

# Project LECA - Supporting the Coexistence and Conservation of Carpathian Large Carnivores: “Outcomes and Challenges from Cross-Border Pilot Areas”

Interreg  
CENTRAL EUROPE



Co-funded by  
the European Union

LECA

LECA - CE0100170



17th Meeting of the Carpathian Convention Working Group on Biodiversity

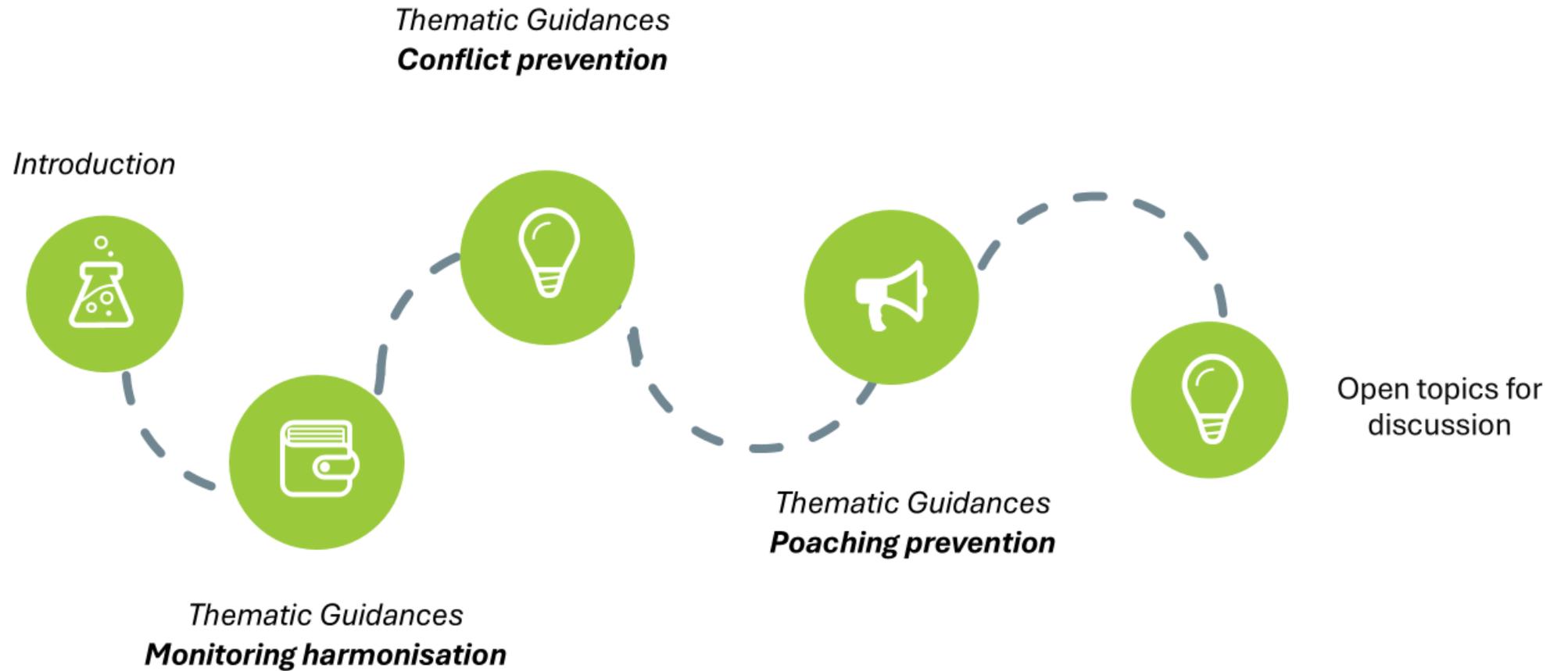
Online | 24 February 2026

Co-authors: David Sütő, WWF Hungary; Tereza Thompson, WWF Slovakia

Mgr. Martin Duľa, Ph.D.

project coordinator

Mendel University in Brno



# Introduction

- Structure and a description of selected best practises to be included within three thematic guidances
- Reflect the 3 specific objectives of Action Plan on conservation of large carnivores and ensuring ecological connectivity in the Carpathians (Papp et al. 2020)
- Best practises in light of three thematic pillars have been validated in cross-border pilot and reference activities
- Final guidance documents will be complemented by relevant scientific studies and technical reports, as well as by results and outputs from other projects focused on harmonising large carnivore monitoring, assessing demographic parameters, mitigating human–carnivore conflicts, and improving poaching detection and investigation.



## INTERNATIONAL ACTION PLAN ON CONSERVATION OF LARGE CARNIVORES AND ENSURING ECOLOGICAL CONNECTIVITY IN THE CARPATHIANS

[www.interreg-danube.eu/connectgreen](http://www.interreg-danube.eu/connectgreen)

Project co-funded by European Union Funds (ERDF, IPA)



# Monitoring harmonisation

## Introduction

- Cross-border populations of LC
- Non-harmonised monitoring across borders
- Different data quality & outputs
- Evidence-based decision based on best available monitoring & data needed – different management measures & legislation across Caprathians
- Improvement & harmonisation of monitoring & data collection needed



# Monitoring harmonisation

Selected best practices from Carpathian region and cross-border pilot areas

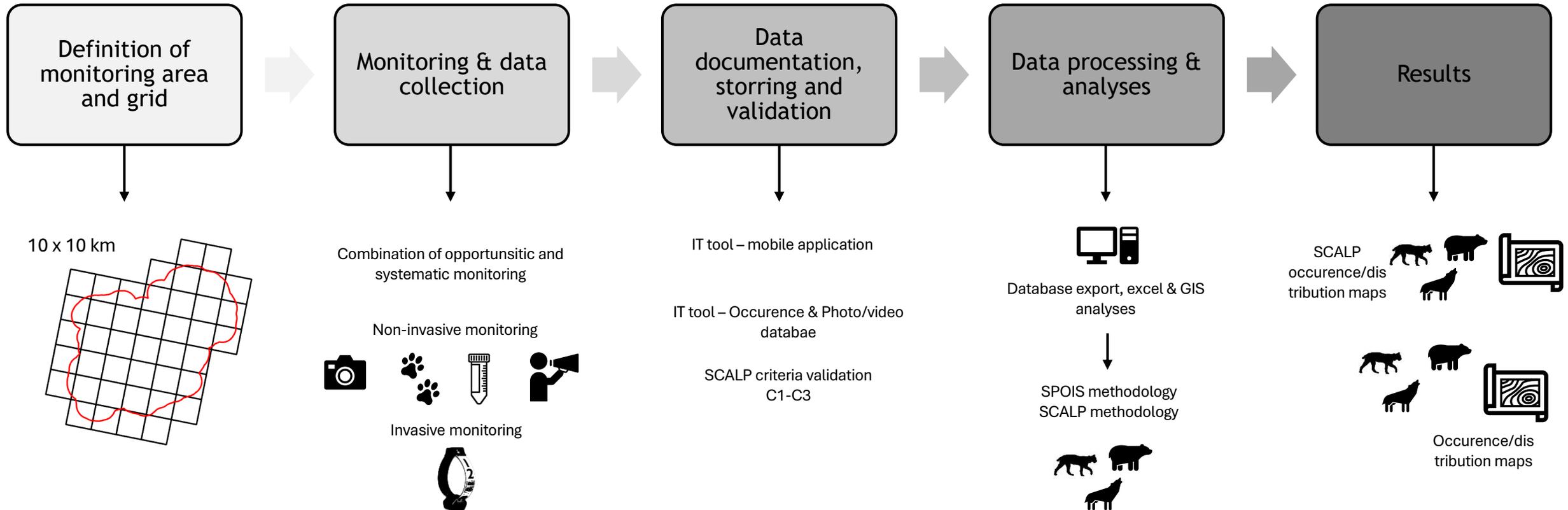
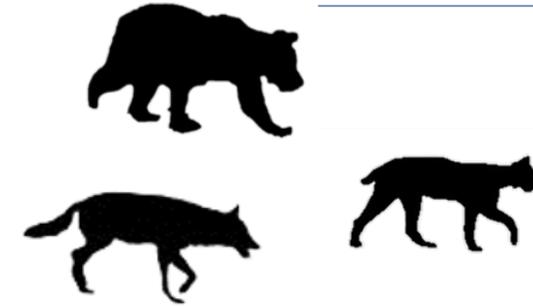
- A. Occurrence and distribution of large carnivores
- B. Integrative monitoring of wolf
- C. Intensive deterministic monitoring of lynx
- D. GPS telemetry of bear & wolf



