



ERBFacility Raptor Advice Hub

Structure and overview of content

WG4 & cross-WG Virtual Meeting
22 April 2021

**TAKING FORWARD A EUROPEAN RAPTOR SAMPLING
PROGRAMME & THE ERBF ADVICE HUB**

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ERB Facility Raptor Advice Hub

Advice Hub objective:

- To provide a **first point of contact** for people interested in contributing to a **future ERB Facility** – where they can find summarised information and links to more detailed information about all the relevant good practice guidance, opportunities and ways to participate.
- It will be a **web-based** platform bringing together the main data needed to facilitate **cooperation** and **coordination**, **increase capacities** and **harmonize** future raptor biomonitoring activities in an easy-to-follow format.



ERB Facility Raptor Advice Hub



Click on the picture (CTRL + CLICK) to get additional information.



Target audiences:

- Our target audiences are **broad**, including: professional ornithologists, raptor ecologists, field researchers, volunteers (e.g. ringers and raptor monitoring observers), veterinary scientists, ecotoxicologists and analytical chemists, among others.
- Difficulties (providing too detailed or too obvious information for some readers):
 - **Avoid complex jargon**
 - **Start concise and simple** and compile **links to redirect the reader** to more relevant information
 - **Avoid writing long text** that has been published elsewhere – paraphrase and provide links to original sources.



Hub overview



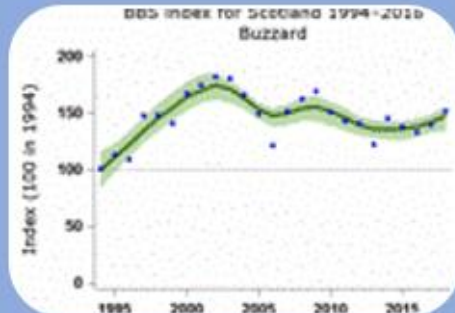
European Raptor
Biomonitoring Facility



Raptor identification,
ageing and sexing



How to monitor raptors



How to share your
monitoring data



Information on
legislation / permits /
licensing / wildlife crime



How to get people
involved in raptor
research



Training opportunities &
skills sharing hub



Species-specific
guidance



How to collect samples



How to submit samples
for analysis



What can we analyse
and where?

Click on the picture (CTRL + CLICK) to get additional information.

Entries



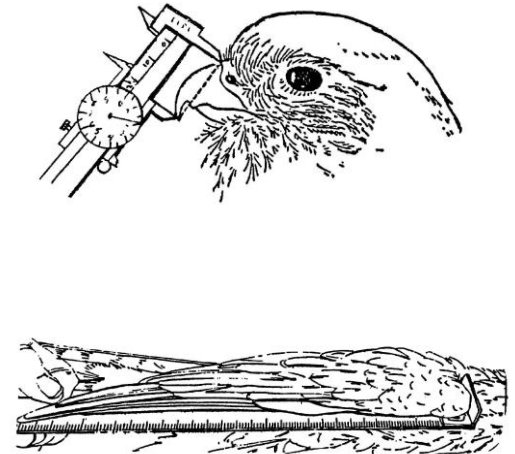
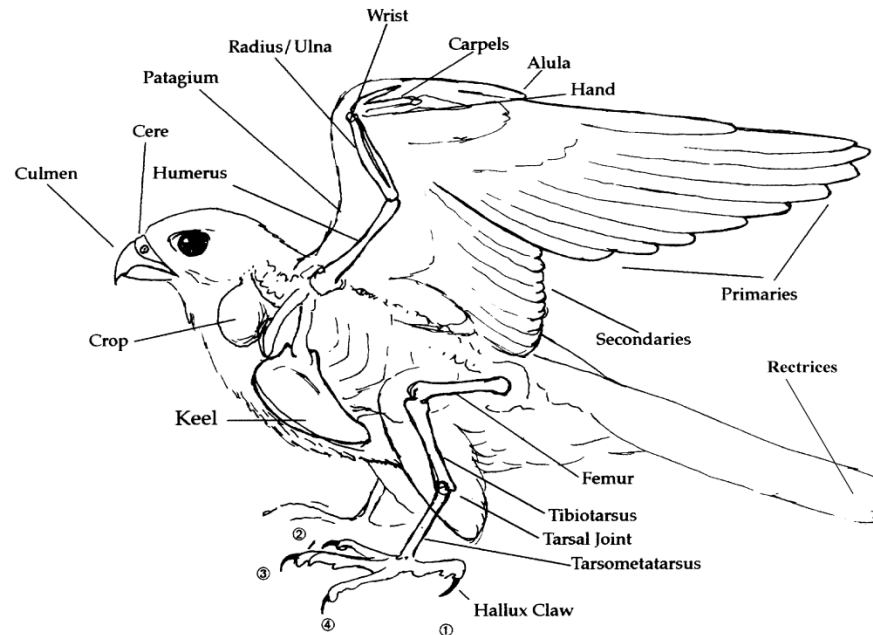
European Raptor
Biomonitoring Facility

1. Raptor identification, ageing and sexing

Providing basic clues for identification, age and sex determination



Photo example: Juvenile Pallid Harrier (left) shows four primary “fingers” compared to a juvenile Hen Harrier’s five “fingers” (right).



