a reminder halfway through the period. We recommend keeping the questionnaire open for at least several weeks and sending reminders to increase the response rate. The survey process itself proved valuable as a participatory tool, fostering reflection among investigators.



DOTAZNÍK PRE VYŠETROVATEĽOV ZAMERANÝ NA OTÁZKY OHĽADOM VYŠETROVANIA PYTLIACTVA

Interreg CENTRAL EUROPE

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LECA

Dobrý deň, tento anonymný dotazník je určený pre policajných vyšetrovateľov. Jeho cieľom je získať poznatky o skúsenostiach s pytliactvom, vrátane pytliactva zameraného na veľké šelmy (medveď, vlk, rys.)

Dotazník vznikol v rámci medzinárodného projektu **LECA – Podpora spolunažívania a ochrany veľkých šeliem v Karpatoch**. Jeho cieľom je lepšie porozumieť problému pytliactva na Slovensku, v Čechách, Poľsku, Maďarsku a Ukrajine a v hraničných oblastiach týchto krajín. Vzhľadom na kľúčovú pozíciu polície pri odhaľovaní tejto nelegálnej činnosti, je pre nás dôležité poznať práve Vaše názory a skúsenosti, ktoré môžu pomôcť formovať realistické a spoločné riešenia problémov.

Dotazník je anonymný a nezbiera žiadne identifikačné osobné údaje. Vyplnenie dotazníka vám zaberie približne 5–10 minút.

Za vyplnenie dotazníka vopred ďakujeme!

Viac o projekte si môžete prečítať na https://www.interreg-central.eu/projects/leca/

Začať Enter

Secured

Survio - Vytvořit dotazník

Figure 3 - Title page of the Slovak version of the questionnaire for police investigators created via Survio.

Specialised seminars in cross-border pilot areas

Alongside formal education, specialised training plays a key role in strengthening the practical competencies needed for investigating crimes against wildlife. These activities focus on real field situations, evidence, handling, and understanding the specific nature of individual cases, which

often go beyond the usual experience of police or environmental authorities. In addition to developing professional skills, the training helps create a shared foundation for cooperation among different professions – from forensic experts to law enforcement authorities – thereby improving the consistency of procedures and the overall effectiveness of the investigation process. In addition, training activities should also cover the use of open-source intelligence (OSINT), including the monitoring and analysis of social media, online marketplaces, and other publicly available digital sources. These tools can significantly enhance the ability of law enforcement authorities to detect illegal activities, identify suspects, and support ongoing investigations.

A good example of best practices on effective exchange is the long-standing series of seminars focused on wildlife crime, which for many years were regularly organised in the Czech Republic by the Environmental Inspectorate and later by Charles University under the patronage of Mrs. Říhová. Their aim was to enable the exchange among experts from various fields (science and research, law enforcement authorities, forensic specialists, NGOs, representatives of Ministry of the Environments, etc.) They typically lasted two days, filled with expert presentations and discussions, while also providing opportunities to build closer personal contacts across professional groups. We provided an example of such a seminar as a case study described in section C of this document.

Another good example is WildLIFE Crime Academy, which gave rise to an initiative focused on combating wildlife crime, particularly in Central and Southeastern Europe.[5] It is a practice-oriented program that combines training, experience change, and capacity-building across different professional groups.

International knowledge exchange

International knowledge exchange plays a key role in strengthening the effectiveness of wildlife crime investigation, particularly in regions such as the Carpathians where large carnivore populations and related illegal activities cross national borders. Sharing experiences, methodologies, and lessons learned between countries enables authorities to better understand common challenges, identify effective solutions, and harmonise investigative practices.

Such exchanges can take various forms, including joint workshops and seminars, study visits or cross-border meetings. These activities facilitate the transfer of practical knowledge, such as investigative techniques, forensic approaches, and cooperation mechanisms between law enforcement and external experts.

Importantly, international knowledge exchange also contributes to building professional networks and trust among stakeholders, which is essential for effective cross-border cooperation. By learning from both successful approaches and identified shortcomings in other countries, institutions can

[5] Information about Wildlife Academy is available online here: https://wildlifecrimeacademy.eu/project-overview/about/.

adapt and improve their own practices, leading to more coordinated and efficient responses to illegal killing of large carnivores.

Case study from the LECA project on international online seminar

As part of high-level knowledge exchange, an international online seminar was organised focusing on the investigation of large carnivore poaching in the Carpathian region. The seminar brought together representatives from the project pilot countries to share experiences and strengthen cooperation.

A key element of the seminar was the presentation of successful investigation cases, with a focus on identifying factors that contributed to effective outcomes. This approach supports the transfer of best practices across countries and helps build lasting professional networks between investigators, prosecutors, and experts.

The discussions highlighted several priority training needs, including wildlife crime scene investigation, forensic evidence collection and preservation, species identification and biological sampling, as well as the use of ballistics, toxicology, and legal tools in environmental crime cases. The importance of addressing emerging areas, such as wildlife-related cybercrime related to illegal wildlife trade, was also noted.

Participants expressed strong interest in exchanging practical experience and learning from colleagues who have handled complex cases. This underlines the importance of case-based and practice-oriented training, which is often more effective than purely theoretical approaches.

Overall, the activities demonstrated that capacity building should be continuous, practical, and involve multiple disciplines. Effective investigation of wildlife crime requires a combination of ecological knowledge, forensic expertise, legal understanding, and strong inter-agency cooperation. Creating platforms for dialogue and knowledge exchange contributes significantly to improving investigative capacity.

Sustained investment in training and cross-border cooperation remains essential to ensure that authorities are well-equipped to detect, investigate, and prosecute illegal killing of large carnivores, thereby supporting their long-term conservation.

Box 7. Minimum standard measures for knowledge exchange

Define clear objectives for training and surveys. Identify key knowledge gaps, skills needs, and cooperation challenges.

Identify and target relevant groups. Focus primarily on police investigators, while including other key actors where relevant.

Provide basic training activities. Organise lectures, seminars, or workshops on wildlife crime investigation.

Cover essential competencies. Include crime recognition, basic evidence handling, and inter-agency cooperation.

Use structured questionnaires to assess state of knowledge and needs. Collect information on experience, challenges, and training priorities.

Ensure simple, confidential and accessible survey design. Keep questionnaires anonymous, short, clear, and easy to complete. Enable honest responses through anonymous or secure formats.

Use survey results to improve training. Adjust training content based on identified needs.

Organise basic meetings or exchanges. Facilitate at least occasional interaction between investigators and experts.

Document and share key outputs. Provide summaries, materials, and contacts after trainings or meetings.

Box 8. Recommended measures (best practice) for knowledge exchange

Establish continuous, long-term training systems. Combine regular training, surveys, and knowledge exchange into an ongoing process.

Design surveys with expert input and pilot testing. Ensure high-quality, reliable data collection (e.g., with social science expertise).

Use surveys strategically and repeatedly. Monitor trends, evaluate progress, and adapt training over time.

Deliver practical, case-based training. Focus on real scenarios, field and participatory exercises, and lessons from actual investigations.

Integrate multidisciplinary expertise in training. Involve forensic experts, prosecutors, scientists, and law enforcement.

Strengthen cross-border and international cooperation. Organise joint seminars, workshops, and knowledge exchange across countries.

Support networking and trust-building. Create opportunities for personal contacts between investigators and experts.

Use interactive and diverse training formats. Include discussions, group work, and digital tools to increase engagement.

Apply advanced tools for survey distribution and analysis. Use professional platforms and present results through clear visuals (maps, charts).

Evaluate impact and improve continuously. Collect feedback after trainings and use it to refine future activities.

E. Public awareness campaigns and involvement of these groups to monitoring of illegal killing

Public awareness and active involvement of stakeholders are essential for preventing and detecting illegal killing of large carnivores in the Carpathians. While strong law enforcement and forensic capacity are necessary, long-term success depends on public attitudes, community engagement and cooperation between authorities and local actors.