# Monitoring harmonisation

## A. Occurrence and distribution of large carnivores

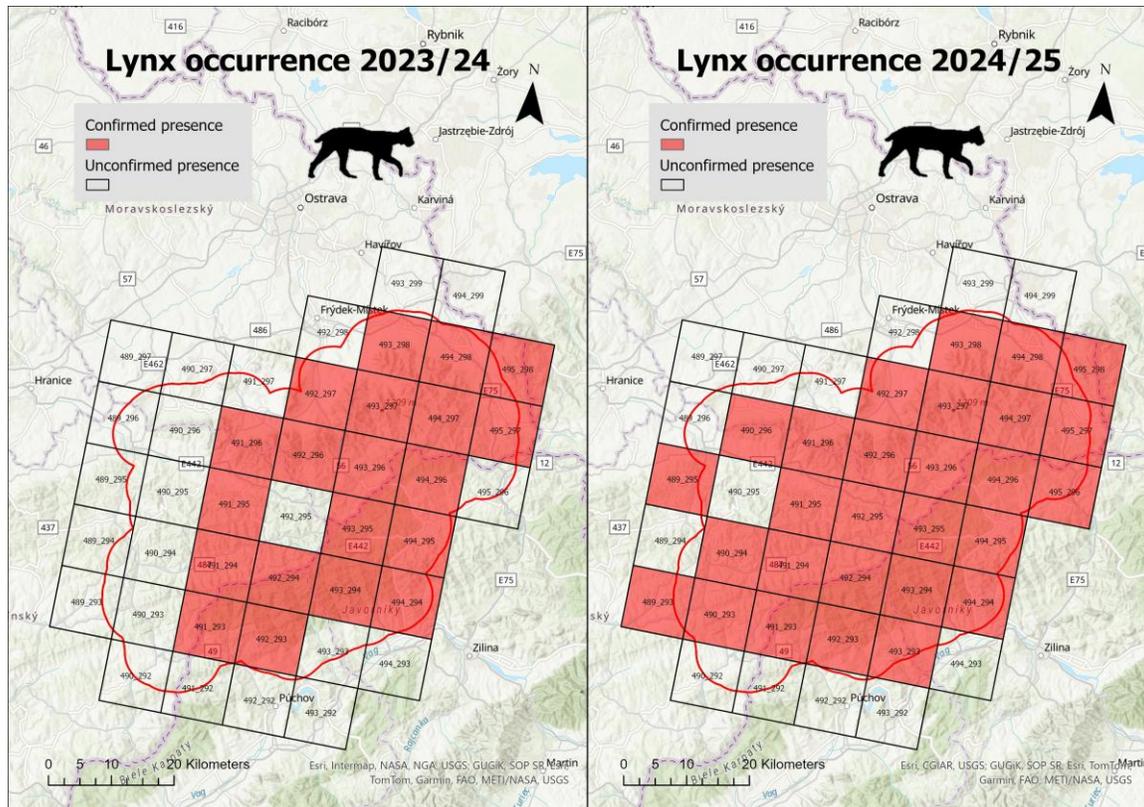
- validated & the most appropriate monitoring workflow in Beskydy-Kysuce & other cross-border pilots



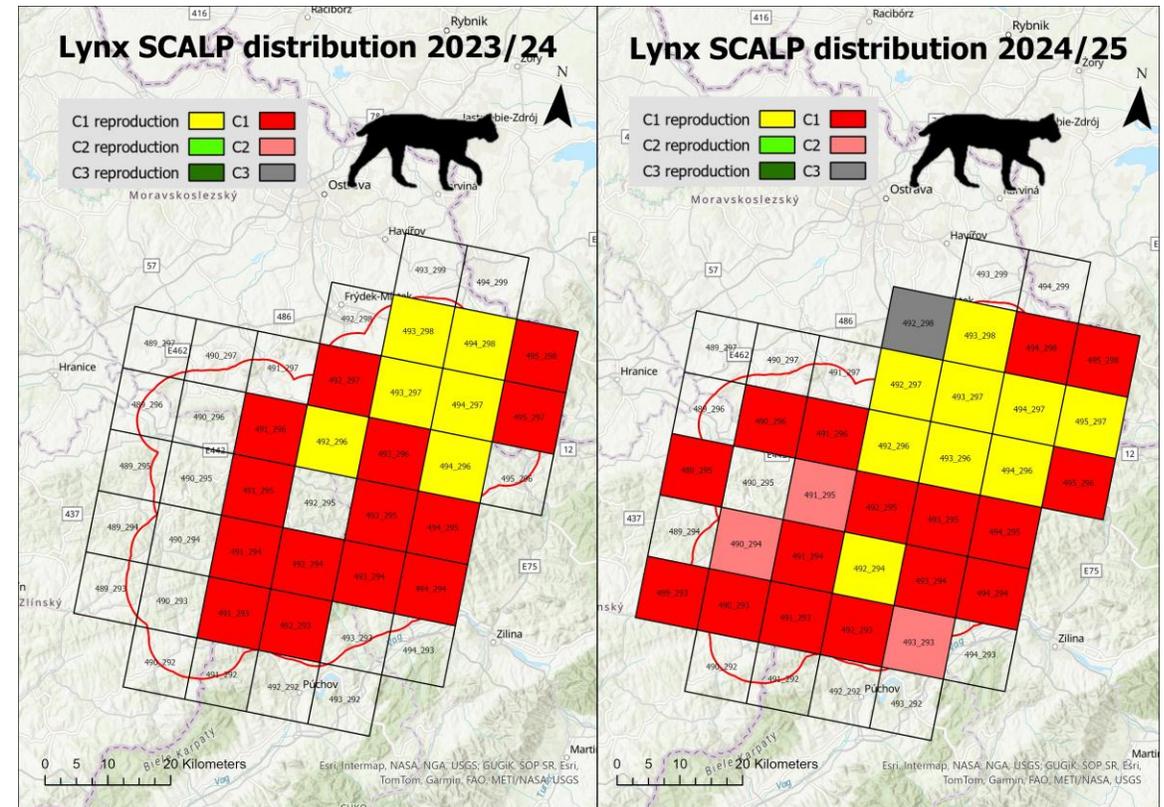
# Monitoring harmonisation

## A. Occurrence and distribution of large carnivores

- Harmonised with EU reporting standards and methodology (LCIE distribution maps, SCALP maps)
- SCALP maps applicable also for low quality input data (C3 SSCALP category)
- Involvement of volunteers & conventional monitoring forms - cost effective