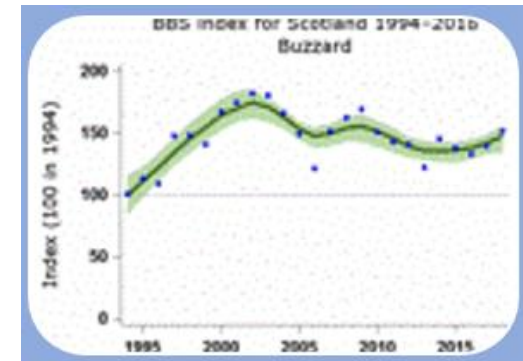
2. How to monitor raptors



- Context on **monitoring** as **early warning** of **contaminants effects**
- Characteristics of raptors that influence **choice of monitoring techniques**
- **Choice of parameters** to monitor and choice of **study areas**
- **Guidance** for each type of parameter to be monitored

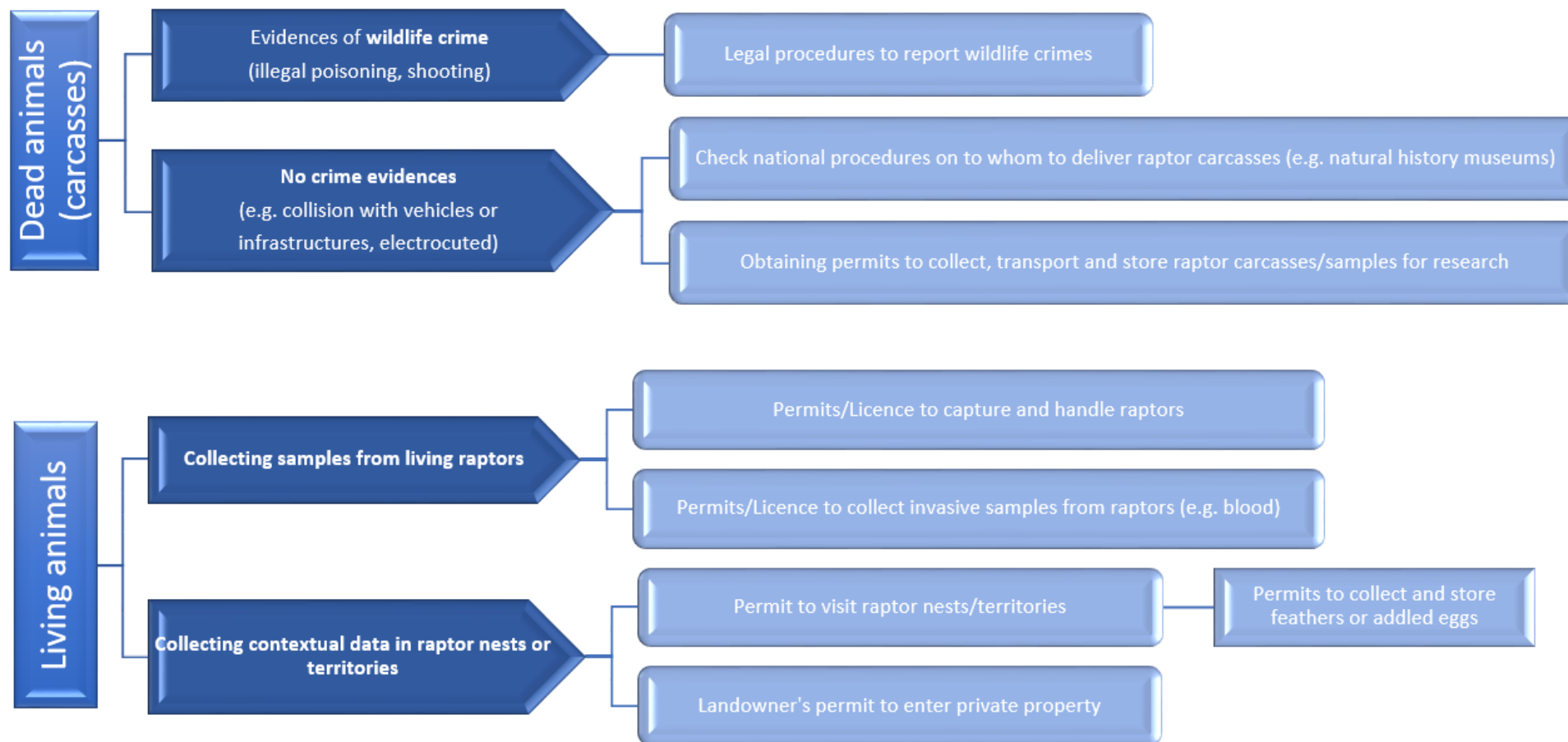
3. How to share your monitoring data

- Compile a **list of places** where **monitoring data** are shared currently



4. Information on legislation / permits / licensing / wildlife crime

- Diagram on procedures to comply with European/National legislation during sampling (**with links to national websites**)
- International legislation and guidance on the collection and shipping of raptor samples





5. How to get people involved in raptor research

Context on:

- which **types of audience** (‘actors’) we try to encourage to take part
- their **motivations** and how will they **benefit**
- what are the **barriers** to these people participating and how do we **find solutions** to them
- what **specialist skills** are needed and how can we help people to obtain them (**training** needs)
- how to **reach** the **appropriate audiences**
- **designing materials** and appropriate goals/methods for different audiences
- once people are engaged, how do we **retain** their **motivation**



6. Training opportunities & skills sharing hub



- **Growing section**
- **Links to training material**, summer schools, on-line training videos and courses, workshops, etc.

7. Species-specific guidance