Large carnivores such as bears, wolves and lynx are ecologically important species and symbols of the Carpathian natural heritage. However, their presence can also lead to conflicts in rural areas, which may influence public attitudes and, in some cases, increase tolerance towards illegal killing.

Communication strategies should be tailored to specific groups such as local communities, hunters, forestry workers, farmers, students and the general public. Effective communication requires clarity on what information is shared, why it is relevant, who the target audience is and how the message is delivered.In this context, communication activities should be informed by regular analytical reports (e.g. prepared in three-year cycles), which assess trends in wildlife crime, identify emerging risks, and evaluate the effectiveness of implemented measures.

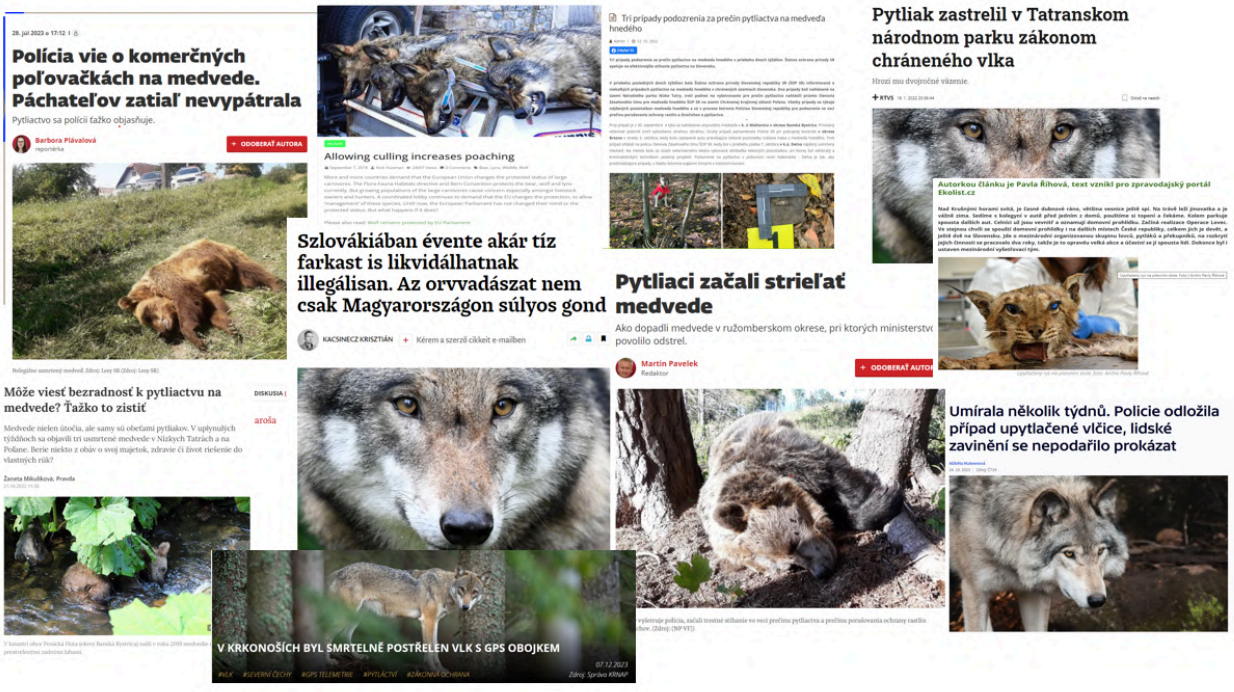


Figure 4 - Collage of media articles on poaching in the Carpathian region.

Public awareness campaigns should help people clearly understand what wildlife crime is - and what it is not. They should explain the ecological importance of large carnivores, the legal protections in place and the consequences of illegal killing. This includes highlighting not only

the environmental damage caused by poaching, but also the legal sanctions and criminal liability associated with such offences. An important aspect of communication is to counter the perception still present in some communities that poaching is acceptable or not a serious criminal offence.

In parallel, campaigns should provide clear, practical guidance on when, where and how to report suspected illegal activities. Establishing confidential reporting channels, hotlines or digital reporting tools can facilitate communication with law enforcement authorities. Ensuring professional handling of reports and adequate protection of informants is essential for maintaining public trust and encouraging people to come forward.

Publicising successfully prosecuted cases can further reinforce the message that illegal killing is neither acceptable nor without consequence. Transparent communication about detected offences and final convictions strengthens the deterrent effect and demonstrates that wildlife crime is effectively investigated and prosecuted.

Public involvement in monitoring does not replace professional law enforcement but complements it. Community-based observation networks, cooperation with rangers and forestry staff, and participatory monitoring programmes can improve situational awareness in remote mountain areas where official patrol capacity is limited. Structured collaboration frameworks ensure that citizen engagement supports investigations without compromising procedural integrity.

Figure 5. Photo from a seminar held as part of a project LECA focused on lynx monitoring.

Hunters represent one of the most important stakeholder groups in efforts to prevent and detect illegal killing of large carnivores. As active users of the landscape, they often possess detailed knowledge of wildlife presence, movement patterns and unusual activities. Survey results from pilot areas indicate that hunters are often among the primary sources of information about poaching incidents. This demonstrates the potential for constructive cooperation when trust is established.

Awareness work with hunters should start by recognising their knowledge of wildlife and local conditions. Transparent communication about legal requirements, management challenges and the ecological role of large carnivores helps build common ground. Creating opportunities to discuss practical concerns and to clarify reporting procedures supports mutual trust and reinforces a shared responsibility to prevent illegal killing.

Involving hunting associations in monitoring initiatives, such as reporting suspicious activities, sharing field observations or participating in joint workshops with conservation and law-enforcement authorities, can significantly strengthen early detection capacity. Clear reporting mechanisms and assurances that information will be handled professionally help increase their willingness to cooperate.

Constructive engagement with hunters contributes not only to reducing poaching but also to building long-term relationships that support coexistence between large carnivores and rural communities.

Figure 6. Photo from the SK/HU stakeholder meeting for foresters and hunters

Local communities often live closest to areas where illegal killing of large carnivores occurs, making their involvement essential for both prevention and early detection. Their knowledge of the landscape, wildlife presence and unusual activities provides valuable information that formal monitoring may miss.

Awareness activities should explain the ecological importance of large carnivores for the ecosystem, while also acknowledging the real challenges and conflicts that coexistence can bring for rural livelihoods. Addressing both aspects is essential for building trust and reducing tolerance for illegal killing. Local residents are more likely to report suspicious activities when they feel informed, respected and confident that their concerns will be taken seriously.

Communication with local communities should be clear, practical and adapted to local conditions. Using established channels, community meetings, municipal information boards, local media or associations — helps ensure that information on what constitutes wildlife crime and how to safely report suspected offences is accessible and easily understood.

Encouraging community participation in monitoring, such as reporting observations, noting unusual activities or participating in simple citizen-science initiatives, can significantly strengthen detection capacity. Providing feedback on how community-reported information is

used, and recognising these contributions publicly, helps maintain long-term cooperation and reinforces shared responsibility for protecting local wildlife.

Educational activities in schools and community events can support long-term behavioural change. By increasing knowledge about biodiversity, ecosystem services, and coexistence measures, such activities help reduce misconceptions and build support for conservation efforts. Collaboration with NGOs, conservation institutions and local authorities increases both the credibility and outreach of such activities, ensuring that young people receive accurate, balanced and engaging information about wildlife and the importance of preventing illegal killing.

With regard to communication and education, it is essential to address misinformation circulating in the public space. Hoaxes and misleading narratives about large carnivores are often based on misinterpreted or decontextualised information, which fosters mistrust, heightens fear, and undermines efforts towards coexistence with wildlife. **Continuous countering of misinformation**, myth-busting, and public education are therefore critical. In addition to campaigns and educational initiatives, it is advisable to develop clear, visually engaging, and easily accessible materials for the general public. These can be disseminated via social media, websites, relevant institutions, and mainstream media channels.[6]

Figure 7 - Camera trap demonstration and presentation at a student summer camp in Slovakia.