Distribution maps (following Kaczensky et al. 2024)



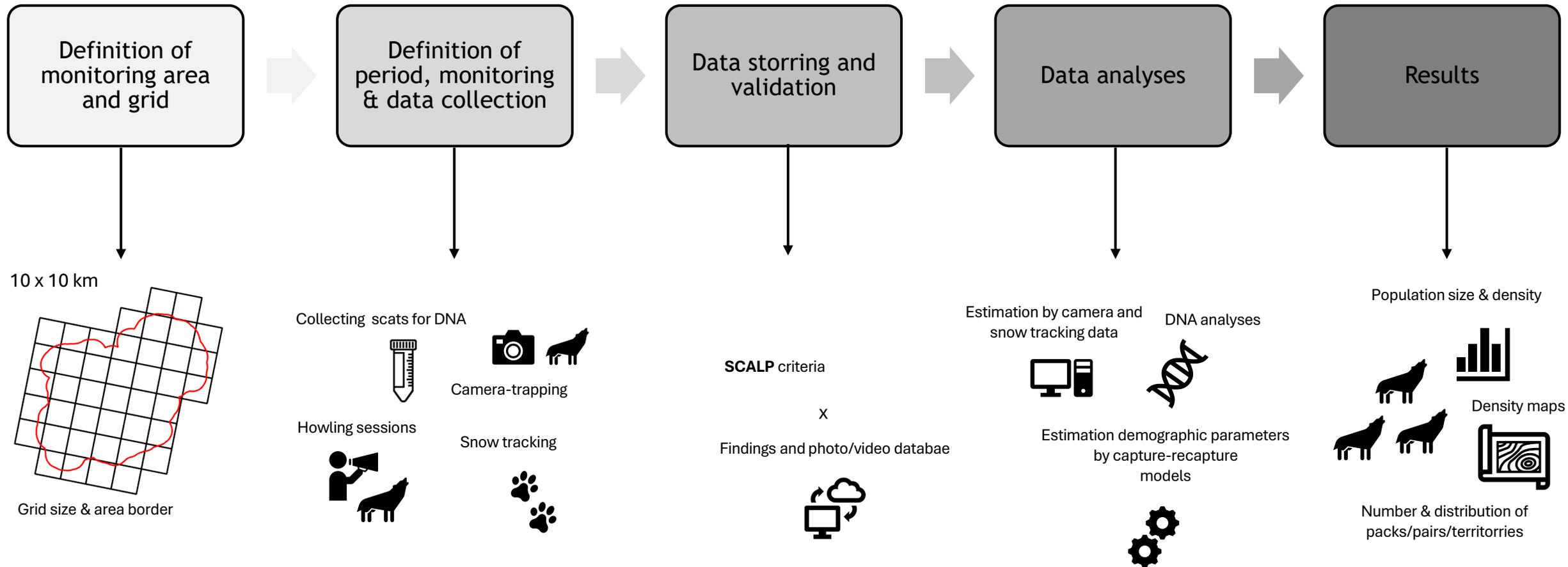
SCALP maps (following Molinari-Jobin et al. 2012; SCALP+ methodology)

# Monitoring harmonisation



## B. Integrative monitoring of wolf

- validated & the most appropriate monitoring workflow in Beskydy-Kysuce area

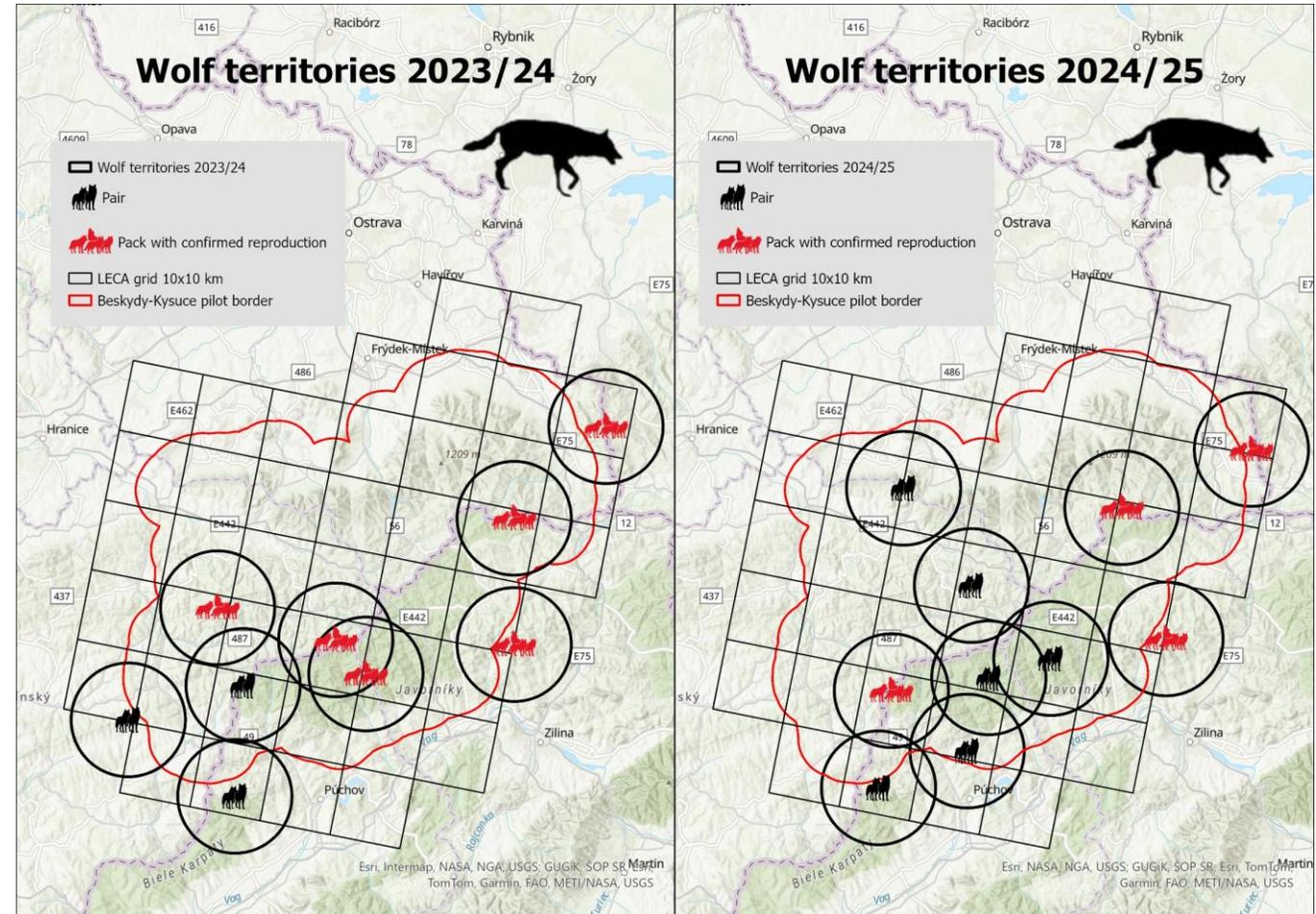
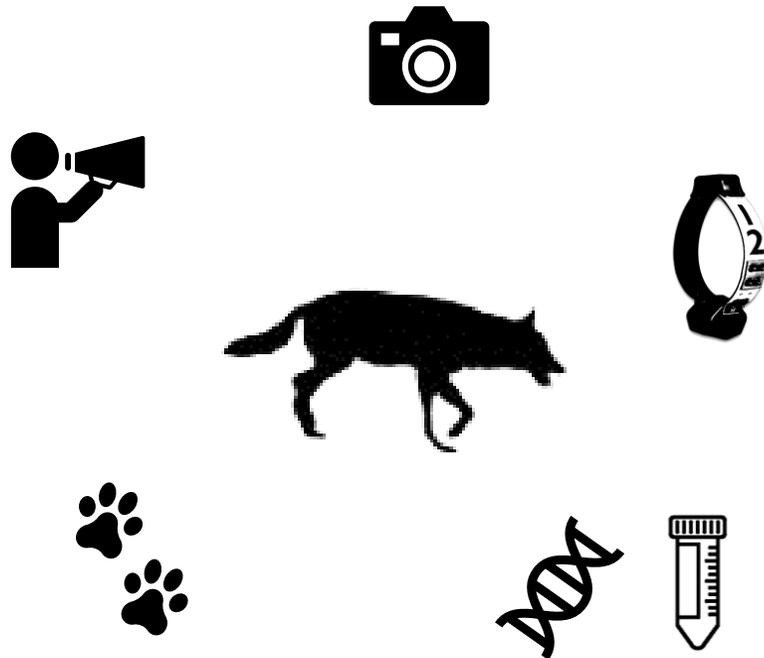