- Link to [guidelines on specific species / group of species](#)
- Network already working on species-specific guidance (e.g. [vulture guidance](#))

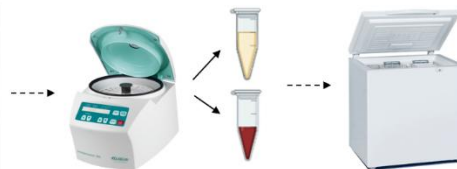
Vulture Guidance for Biomonitoring



1. Prepare proper material



2. Collect samples and transfer to containers



3. Transport and process samples



4. Store samples

Guidance for biomonitoring using vultures as indicators for contamination in the environment



8. How to collect samples

Links to:


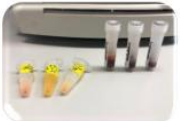

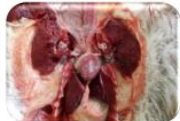






- [Sampling protocols](#)
- [Guidance videos](#) to perform **necropsies** and **collect samples**
- Guidance for **contextual data collection**
- Table – Contextual data **recording sheet**



A schematic sampling protocol for contaminant monitoring in raptors

Click on the name of the matrix to see the schematic protocol for each sample type.

Click [here](#) to see important general guidelines related to permits and health and safety issues when sampling.

ACTIVE MONITORING (Trapped live birds and nests)			PASSIVE MONITORING (Dead birds)	
Blood	Plasma/Serum	Deserted/Addled eggs	Internal tissues	Gastric content
				
Feathers	Preen oil	Regurgitate pellets/Prey remains	Feathers	Preen oil/Gland
				

Click [here](#) to see Table 1. Volume/Mass of sample, type of container and transport conditions required for contaminant monitoring in different matrices

Click [here](#) to see Figure 1. What can we measure in each sample type? (a. [Active monitoring](#) / b. [Passive monitoring](#))