In conclusion, public awareness campaigns and stakeholder involvement are indispensable elements of a comprehensive strategy to combat illegal killing of large carnivores in the Carpathians. By increasing knowledge, reducing social acceptance of poaching, and encouraging responsible reporting, these measures strengthen prevention and enhance detection. Sustainable conservation of large carnivores requires not only effective enforcement but also informed, engaged, and cooperative communities that recognise the value of protecting the region's shared natural heritage.

[6] Publication *Large Carnivores: Myths, Worries and Facts* is available in Czech language is available here: https://www.selmy.cz/povery-a-fakta/.
Infographics in Hungarian is available here: https://wwf.hu/farkas-nagyragadozo-a-szomszedban/.

Case study from the Czech Republic on Wolf and Lynx Patrols

Wolf and lynx patrols are volunteer-based monitoring initiatives that operate in areas where large carnivores occur. Their main purpose is the regular presence of trained volunteers in the field, which serves both as a **deterrent to illegal hunting** and as a **means of collecting valuable ecological data**. By systematically moving through the landscape, patrol members monitor signs of animal presence such as tracks, scats, and hair, which are then documented and, where relevant, used for scientific research[7]. At the same time, visible signs of patrol activity, including informational signage, signal to potential offenders that the area is actively monitored. These patrols are typically coordinated by experienced leaders and follow structured methods to ensure that data collection is reliable and that activities are carried out safely and effectively.

Figure 8 - Wolf and Lynx Patrols training. Photo by Jana Kloučková Kudrnová.

[7] Data from the field is registered to the database via the CarniTrack application available to professionals and to the wide public here: https://www.carnivores.cz/carnitrack-mobile-app/.

Also, the public was involved in monitoring using the **CarniTrack** mobile application, which has been developed for easy data collection in the field during large carnivore surveys and for observation reporting. The app captures images, GPX tracks, coordinates and all relevant metadata during field trips. The application has been enhanced by Hnutí DUHA Šelmy based on an update of the original Shelmon app, within the project LECA.

All data are uploaded to the central online database in structured form for validation and further analysis conducted by experts from Mendel University and FoE CZ. The data are objectively assessed in the desktop application based on the SCALP methodology, using a scale of data verifiability ranging from the most stringent category C1 ("hard data" - pictures, dead animals, genetic) to evidential data, through the documented records of tracks, scat, and other indirect signs of occurrence (C2) to unverifiable public reports (C3).

As a best practice, wolf and lynx patrols are important because they complement formal law enforcement by increasing situational awareness in remote areas where official capacity is limited. Their continuous presence helps prevent illegal killing by raising the perceived risk of detection, while also contributing to early identification of suspicious activities. In addition, the data collected supports conservation monitoring and can provide indirect evidence relevant to investigations. Beyond their operational role, these initiatives also strengthen public engagement by involving citizens directly in conservation efforts, building trust, and fostering a sense of shared responsibility. This combination of prevention, monitoring, and community involvement makes patrols a highly effective and transferable tool in combating wildlife crime.

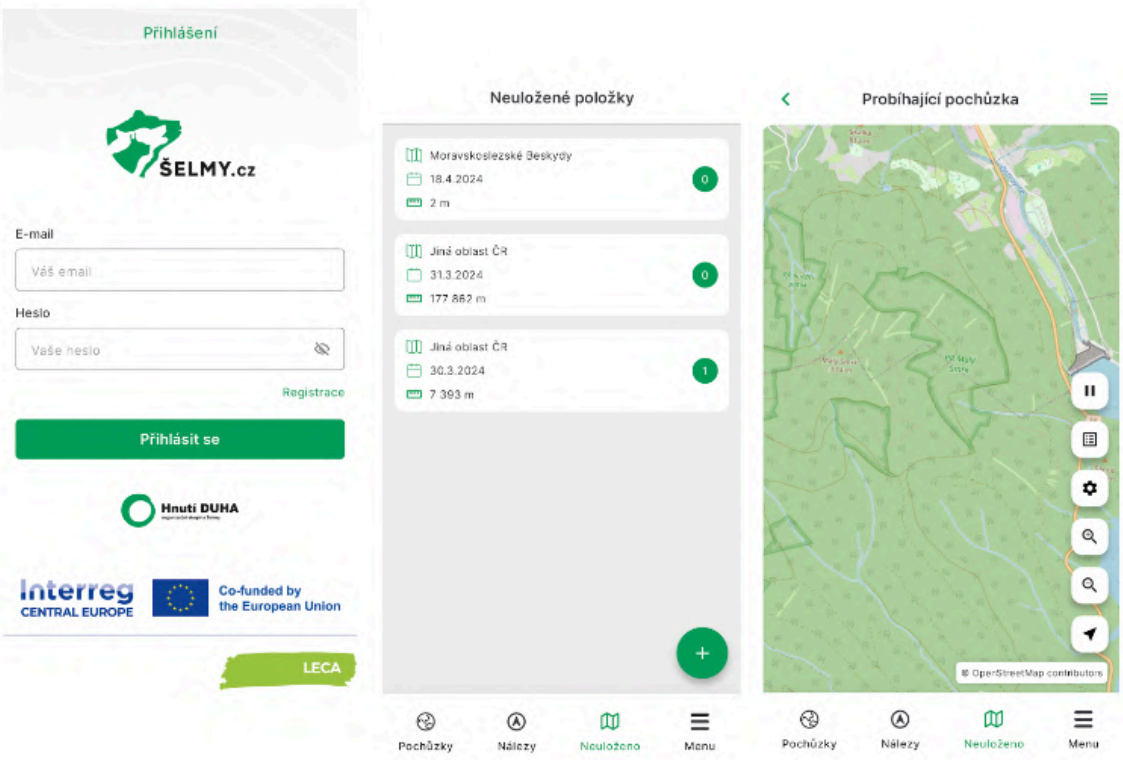


Figure 9 - Illustration of the CarniTrack application.

Case study on the digital communication campaign

WWF Slovakia implemented a comprehensive **digital communication campaign** within the LECA project, aimed at raising awareness of the underlying causes of human large carnivore conflicts. The campaign was designed with a strong emphasis on multiplatform applicability both visually and content-wise optimised for easy sharing and adaptation by project partners.

In just one month (September 2025), the campaign reached 714,447 unique users, generated nearly 2 million impressions, and drove 15,423 clicks to a dedicated landing page focused on large carnivores. These metrics indicate a high level of reach as well as audience engagement.

Key outputs of the campaign included three thematic videos, each focusing on a specific large carnivore species (lynx, bear and wolf). The video content was optimised for social media distribution and simultaneously embedded on the organization's website as a supporting educational tool.

The campaign also featured an interactive quiz aimed at identifying and debunking common myths and misinformation about large carnivores. In addition, it included a series of social media posts

and a set of banners designed for performance marketing campaigns on platforms such as Meta and Google Ads.

Figure 10 - Infographics issued within the LECA digital campaign.

Case study from the Slovak Karst pilot area on active involvement of hunters

Foresters and hunters represent one of the most important stakeholder groups, particularly in the Slovak Karst pilot area, where an extensive lynx monitoring program using camera traps was implemented. Key institutions involved included Forests of the Slovak Republic (Eastern regional unit) and the Rožňava Regional Hunting Chamber, alongside a broad network of stakeholders such as the national park administration, municipal land associations, private landowners, farmers, and individual hunting ground users.

Given that Forests of the Slovak Republic manages a substantial portion of the pilot territory including both forest lands and hunting grounds and that the Rožňava Regional Hunting Chamber

brings together around 40 hunting grounds across the region, their early involvement was essential for the successful rollout of field activities. During the preparatory phase, several expert consultations and coordination meetings were held, culminating in the presentation of the lynx monitoring plan to hunting managers. The emphasis on open and transparent communication, particularly important given the involvement of a non-governmental conservation organization, was met with strong appreciation and helped establish mutual trust from the outset.

Throughout the implementation phase, cooperation evolved into an active and continuous exchange of knowledge and field experience. Stakeholders collaborated on camera trap deployment, shared observations from the field, and participated in joint workshops and discussions focused on improving understanding of lynx ecology and conservation needs. These interactions not only strengthened technical collaboration but also helped bridge differing perspectives between conservationists and land users.