# Monitoring harmonisation

## B. Integrative monitoring of wolf

- Detailed data on population structure & dynamics (all methods integrated)
- High resolution data appropriate for evidence based conservation and management
- Significant financial costs and a high level of expertise are required

LECA

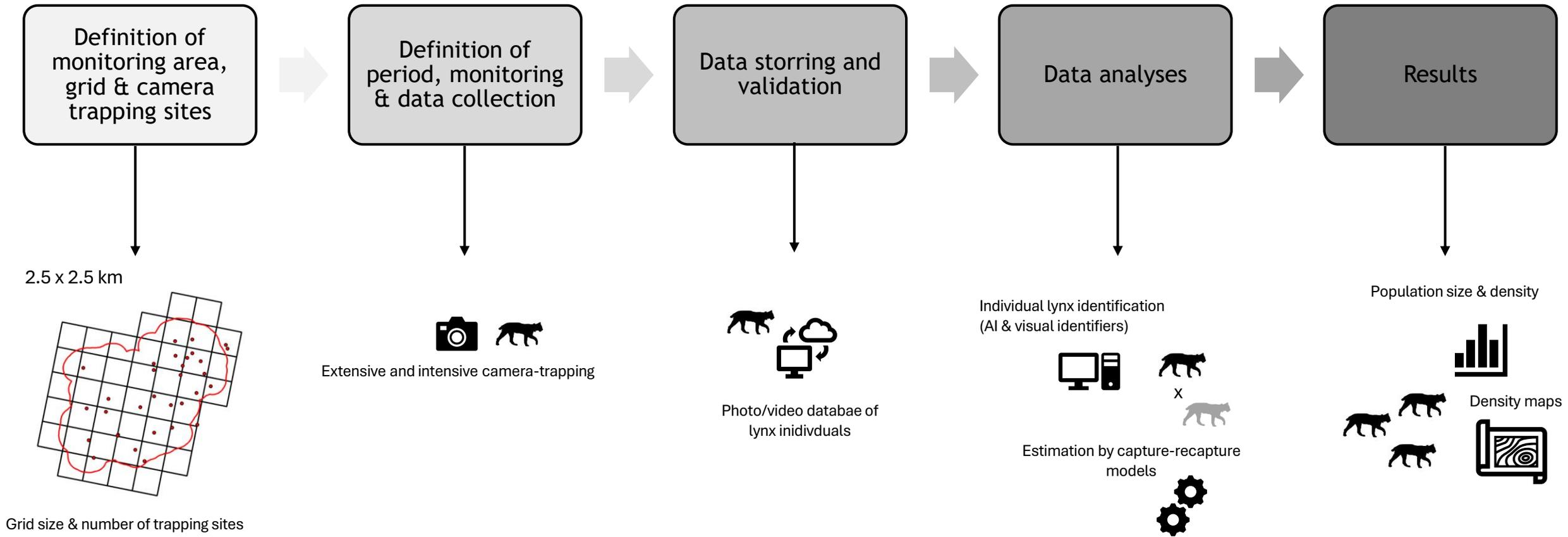


# Monitoring harmonisation



## C. Intensive deterministic monitoring of lynx

- validated & the most appropriate monitoring workflow in Eastern Carpathians & Slovak Karst/North Hu Mts.