This transparent and inclusive approach has delivered tangible benefits. Beyond supporting high-quality data collection, while fostering a sense of shared responsibility for wildlife conservation. Importantly, it has also laid the foundation for long-term partnerships, reinforcing trust and promoting sustainable coexistence between large carnivores and rural communities in the region.

Box 9. Minimum standard measures for public awareness and stakeholder engagement

Define clear campaign objectives. Set simple and measurable goals (e.g., increase reporting, reduce tolerance for poaching).

Identify and target key groups. Tailor communication to specific audiences (e.g., local communities, hunters, students).

Provide clear and accurate information. Explain what wildlife crime is, legal protections, and consequences of illegal killing.

Use simple, evidence-based messaging. Ensure communication is factual, understandable, and avoids misinformation.

Ensure culturally sensitive communication. Respect local contexts and avoid stigmatising communities.

Establish basic reporting mechanisms. Provide clear instructions on how and where to report suspected illegal activities.

Coordinate with relevant institutions. Align messaging between authorities to ensure consistency and credibility.

Communicate selected enforcement outcomes. Share information on successfully prosecuted cases, without compromising investigations.

Use basic outreach channels. Disseminate information through local media, meetings, and public platforms.

Monitor basic campaign results. Track simple indicators (e.g., reach, participation, number of reports).

Box 10. Recommended measures (best practice) for public awareness and stakeholder engagement

Apply behaviour-change communication strategies. Focus on shifting attitudes and reducing social acceptance of poaching.

Base campaigns on local context and research. Use surveys or consultations to understand attitudes, conflicts, and motivations.

Develop targeted and tailored messaging. Adapt content to specific stakeholder groups and real-life situations.

Provide secure and accessible reporting tools. Ensure anonymous or confidential reporting options to build trust.

Engage stakeholders as active partners. Involve hunters, local communities, and other groups in monitoring and prevention.

Strengthen collaboration with media. Work with journalists to communicate accurate and impactful messages.

Use trusted local actors and influencers. Engage respected individuals to increase credibility and outreach.

Promote participatory monitoring approaches. Support community-based observation and reporting systems. Use specialised apps developed for these purposes (e.g., CarniTrack).

Integrate awareness with education activities. Include schools, workshops, and long-term learning initiatives.

Evaluate impact and adapt strategies continuously. Use feedback, surveys, and data to improve campaigns over time.

3. Lessons Learned – Risks & Recommendations

The implementation of activities aimed at improving the investigation and prosecution of large carnivore poaching in the Carpathians has generated important insights into systemic weaknesses, operational risks, and opportunities for improvement. Experience gained through cross-border seminars, surveys of police investigators, stakeholder consultations, and the analysis of real cases has highlighted both structural challenges and practical solutions. These lessons learned provide a solid foundation for strengthening law enforcement under Strategic Objective #4 of the Carpathian Action Plan.

One of the most significant risks identified is the persistent lack of sufficient and admissible evidence. Wildlife crimes often occur in remote areas, where improper crime scene management, delayed forensic involvement, or loss of biological material can significantly weaken cases. Without robust forensic support, investigations may be downgraded, reclassified as lesser offences, or discontinued altogether due to insufficient proof, thereby limiting the overall effectiveness of enforcement efforts.

A second major risk lies in inconsistencies within legal frameworks. Variations in legal definitions, thresholds for criminal liability, and the level and type of penalties can undermine deterrence and create uncertainty in enforcement. A useful criterion for distinguishing the seriousness of an illegal act is the determination of the social value of large carnivores, as defined by law, encompassing their cultural, social, and biological importance. Additional factors, such as the number of individuals killed or traded and repeat offending (recidivism), should also be taken into account. Clear and unambiguous criteria for assessing the seriousness of offences are essential for effective law enforcement. At the same time, penalties must be both proportionate and enforceable. Financial sanctions require consistent enforcement mechanisms; where enforcement is weak or absent, their deterrent value is significantly reduced. In this context, non-monetary penalties, such as long-term or lifetime bans on hunting or related activities, may provide an important complementary deterrent.

Institutional fragmentation represents another systemic risk. Responsibilities are often distributed across multiple authorities, including police, environmental agencies, hunting administrations, and customs services, without sufficiently structured coordination mechanisms. Limited data sharing and the absence of centralised information systems further constrain strategic analysis and cross-border cooperation. Given that large carnivore populations and illegal activities frequently extend across national borders, insufficient transnational coordination can allow offenders to exploit jurisdictional gaps.

Capacity-related risks are also significant. Limited specialised training, combined with high staff turnover, affects the quality and consistency of investigations. While there is clear demand for training in areas such as forensic techniques, crime scene management, and legal qualification of offences, ensuring the long-term sustainability of specialisation remains a challenge. This applies

not only to investigators but also to prosecutors and other law enforcement authorities involved in the protection of large carnivores.

Finally, social tolerance or passive acceptance of poaching in certain communities constitutes a long-term risk. Where illegal killing is perceived as justified or harmless, reporting rates remain low and enforcement becomes more difficult, ultimately weakening the deterrent effect of existing measures.

Recent legislative developments in Slovakia illustrate how these risks can materialise in practice. Amendments to the Criminal Code and other generally applicable legal regulations for nature conservation increased the threshold for criminal liability for harming or killing a protected animal from €2,660 to €7,000, while at the same time reducing the officially assigned societal value of these species. Taken together, these changes significantly narrow the scope for criminal prosecution, increasing the likelihood that illegal killings are treated as minor offences or remain unpunished.

The situation is further complicated by inconsistencies between the Nature Conservation Act and the Hunting Act. The reclassification of the grey wolf from a strictly protected species to one that may be hunted under a quota system during defined periods has introduced regulatory ambiguity and weakened the clarity of enforcement. Available analyses indicate that culling has not consistently targeted areas with the highest levels of damage and has, in some cases, taken place near protected areas, raising concerns about coherence with conservation objectives.

In the case of the brown bear, a special management regime was introduced to allow the culling of so-called problematic individuals. However, the permitting process has proven legally contentious. Court rulings have found that certain permits issued by the Ministry of the Environment were insufficiently justified, effectively allowing for broad interpretation of when lethal intervention is necessary. This creates legal uncertainty and increases the risk that such measures are applied inconsistently or without adequate evidence.

Overall, the Slovak case demonstrates how a combination of increased legal thresholds, reduced species valuation, and inconsistencies across sectoral legislation can weaken enforcement, reduce deterrence, and create space for discretionary or insufficiently justified decision-making. It underscores the importance of maintaining clear, coherent, and enforceable legal frameworks as a prerequisite for effective wildlife crime prevention and prosecution.

Summary of key potential risks and recommendations for their mitigation

Risk/ Obstacle	Category	Description	Impact severity	Mitigation measures	Responsible Actor(s)	Key actors
Regulatory Fragmentation	Legal / Policy	Inconsistent regulations across regions may delay implementation or reduce effectiveness.	High Compromises policy coherence, delays implementation, and increases administrative complexity.	Harmonise regulations, establish cross-regional coordination mechanisms, and provide guidance documents.	Relevant Ministries / Regulatory Bodies	Regional authorities, industry associations
Funding –Volatility	Financial	Unpredictable funding allocations may cause project delays or scaling issues.	High Leads to project interruptions, limits resource allocation, and undermines long-term planning.	Diversify funding sources, establish contingency reserves, and regular budget reviews.	Ministry of Finance / Programme Management	Donors, budget oversight committees
Stakeholder Non-Alignment	Political / Organisational	Key stakeholders may have conflicting priorities, leading to delays or reduced policy adoption.	Medium Weakens coordination, slows decision-making, and risks policy weakening.	Conduct stakeholder mapping, organise coordination workshops, establish consensus-building forums.	Lead Policy Unit / Project Office	NGOs, private sector partners, local governments
Technology / Infrastructure Gaps	Technical / Operational	Lack of required technology or infrastructure may hinder policy execution.	Medium Restricts operational efficiency, delays service delivery, and increases implementation costs.	Invest in infrastructure, provide technical assistance and training, pilot solutions before scaling.	IT / Infrastructure Department	Vendors, technical partners, local implementers
Public Resistance	Social / Reputational	Citizens may resist changes due to lack of awareness or perceived negative impacts due to insufficient knowledge or misinformation circulating in the society..	Medium Reduces adoption rates, damages trust, and generates negative public perception.	Run awareness campaigns, involve communities in consultation, implement phased rollout.	Communications & Outreach Division	Civil society, media, community leaders

Conclusion

The experience gained demonstrates that combating large carnivore poaching requires a comprehensive and coordinated approach combining legal reform, institutional strengthening, forensic capacity, data management, and community engagement. Addressing the identified risks through targeted recommendations will enhance the effectiveness of investigations, increase conviction rates, and contribute to the long-term protection of large carnivores in the Carpathians. Sustainable conservation depends not only on ecological measures but also on a strong and consistent rule of law.