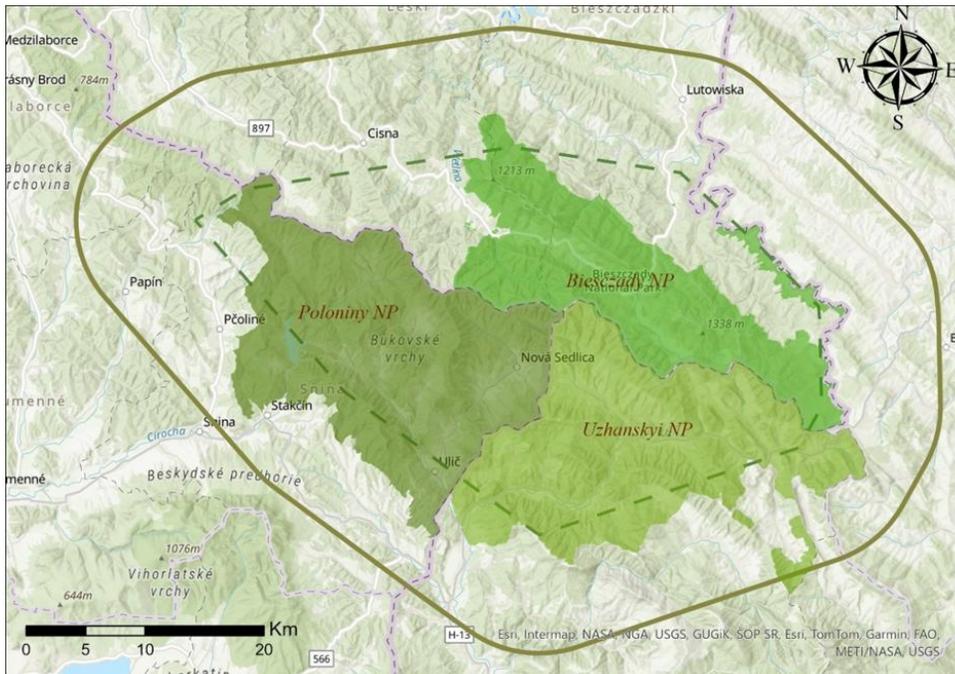


# Monitoring harmonisation



## C. Intensive deterministic monitoring of lynx

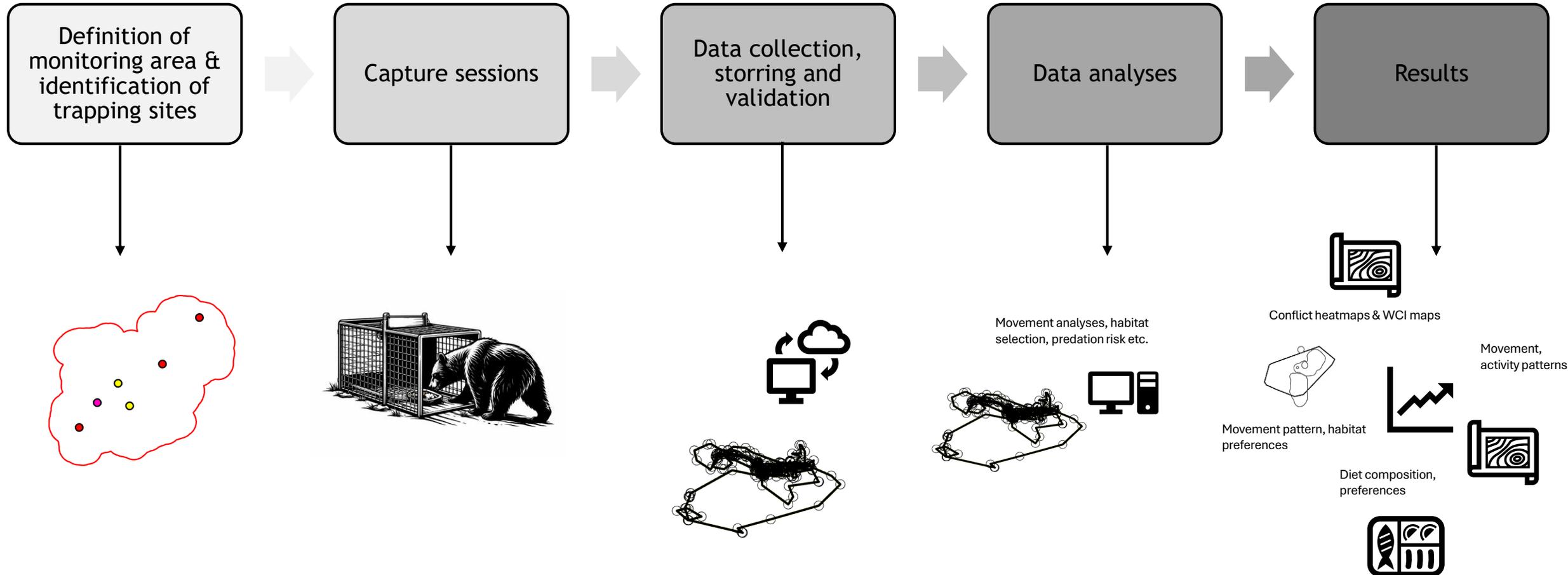
- Detailed data on population structure & dynamics
- High resolution data appropriate for evidence based conservation and management
- Significant financial costs and a high level of expertise are required



# Monitoring harmonisation

## D. GPS telemetry of bear & wolf

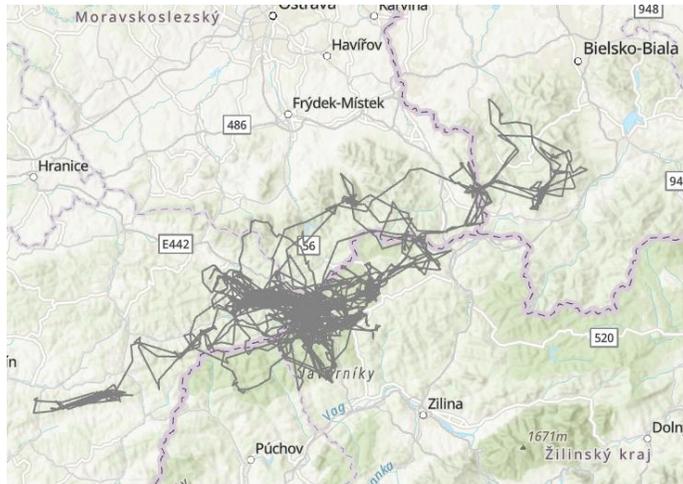
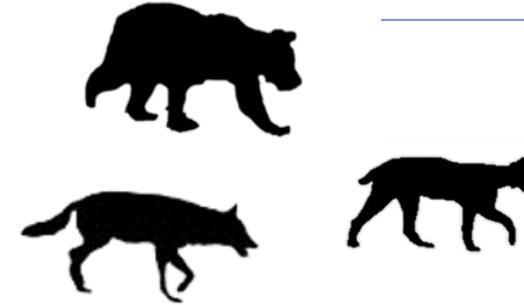
- validated & the most appropriate monitoring workflow in Beskydy-Kysuce & Tatras



# Monitoring harmonisation

## D. GPS telemetry of bear & wolf & lynx

- High resolution data (movements, resting sites, feeding sites etc).
- High resolution data appropriate for evidence based conservation and management
- Significant financial costs and a high level of expertise are required



# Conflict prevention

## Introduction

- Human-wildlife conflicts often complex
- Focused on livestock depredation
- Landscape of institutionalized conflict-prevention systems was fragmented
- Most conflicts affected small livestock species
- Damages are on the rise
- Wolves were responsible for most of the damages
- Lack data of effectiveness of the applied preventive measures