4. Material Relevant to Case Studies from LECA Cross-border and Reference Areas

Operational approach to identifying high-risk areas

The identification of areas with a high concentration or probability of illegal killing should follow a structured, repeatable workflow that links data collection with concrete enforcement and prevention actions.

Step 1: Data collection (multi-source input)

Authorities should systematically collect and consolidate data from three main categories:

- **Crime and law enforcement data**
  Records of detected poaching incidents (historical and recent), types of offences, methods used, confiscated trophies, forensic reports, and ongoing investigations.

- **Biological and environmental data**
  Population monitoring data, telemetry (GPS tracking), genetic analyses, camera trap records, and wildlife mortality reports. Particular attention should be paid to irregular patterns, such as sudden disappearances or unexplained signal loss.

- **Social and institutional data**
  Distribution and capacity of enforcement personnel, presence of trained staff or volunteers, intensity of hunting activity, livestock depredation records, and local attitudes toward wildlife and law enforcement.

Step 2: Data integration and analysis

Collected data should be standardised and integrated into a common analytical framework. Key analytical outputs include:

- **Spatial analysis**: mapping incidents and indicators to identify geographic clusters (hotspots)
- **Temporal analysis**: identifying seasonal patterns or recurring time periods of increased risk
- **Pattern recognition**: linking methods, locations, and potential repeat offenders
- **Correlation analysis**: assessing relationships between illegal killing and risk factors (e.g.,, livestock damage, low enforcement presence)

Combining enforcement data with ecological monitoring is particularly valuable for detecting indirect signals of illegal activity.

Step 3: Risk assessment and prioritisation

Based on the analysis, authorities should:

- Classify areas into **risk levels** (e.g.,, high, medium, low)
- Identify **priority zones** for intervention
- Detect **emerging risks** (new locations or changing patterns)

This step transforms raw data into actionable intelligence.

Step 4: Outputs

The results of the analysis should be translated into clear, operational tools:

- **Risk maps** showing hotspots and priority areas
- **Trend reports** (spatial and temporal developments)
- **Profiles of risk factors** (e.g.,, typical locations, methods, timing)
- **Early warning indicators** for potential illegal activity

These outputs should be regularly updated and shared with relevant authorities.

Step 5: Operational use (link to action)

Risk identification should directly inform:

- **Targeted patrol planning** (increased presence in high-risk areas)
- **Focused investigations** (prioritising high-probability cases)
- **Preventive measures** (e.g.,, outreach in affected communities, livestock protection support)
- **Resource allocation** (deployment of specialised staff and technical tools)
- **Cross-border coordination** (joint actions in shared risk zones)

Practical checklist for authorities

To support implementation, the following checklist can be used:

- Establish or designate a **central coordination unit** responsible for data integration
- Ensure **standardised data collection protocols** across institutions

- Develop or use an **interoperable database system**
- Regularly produce and update **risk maps and analytical reports**
- Integrate **forensic, ecological, and enforcement data**
- Create **confidential reporting channels** for local stakeholders
- Create **database for indirect evidence**
- Strengthen **cross-border data exchange mechanisms**
- Use risk analysis outputs to guide **operational planning and prevention strategies**
- Communicate clearly that risk mapping is a **technical tool**, not a means of stigmatisation

Questionnaire for police investigators

QUESTIONNAIRE FOR INVESTIGATORS

FOCUSING ON POACHING INVESTIGATIONS

This anonymous questionnaire is for police investigators. Its aim is to gather knowledge about experiences with poaching, especially poaching targeting large carnivores (bear, wolf, lynx).

The questionnaire was developed within the framework of the international project LECA - Promoting Coexistence and Conservation of Large Carnivores in the Carpathians. Its aim is to better understand the poaching problem in Slovakia, the Czech Republic, Poland, Hungary and Ukraine and in the border areas of these countries. Given the key position of the police in detecting this illegal activity, it is important for us to know your views and experiences, which can help shape realistic and common solutions to the problems.

The questionnaire is anonymous and does not collect any personally identifiable information. The questionnaire will take you approximately 5-10 minutes to complete.

Thank you in advance for completing the questionnaire!

INVESTIGATION EXPERIENCE

We are interested in your experience to date in investigating illegal activities against the environment.

How many years have you been investigating environmental crimes?

- 0-5 years
- 6-15 years
- 16-30 years
- More than 30 years
- I don't know

What is your job title/position?

- Investigator
- Police officer in charge of carrying out operational and search activities
- Criminalistics technician
- Management Officer
- Dog handler
- Other

EXPERIENCE WITH POACHING

Tell us about your experience with poaching so far and to what extent you perceive it as a problem.

To what extent do you perceive poaching as an issue in your country? (Please indicate on a scale of 1-5)

(1) Poaching is not an issue
(2) It is a negligible/marginal issue
(3) It is an issue

(4) It is a more serious issue
(5) It is a very serious issue

To what extent do you perceive large carnivore poaching as an issue in the region where you work? (Please indicate on a scale of 1-5)

(1) Poaching is not an issue
(2) It is a negligible/marginal issue
(3) It is an issue
(4) It is a more serious issue
(5) It is a very serious issue

How often do you encounter large carnivore poaching cases in your practice?

- Regularly (more than 5 cases per year)
- Occasionally (1-5 cases per year)
- Rarely (less than 1 case per year)
- I do not encounter such cases

MOTIVES AND POACHERS

In this section we are interested in what are the main motives of poaching, which species are most often the subject of poaching, who are the perpetrators and in what way they commit poaching.

What species are most often the subject of illegal activities in poaching cases that you encounter in practice in your region?

- Game - deer and red deer
- Large carnivores (bear, wolf, lynx)
- Birds of prey
- Fish
- Other (please specify):.....

What do you think is the most common motive of poaching of the species listed below? *(You can also select multiple answers for each species. Mark them in the cell with an X.)*

	Lynx	**Wolf**	**Bear**	**Game**
Trophy				
Food (meat)				
Financial gain (monetary provision for the trophy, meat, e.g.,)				
Fun, adrenalin, adventure				

Damages on livestock or property (e.g., beehives, fencing), damages on crops (e.g., corn)				
Protection (fear from the attack, etc.)				
Obstacles in gaining shooting permit legally				
Status / recognition in the community				
Traditions, habits, superstitions				
Other				
I don't know				

In your opinion, which groups do poachers most often come from in your region? (You can choose more than one answer.)

- Local inhabitants
- People from other regions and districts
- People from abroad
- People with low income and people from socially disadvantaged groups
- Financially well positioned people, people with high society status
- Hunters or members of hunting association
- Fishermen
- Organised groups
- Other (please specify): .....
- I don't know

Have you also encountered poaching in your region committed by organised or criminal groups?

- Yes
- No
- I'm not aware of it

What forms of poaching do you encounter most often in your region:

- Hunting without a permit
- Prohibited method of hunting
- Hunting in periods when the species is protected
- Unauthorised possession or transfer of game/fish to self/other
- Other (specify): .....