# Conflict prevention

Selected best practices from Carpathian region and cross-border pilot areas

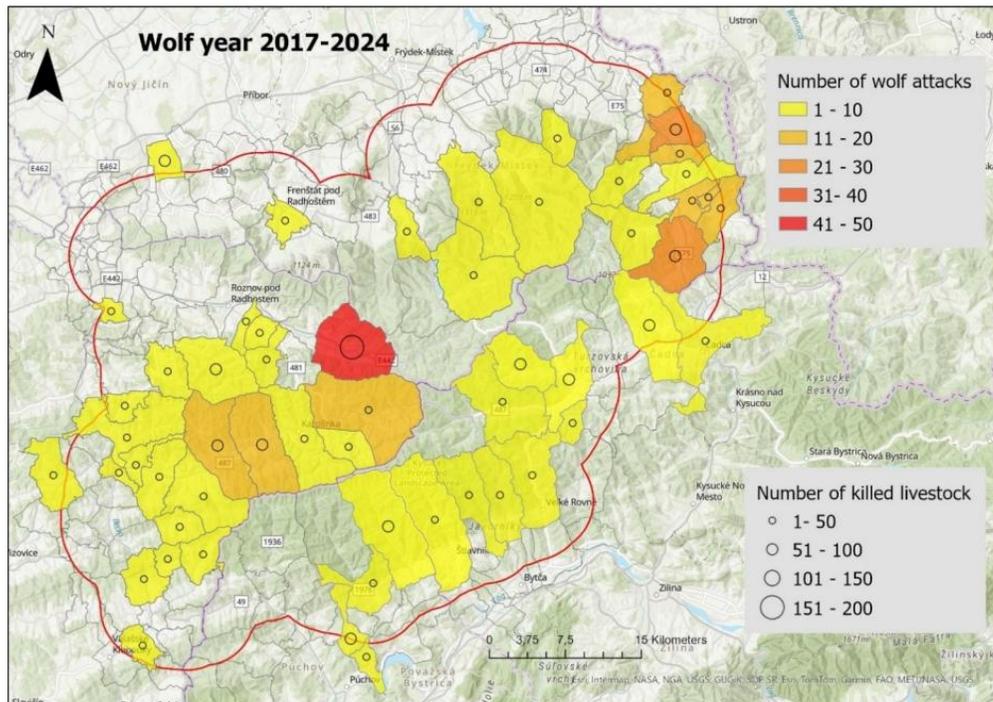
- A. Identification of attractants and hot-spot analyses**
- B. Application of effective prevention measures**
- C. Establishment and using of funding and compensation schemes**
- D. Establishment and operation of local/regional/cross-border stakeholder platforms**
- E. Lectures and seminars focused on large carnivore ecology**



# Conflict prevention

## A. Identification of attractants and hot-spot analyses

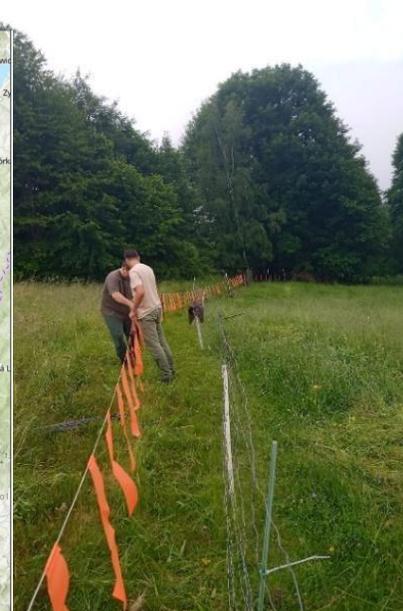
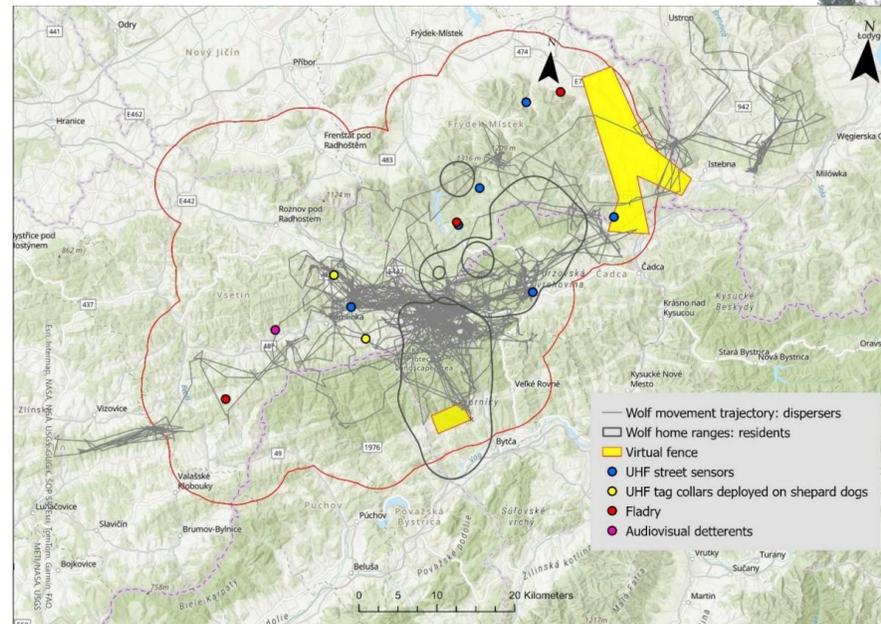
- Analysis of wolf & bear depredation
- Telemetry techniques for identifying clusters
- High resolution data about attractants
- Analysed diet and stress hormone levels of bears



# Conflict prevention

## B. Application of prevention measures

- Application followed stakeholder consultations
- Standard: recommended measures in the Czech Republic
  - Providing detailed description of technical requirement: fencing, LGD, *husbandry practices*, deterrents
- Addresses access to waste and other attractants
- Validated at multiple cross-border pilot area



## C. Establishment and using of funding and compensation schemes

Within the implementation of the Wolf Management Programme in the Czech Republic, several financial instruments are available to support livestock breeders in areas affected by wolf presence. The key mechanisms include:

1. Funding for preventive measures to protect livestock – provided under the Operational Programme Environment (OPE), administered by the State Environmental Fund of the Czech Republic for business entities and by the Nature Conservation Agency of the Czech Republic for non-business entities (small-scale farmers).
  - Standard: Protection of livestock against attacks by large carnivores
2. Compensation scheme for damages – based on Act No. 115/2000 Coll., on compensation for damages caused by selected specially protected animals (including wolf, lynx and bear).
3. Compensation for restricted agricultural management (limitations on grazing in wolf occurrence areas) – granted under Section 58 of Act No. 114/1992 Coll., on Nature and Landscape Protection.