What prohibited hunting methods do you encounter most often in your region?

- Poisoning
- Trapping

- Hunting with unauthorised weapons
- Hunting from motor vehicles, aircraft or other means of transport
- Hunting with acoustic devices, artificial lighting, etc.
- Other (please specify): .....

REPORTING POACHING

We would like to know how information on poaching reaches you.

From what sources do you most often receive information about poaching in your region?
(You can select multiple answers, please mark only the most relevant ones)

- Superordinate organisations/units
- State nature conservation organisations
- Hunters, hunting associations
- Fishermen, fishing associations, etc.
- Civic associations, non-profit organisations
- Local government, municipalities
- Public
- Anonymous reports
- Other (please specify): .....

Do you think the public in your region is willing to report poaching incidents?

- Yes
- Rather yes
- Rather not
- Not
- I don't know

If you agree with the statement that the public has reduced incentive to report poaching, why do you think that is?
(You can select multiple answers, please mark only the most relevant ones)

- Witness' fear of retaliation
- Witness' fear of condemnation by the community or cohesion with the group (e.g., if the poacher is a hunter, neighbour, etc.)
- Distrust in the police
- Reluctance or disinterest
- Ignorance (not knowing that it is an illegal activity)
- Unawareness of how and where to report cases)
- Reluctance to report illegally hunted game by hunters due to the reduction of hunting numbers of animals
- I don't think the public has reduced incentive.
- Other: .....

BARRIERS TO INVESTIGATION

What do you perceive as the most serious problems in investigating poaching?

What are the most common problems you encounter when investigating poaching?
(You can select multiple answers, please mark only the most relevant ones)

- Lack of evidence
- Rapidly expiring evidence, complexity of investigations in nature

- Lack of staff capacity
- Lack of financial resources
- Insufficient technical equipment
- Insufficient legislation
- Insufficient application of legislation in practice
- Insufficient professional qualifications within the police
- Lack of external experts (e.g., experts)
- Insufficient cooperation with other institutions
- Low priority compared to other types of crime
- Other (please specify): .....

When investigating poaching, do you cooperate with other institutions (e.g., SOP SR, veterinary administration, others...) or external experts?

- Yes, often
- Yes, rarely
- No

How often do you also encounter illegal arming in poaching cases?

- Very often
- Often
- Rarely
- I don't encounter

Do you encounter pressure from any interest groups when investigating poaching cases?

- Yes, often
- Yes, rarely
- No

Do you usually get feedback on how the case you investigated proceeded further?

- Yes, I receive feedback on the progress of my case
- Yes, but only partially (e.g., only from the prosecutor, but I don't know how the case developed in court, etc.)
- No, I don't receive information about the development of the case retrospectively

SANCTIONS

We are interested in how you rate the penalties for poaching? Do they have a sufficient deterrent effect on offenders?

What is your opinion on the penalties/sanctions associated with poaching?

- They are inadequate, do not deter offenders
- They are adequate
- They are disproportionately severe

NEEDS AND RECOMMENDATIONS

We would like to know what your recommendations are and whether you are keen to increase your knowledge of poaching investigations.

What do you think would be most helpful to improve poaching prevention?

(You can select multiple answers)

- Monitoring of selected areas
- Use of innovative technologies
- Adequate deterrent penalties
- Consistent enforcement of claiming damage (by the state or the damaged party)
- Strict laws and their consistent application in practice
- Increasing the capacity of nature guards, game guards, fishery guards
- Greater involvement of local communities and the public
- Improved cooperation and information exchange between different actors, institutions
- Educational campaigns - towards the public but also towards professional staff (e.g., nature protection agencies, hunting guards, etc.)
- Improve the way in which cases are reported by the public (e.g., anonymously, etc.)
- Media coverage of the problem and of successful cases
- Other (please specify): .....

Which of the following changes would you agree with? (You can select multiple answers)

- Make it mandatory to have comparative biological material at exemption shootings
- Trophies to be marked with an unmistakable mark and seal
- Introduce a public record of trophies
- Other (please specify):.....

Would you welcome training on how to investigate poaching incidents?

- Yes
- No
- I don't know

What type of training would you like to take part in?

- Crime scene investigation
- Forensic techniques
- Legislation
- Biology, species identification, etc.
- Use of cybernetics
- Other (please specify): .....
- None, I am not interested in such training

DATA ABOUT THE RESPONDENT

The following questions collect information about the respondent., you They will help us to better understand how attitudes and experiences differ between various groups of respondents. These data are anonymous and will only be used for analysis purposes.

Do you work in a region where large carnivores (bear, wolf, lynx) or any of them are present?

- Yes, all three
- Yes, only some
- No

- I don't know

Are you currently, or have you ever been, an active hunter?

- Yes I am
- Yes I was, but I'm not anymore
- I am not, nor have I ever been

What is your age

- Under 24
- 25 - 44 years old
- 45 - 64 years
- 65 years and over

Please indicate your sex

- Female
- Male

In which category would you put the place where you live?

- City
- Village
- Solitude or scattered settlements
- Other (please specify): .....

Please indicate your highest level of education

- Primary
- Secondary
- First level university
- Second level university
- I don't wish to indicate

Thank you for taking the time to complete the questionnaire. Your answers will help us better understand and seek the effective solution to the issue of poaching.

The LECA Project Team

Questionnaire for police investigators: Key findings

Respondents had one month to complete the questionnaire (August - September 2025). A total of 173 police officers completed the survey. The majority of responses (93) came from Poland, 73 from the Slovak–Czech area, with additional responses from Hungary and Ukraine. In Poland, the survey remained open until December 2025 due to a low number of initial responses. This proved to be a good decision, as 93 responses were collected for this country.

Key findings include:

82.5% of respondents (mainly from SK-CZ area) encounter poaching of game species; 30% encounter poaching of large carnivores. Lack of evidence (77.5%) is considered the most significant obstacle in investigations. 62.5% believe current penalties are insufficient to deter offenders. 80% frequently cooperate with other institutions or external experts. 87.5% would welcome additional training.

Investigators identified trophy hunting, retaliation for damage, and thrill-seeking as common motives for large carnivore poaching. Hunting without permit and the use of prohibited methods were reported as the most frequent offences. The survey also revealed strong support for improved evidence systems, including biological reference sampling, trophy marking and sealing, and public trophy registers.

In Poland, 62.3% of respondents perceived poaching as an issue, with 17.2% considering large carnivore poaching a major concern. Fish and game species were most often targeted (59.1% each), while large carnivores accounted for 9.7% of cases. Insufficient evidence (44.1%) and inadequate technical equipment (30.1%) were reported as key challenges, and 63.5% considered existing penalties inadequate. A majority (72%) expressed interest in additional training, particularly in forensic investigation, legislation, and species identification, highlighting the importance of expert collaboration and peer learning.

Stakeholder survey questionnaire

Project LECA: Supporting the coexistence and conservation of Carpathian LargE CArnivores

Survey questionnaire

The Carpathians are home to large populations of lynx, wolves and bears. The LECA project aims at making large carnivore conservation in the Carpathians more effective and sustainable. Our goal is to introduce a consistent and efficient monitoring approach while involving local stakeholders as well as international partners. Harmonised transboundary monitoring approach will result in current information on populations coupled with proposals for effective conflict and poaching prevention measures. Cooperation is key to our project. Large carnivore protection and the conflict that may arise between these animals and human interests cannot, however, function sustainably without local as well as international cooperation. The LECA project partners consider involvement of local stakeholders crucial to both monitoring approach formulation and its implementation.

This survey focuses on local stakeholders, their opinions, information and experiences they have with large carinores. The aim is to gather information for future project activities, further cooperation and more intensive involvement of relevant stakeholders.

The survey consists of six thematic sections and contains closed multiple choice questions as well as open questions without suggested answers. Completing the questionnaire takes approximately 15-20 minutes of time. The survey is conducted in Slovakia, Czech Republic, Hungary and Poland.

The survey serves primarily for the LECA project internal purposes. Since we will conduct the survey again after two years, we kindly ask you to provide your email contact information so we can send you the questionnaire again in the future. The survey is **anonymous** and your name or email will not be linked to your answers. We will analyse and evaluate the answers separated from your contact information. By filling in the questionnaire you consent to include your answers to analyses and to send you the questionnaire in the second round of surveying.

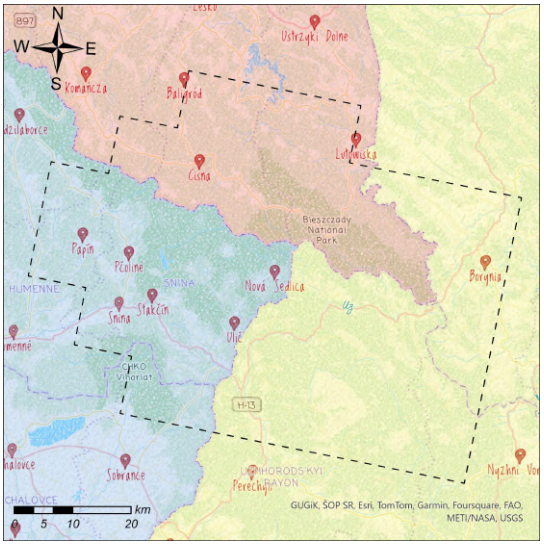
Thank you very much for filling in the questionnaire.

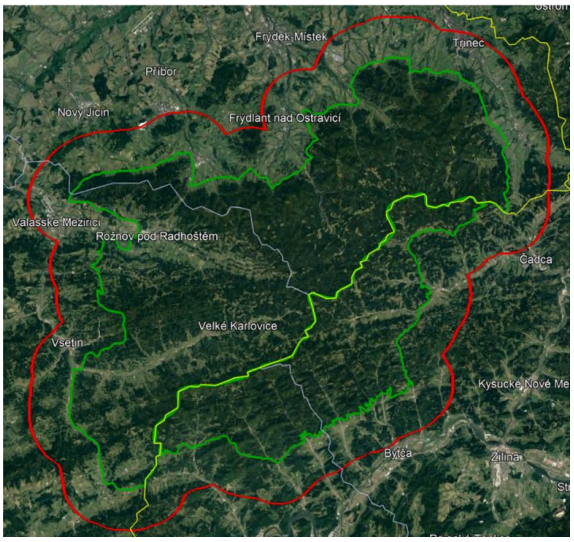
If you want to find out more about LECA, visit the official project website here https://www.interreg-central.eu/projects/leca/.

Contact responsible for the survey

******

This is the pilot area where we conduct this survey (marked with red line). Do you live in this area?





Yes No

If you do not live in this area, approximately how much time do you spend here, how often do you come?

None, I'm not spending any time in the area
Once a year
Once in a month
Once in a week
Several times a week

SECTION 1 - GENERAL IDEA ABOUT LARGE CARNIVORES (LCs) IN THE AREA

Are there large carnivores (LCs), wolf, lynx, bear, present in your local area (indicated in the picture above)?

Yes No

Which of the LCs is currently present in your local area?

	Does not occur here	Sometimes enters local area	Permanently lives in local area	I don't know
Wolf	1	2	3	0
Lynx	1	2	3	0
Bear	1	2	3	0

To your knowledge, over the past ten years have the numbers of these animals changed in this area? If so, how have the numbers changed?

	Decreased greatly	Decreased somewhat	Remained the same	Increased somewhat	Increased greatly	Don't know
Wolf	1	2	3	4	5	0
Lynx	1	2	3	4	5	0
Bear	1	2	3	4	5	0

In this area have you ever seen any of the following animals?

	No, never	Yes
Wolf	0	1
Lynx	0	1
Bear	0	1

In your opinion, do large carnivores have a significant impact on the environment, regulation of biodiversity?

	Positive	Negative	Neutral or no significant effect	Don't know/Can't estimate
Wolf	1	2	3	0
Lynx	1	2	3	0
Bear	1	2	3	0

In your opinion, do large carnivores have a significant impact on regulation of other species?

	Positive	Negative	Neutral or no significant effect	Don't know/Can't estimate
Wolf	1	2	3	0
Lynx	1	2	3	0
Bear	1	2	3	0

How exactly do you think large carnivores impact the environment and other species? Could you be more specific?
Answer: _____

Do you think that these animals can represent a physical threat to humans?

	Yes	No	It depends on the situation	I don't know
Wolf	1	2	3	0
Lynx	1	2	3	0
Bear	1	2	3	0

SECTION 2 - HUNTING AND LCs PROTECTION

How do you feel about the fact that the following animals live in this area?

	Very bad	Bad	Neither bad nor good	Good	Very good
Wolf	1	2	3	4	5
Lynx	1	2	3	4	5
Bear	1	2	3	4	5

How would you feel if the numbers of these animals in your local area increase?

	Very bad	Bad	Neither bad nor good	Good	Very good
Wolf	1	2	3	4	5
Lynx	1	2	3	4	5
Bear	1	2	3	4	5

What do you think the increase of LCs populations would result in? What would it cause?
Answer: _____

How would you feel if the numbers of these animals in your local area decrease?

	Very bad	Bad	Neither bad nor good	Good	Very good
Wolf	1	2	3	4	5
Lynx	1	2	3	4	5
Bear	1	2	3	4	5

What do you think the decrease of LCs populations would result in? What would it cause?
Answer: _____

Do you think LCs should be legally protected under the current circumstances?

	Definitely yes	Rather yes	Rather no	Definitely not	Don't know
Wolf	1	2	4	5	0
Lynx	1	2	4	5	0
Bear	1	2	4	5	0

Do you think the current national legislation on LCs protection is sufficient?

	Definitely yes	Rather yes	Rather no	Definitely not	Don't know
Wolf	1	2	4	5	0
Lynx	1	2	4	5	0
Bear	1	2	4	5	0

Do you think the implementation of current national legislation on LCs protection is sufficient?

	Definitely yes	Rather yes	Rather no	Definitely not	Don't know
Wolf	1	2	4	5	0
Lynx	1	2	4	5	0
Bear	1	2	4	5	0

If not, what do you think could be done differently?
Answer: _____

Do you think it is necessary to control the further spread of LCs and its related effects by hunting?

	Definitely yes	Rather yes	Rather no	Definitely not	Don't know
Wolf	1	2	4	5	0
Lynx	1	2	4	5	0
Bear	1	2	4	5	0

Have you been, or are you currently, actively involved in any of the following activities? (You can choose multiple answers).

- Taking part in the legislative process towards LCs protection (for example, attending round tables, commenting on proposed law, preparing expert statements and proposals for legislators).
- Taking part in the LCs protection implementation on the communal/local level.
- Taking part in implementation of preventive measures.

Other (specify): _____

How do you evaluate your involvement?

I'm very satisfied, I was fully involved	I'm satisfied but I could have been involved more	I'm dissatisfied, I could have been involved more	I'm neither satisfied, nor dissatisfied, I didn't want to be involved	Not applicable
1	2	3	4	0

What would you need/what would help you in order to get involved to the level you are satisfied with your involvement?
Answer: _____

SECTION 3 - COOPERATION AND MONITORING

Do you think it is necessary to monitor LCs populations?

	Definitely yes	Rather yes	Rather no	Definitely not	Don't know
Wolf	1	2	4	5	0
Lynx	1	2	4	5	0
Bear	1	2	4	5	0

Do you cooperate with other people/institutions in monitoring LCs populations?

Yes	No	It depends on the situation
1	2	3

If you only cooperate occasionally or depending on the situation, could you be more specific? What are the situations when you cooperate with other people/institutions in LCs monitoring?
Answer: _____

Do you share information about LCs populations with others (individuals or institutions)?

Yes	No	It depends on the situation
1	2	3

Do you cooperate and/or share information about LCs populations across borders (with individuals/institutions abroad)?

Yes	No	It depends on the situation
1	2	3

What are the institutions/people/groups you cooperate and share information with?
Answer: _____

What do you think are the biggest problems that impede cooperation and sharing of information about LCs populations?
Answer: _____

How satisfied are you with the support you get (finances, personnel, networks etc.) to cooperate in LCs monitoring?