# Conflict prevention

## D. Establishment and operation of local/regional/cross-border stakeholder platforms

LECA

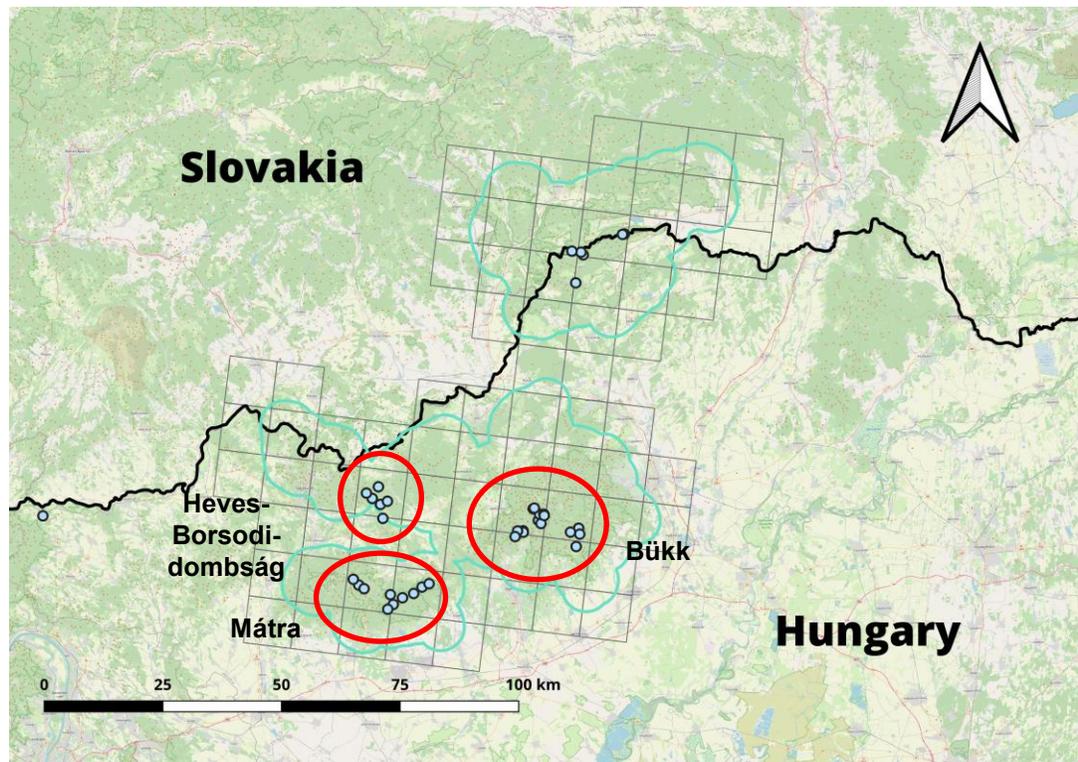
- Stakeholder platforms were established in every cross-border pilot area
- Multiple meetings were held in all cross-border pilot area



# Conflict prevention

## E. Lectures and seminars focused on large carnivore ecology and participatory work with stakeholders

- Education as a tool for awareness raising
- Participatory monitoring



# Poaching prevention

Selected best practices from Carpathian Region and cross-border pilot areas

- A. Identification of areas with high concentration or high assumption of illegal killing**
- B. Establishment of national and international network of wildlife forensic experts on large carnivore poaching and data sharing**
- C. Surveys, lectures and seminars for law enforcement**
- D. Public awareness campaigns and involvement of public into monitoring of illegal killing**



# Poaching prevention

**Law enforcement chain:**  
Detection and reporting → Investigation → Prosecution → Judgement

**Enforcement effectiveness varies across the countries significantly due to:**

- Differences in criminal qualification of wildlife offences.
- Variability in penalties and sanctions.
- Gaps in investigative procedures and evidentiary standards.

**Common Challenges in Investigation:**

- Physical evidence
- Forensic capacity
- Databases and data-sharing mechanisms
- Coordination between institutions.
- Training of investigators
- Proving intent and linking suspects to crime scenes.

# Poaching prevention

## A: Identification of areas with high concentration or high assumption of illegal killing

LECA

**isolated case handling**  **strategic prevention**  
optimised patrol planning, efficient allocation of resources, focused awareness campaigns

### Conservation monitoring

Identification of spatial patterns,  
Detection of suspicious mortality events

- analysis of existing data
- historical records of detected poaching cases
- wildlife mortality reports
- confiscated trophies
- forensic findings
- telemetry data
- camera trapping

### Cooperation with local communities

Valuable local knowledge  
Building trust  
Structured communication channels

- local residents
- forestry workers
- hunting associations
- conservation staff

### Cross-border coordination

Coordinated response  
Prevention of illegal activity displacement  
Sharing information

- high-risk zones,
- repeated incidents
- known suspects

# A: Identification of areas with high concentration or high assumption of illegal killing

## Conservation monitoring

- Monitoring of LCs in 4 pilot areas



## Cooperation with local communities

- volunteers (in CZ Wolf and Lynx Patrol)
- forestry workers
- local hunting associations
- conservation staff (Administrations of PA)

## Cross-border coordination

- Cooperation within the pilot area
- SK-CZ, SK-PL, SK-HU, SK-UA



# Poaching prevention

## B: Establishment of national and international network of wildlife forensic experts on large carnivore poaching

### Forensic evidence:

- high-quality
- scientifically sound
- legally admissible

### Specialised expertise:

- DNA analysis for species and individual identification,
- veterinary pathology
- ballistics
- toxicology to detect poisoning,
- spatial analysis using telemetry or GIS data

### Coordinated network of wildlife forensic experts:

#### experts:

- centralised registry of qualified experts
- centralised registry of accredited laboratories
  - areas of specialisation,
  - available analytical methods,
  - accreditation status
- development standard protocols for
  - crime scene sampling,
  - preservation of biological material,
  - chain-of-custody procedures,
  - reporting formats for expert opinions

### Results in:

- provision of reliable evidence
- improved reliability and comparability of forensic results
- recognition across borders
- **will increase the likelihood of successful prosecution**
- **higher conviction rates, stronger deterrence**

## B: Establishment of national and international network of wildlife forensic experts on large carnivore poaching

### Forensic evidence:

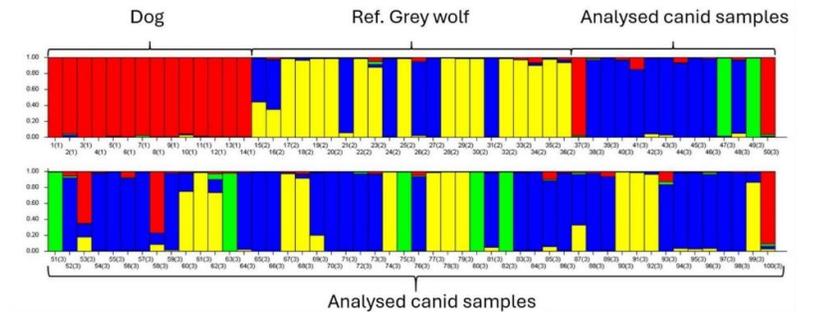
- Genetic samples collected (CZ, PL, HU, SK)

### Specialised expertise:

- Charles University
- Mendel university in Brno
- University of Debrecen
- Institute of Vertebrate Biology CAS, Brno
- TUZVO

### Coordinated network of wildlife forensic experts:

- Contacts were made (two in-person crossborder meetings + one online seminar)



# Poaching prevention

## C: Surveys, lectures and seminars for law enforcement

### Surveys:

- a participatory tool - fostering reflection among investigators and initiating dialogue about systemic improvements

#### Focus:

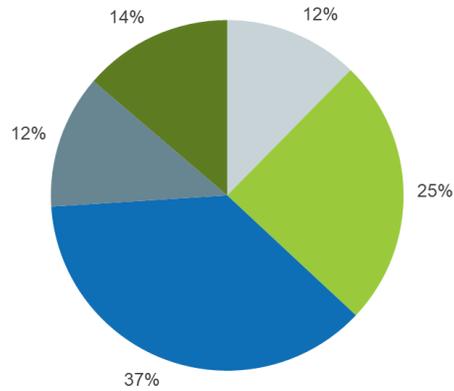
- experience with wildlife crime - LC poaching
- assess perceived severity and frequency of poaching
- identify common investigative challenges;
- evaluate cooperation with external experts and institutions;
- gather feedback on training needs and potential legislative improvements.