Very satisfied	Fairly satisfied	Dissatisfied	I don't know/Can't tell
1	2	3	0

What would you need/what would help you to get better involved in the LCs monitoring?

Answer: _____

SECTION 4 - DAMAGE CONTROL

In this area, do you think that LCs frequently prey on livestock such as sheep, goats, cattle, other?

	Definitely yes	Rather yes	Rather no	Definitely not	Don't know/Can't estimate
Wolf	1	2	4	5	0
Lynx	1	2	4	5	0
Bear	1	2	4	5	0

In this area, do you think that LCs cause great damage to huntable game species and potential economic loss?

	Definitely yes	Rather yes	Rather no	Definitely not	Don't know/Can't estimate
Wolf	1	2	4	5	0
Lynx	1	2	4	5	0
Bear	1	2	4	5	0

In your opinion, do LCs have a significant impact on ungulate populations regulation?

	Definitely yes	Rather yes	Rather no	Definitely not	Don't know/Can't estimate
Wolf	1	2	4	5	0
Lynx	1	2	4	5	0
Bear	1	2	4	5	0

If you think they do have an impact, how do you think LCs affect ungulate populations?

Decrease ungulates significantly	Somewhat decrease ungulates	Decrease ungulates but the effect is negligible

How concerned are you that LCs will cause you damage?

	Not at all concerned	A little concerned	Much concerned	Very much concerned
Wolf	1	2	3	4
Lynx	1	2	3	4
Bear	1	2	3	

To what extent do you agree or disagree with the following statements:

	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree	Don't know
There are benefits to living in an area with LCs	1	2	3	4	5	0
I use preventive measures to protect my property	1	2	3	4	5	0
I get adequate support (eg. financial) to take preventive measures to protect my property	1	2	3	4	5	0
Damages are an accepted fact of life when coexisting with LCs	1	2	3	4	5	0
Compensation paid for damage caused by LCs are adequate and make up for the loss incurred	1	2	3	4	5	0
The procedure for obtaining compensation is clear and easy	1	2	3	4	5	0

How concerned are you about the following?

	Not at all concerned	A little concerned	Somewhat concerned	Much concerned	Very much concerned
LCs are dangerous to humans	1	2	3	4	5
Animal attacks my property, crops, livestock and I have financial damage	1	2	3	4	5
I am not compensated for damage because it is hard to get compensation	1	2	3	4	5
I am not included in decision making about preventive measures	1	2	3	4	5
I don't have enough support in	1	2	3	4	5

preventive
measures
implementation

Do you have other concerns?
Answer: _____

Have you or anyone in your neighbourhood ever experienced damage caused by LCs?

	Yes, to me personally	Yes, to someone I know	No
Wolf			
Lynx			
Bear			

If this is applicable in your country, have you claimed compensation for the damage caused by LCs?

Yes	No	I am not aware of such compensation scheme
1	0	

How would you evaluate the support you get for preventive measures implementation?

Overall good, easy to access support	Overall alright but somewhat difficult to access support	Rather bad, difficult to access support	Overall very bad, complicated, not possible to get support	I don't know/Can't say
1	2	4	5	0

How would you evaluate the compensation return process?

Overall good, easy to access compensation	Overall alright but somewhat difficult to access compensation	Rather bad, difficult to access compensation	Overall very bad, complicated, not possible to get compensation	I don't know/Can't say
1	2	4	5	0

What do you see as the biggest problems or barriers in the compensation return process?
Answer: _____

In cases where LCs cause damage to property, crops or livestock please indicate to what extent you agree or disagree with the following measures for the three species:

	Strongly	Disagree	Neither	Agree	Strongly agree

		disagree		disagree nor agree		
Leave the wild animal alone	Wolf	1	2	3	4	5
	Lynx	1	2	3	4	5
	Bear	1	2	3	4	5
Frighten the wild animal away	Wolf	1	2	3	4	5
	Lynx	1	2	3	4	5
	Bear	1	2	3	4	5
Capture and relocate the wild animal to a new location in the hope that it will not return	Wolf	1	2	3	4	5
	Lynx	1	2	3	4	5
	Bear	1	2	3	4	5
Shoot the animal	Wolf	1	2	3	4	5
	Lynx	1	2	3	4	5
	Bear	1	2	3	4	5
Educate the people who live near wild animal habitat on how to avoid problems by taking preventative measures	Wolf	1	2	3	4	5
	Lynx	1	2	3	4	5
	Bear	1	2	3	4	5

SECTION 5 - POACHING

In your opinion, is poaching (illegal hunting) problematic and harmful?

Definitely yes	Rather yes	Rather no	Definitely not	Don't know
1	2	4	5	0

Could you be more specific? Why do you think so?
Answer: _____

In your opinion, are measures preventing poaching sufficient?

Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree	Don't know
1	2	3	4	5	0

To what extent do you agree with the following statements?

	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree	Don't know
Anti-poaching legislation is sufficient	1	2	3	4	5	0
Preventative anti-poaching information campaigns are sufficient	1	2	3	4	5	0
There are well functioning bodies both state and regional (e.g., police) dealing with poaching investigations	1	2	3	4	5	0

Do you identify any gaps in poaching prevention?
Answer: _____

If you learned that someone you know has illegally killed a lynx, wolf or bear, how would you react? (More than one answer may be selected, separate answers for each species)

	Lynx	Wolf	Bear
I would be glad			
I would feel sorry			
I would be upset			
I would try to explain to them that it was wrong			
I would report it to the police or other relevant institutions			
I would not care			

Other (please specify): _____

Do you have experience with poaching investigation (e.g.,, you announced an illegal LC kill, you were a witness, you were investigating, or consulting)
Yes No

If you do, were you satisfied with the investigation process?

Definitely yes	Rather yes	Rather no	Definitely not	Is not applicable
1	2	4	5	0

Do you identify any gaps in poaching investigation in your country?
Answer: _____

Do you cooperate with other people/institutions in poaching prevention?

Yes	No	It depends on the situation
1	2	3

If you only cooperate occasionally or depending on the situation, could you be more specific? What are the situations when you cooperate with other people/institutions in LCs poaching prevention?
Answer:_____

Do you cooperate and/or share information about poaching across borders (with individuals/institutions abroad)?

Yes	No	It depends on the situation
1	2	3

What are the institutions/people/groups you cooperate and share information with?
Answer: _____

What do you think are the biggest problems that impede cooperation and sharing information about LCs poaching and poaching prevention?
Answer: _____

How satisfied are you with the support you get (finances, personnel, networks etc.) to cooperate in LCs poaching prevention?

Very satisfied	Fairly satisfied	Dissatisfied	I don't know/Can't tell
1	2	3	0

What would you need/what would help you to get better involved in the LCs poaching prevention?
Answer: _____

SECTION 6 - RESPONDENTS

What is your sex?
Male
Female
Other

What is your age group?
15-19
20-29
30-39
40-49
50-59
60-65
66+

What is your occupation? (please circle all that apply):
Livestock owner
Herder
Farmer
Protected area staff
Forester
Police
Hunter
Tourism industry
Civil officer
Other (specify): _____

Do you work for any of the following institutions?
Mendel University in Brno
Ministry of the Environment of the Cezch Republic
Friends of the Earth Czech Republic, Carnivore Conservation Programme
State Nature Conservancy of the Slovak Republic
Technical University in Zvolen
WWF Slovakia
WWF Poland
Tatra National Park
Bükk National Park Directorate
World Woldlife Fund for Nature Hungary
Zarand Association
Slovenia Forest Service

What level of education have you completed?
Primary

Secondary
High school
University
Postgraduate

What is the field of your education? (In what field did you get your degree?)
Specify: _____

How many inhabitants does the place of your residency have?
Less than 2 000 inhabitants
2 001 - 10 000 inhabitants
10001 - 20 000 inhabitants
20 001 - 100 000 inhabitants
More than 100 000 inhabitants

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