### Seminars: law enforcement

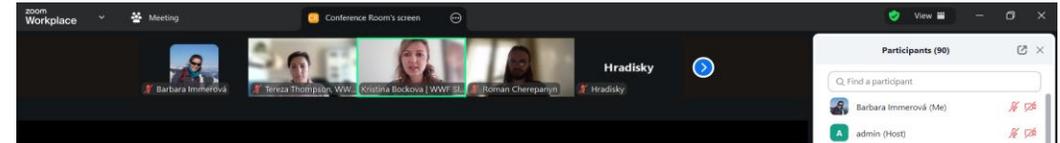
- Law enforcement with conservation staff and specialists
- direct networking
- operational contact-building
- improved cross-border information exchange
- joint training initiatives
- enhanced technical support for law enforcement

# C: Surveys, lectures and seminars for law enforcement

Do akej miery považujete pytliactvo veľkých šeliem za problém v regióne kde pôsobíte?



- 1 - Nie je to problém
- 2 - Je to zanedbateľný/ okrajový problém
- 3 - Je to problém
- 4 - Je to závažnejší problém
- 5 - Je to veľmi vážny problém



**Na doporučení ČÍŽP, ktorá ze všech zajištěných exemplářů rysů odebrala biologický vzorek jsme dožádali:**

- 1) AV ČR, Ústav biologie obratlovců – o ztotožnění rysů k určité populaci na základě DNA
- 2) Nevládní organizaci ALKA Wildlife – porovnání našich fotografií zajištěného exempláře rysa s fotografiemi z databáze ALKA Wildlife

**Na základě porovnání těchto vzorků se podařilo rysa přesně identifikovat včetně pohlaví, jména, evidenčního čísla i oblasti výskytu!**



# Poaching prevention

## D: Public awareness campaigns and involvement of public into monitoring of illegal killing

### Education/ engagement as a preventive measure:

- societal attitudes
- community engagement
- cooperation between authorities and local actors

Negative attitudes toward LCs creates an environment in which **illegal killing is socially tolerated or insufficiently reported.**

Educating public and its involvement in monitoring mechanisms leads to:

**Reduced misconceptions**

**Reduced tolerance for wildlife crime**

**Improved early detection of illegal activities.**

**Support built for conservation policies.**

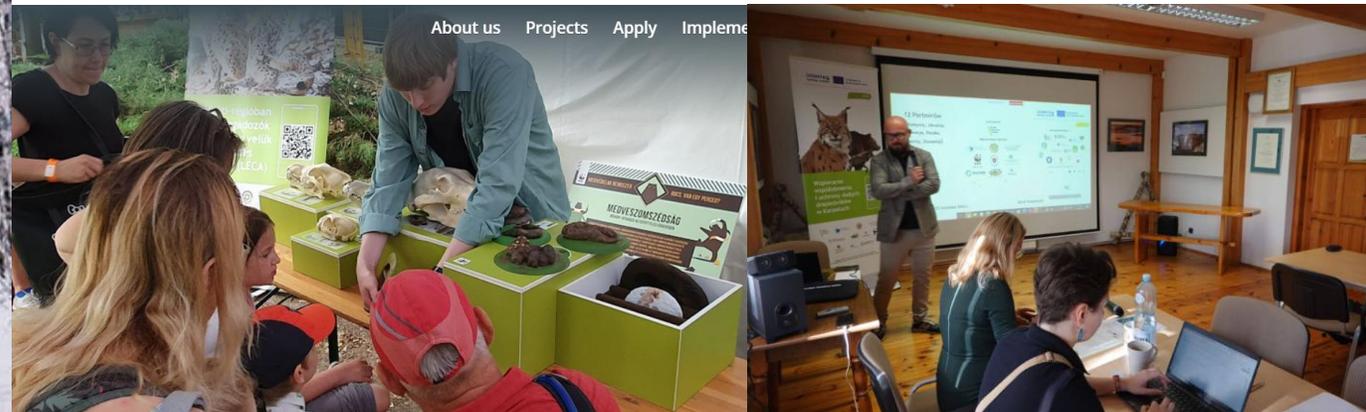
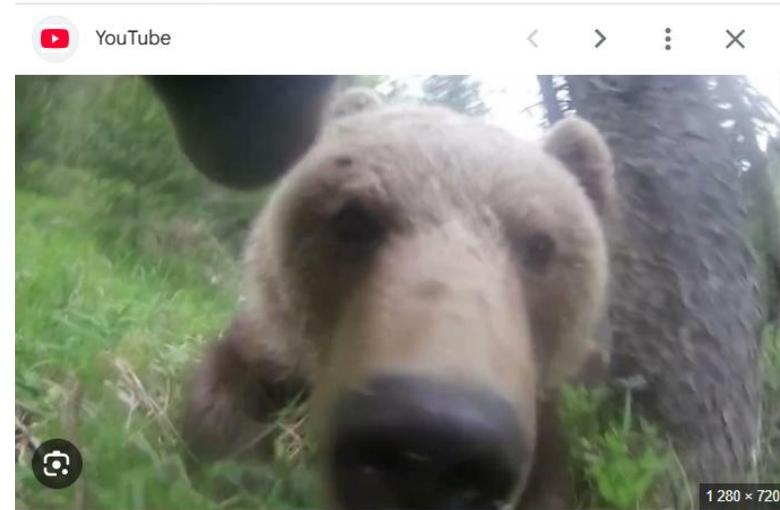
### Aim of awareness raising:

- increase understanding of the ecological role of large carnivores,
- legal protection in place,
- consequences of wildlife crime.

### Who:

- hunters
- local communities living in proximity to large carnivores
- schools
- community-based observation networks,
- rangers and forestry staff

# D: Public awareness campaigns and involvement of public into monitoring of illegal killing



Miłość niedźwiedzi | TPN | LECA | Niezwykłe zdjęcia z perspektywy niedźwiedzi w Tatrach  
Na obrazy sa môžu vzťahovať autorské práva. [Ďalšie informácie](#)

[Navštíviť >](#)

# Thank you for your attention!



## LECA

[Home](#)

[Roadmap](#)

[News](#)

[Events](#)

[Outputs](#)

[Media](#)

## News

P2 Green

**NEWS**

24.03.2025



P2 Green

**NEWS**

04.03.2025



P2 Green

**NEWS**

17.02.2025



**Interreg**  
CENTRAL EUROPE



Co-funded by  
the European Union

LECA



**LECA**

Lead partner: Mendel University in Brno



<https://www.interreg-central.eu/projects/leca/>



[martin.dula@mendelu.cz](mailto:martin.dula@mendelu.cz)



+420 770 137 635