YouTube ES

Search



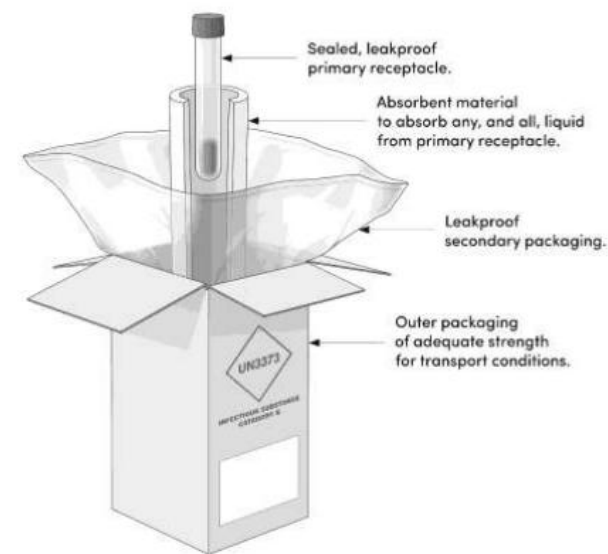
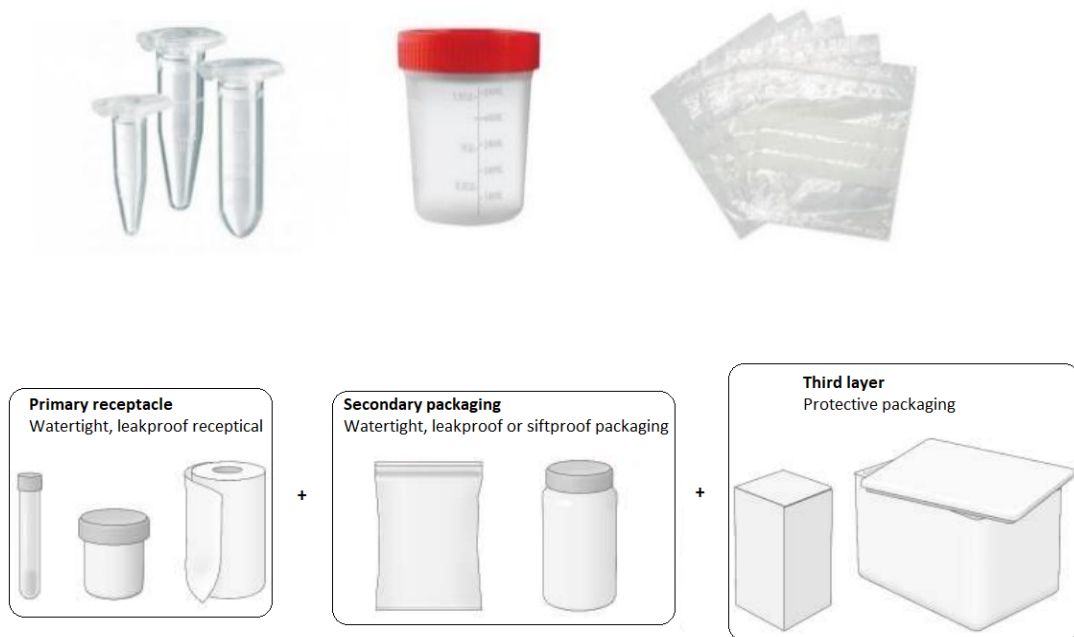
Collect the liver

3:28 / 8:55

Necropsy of an Eagle owl Bubo bubo

9. How to submit samples for analysis

- **Volume/Mass** of sample, **type of container** and **transport conditions** required for contaminant monitoring in different matrices
- Information on **packaging, labelling, paperwork** and **legal considerations**



BIOLOGICAL SUBSTANCE
CATEGORY B

10. What can we analyse and where?



- Diagram on **contaminants** that can be analysed in different **matrices**
- List of **European laboratories** for **contaminant analysis**

34 laboratories from 16 European countries

List of laboratories in Europe (ERBFacility Advice Hub)

Country	Laboratory/Group name	Webpage	Lab leader	Contact person	Email	Phone	City	Full address	Quality control criteria	Acreditation body/number or articles providing details	Services provided
Belgium	Systemic Physiological and Ecotoxicological Research	https://www.uantwerpen.be/en/research-centres/enhar	Ronny Blust	Lieven Bervoets	lieven.bervoets@uantwerpen.be	0032 32653483	Antwerp	Department of Biology, University of Antwerp, Groenenborgerlaan 171, 2020 Antwerp, Belgium	✓	https://www.uantwerpen.be/en/staff/lieven-bervoets/publications/	Analysis of environmental and biota samples
Croatia	Department of Environmental Protection and Health Ecology Aarhus University/	https://www.stampar.hr/	Adela Krivohlavek	Adela Krivohlavek	adela.krivohlavek@stampar.hr	(0385) 14696241	Zagreb	Andrija Stampar Teaching Institute of Public Health, Mirogojska 16, 10000 Zagreb, Croatia	✓	List of publications at https://www.bib.irb.hr/pregled/profil/30785	Analysis of Environmental samples and Forensic toxicology service
Denmark	Department of Environmental Science	https://envs.au.dk/en/	Pia Lassen	Katrin Vorkamp; Rossana Bossi	kvo@envs.au.dk ; rbo@envs.au.dk	+45-85158483; +45-87158603	Roskilde	Department of Environmental Science, Frederiksborgvej 399, 4000 Roskilde, Denmark	✓	DANAK reg. no. 411; https://published.danak.dk/showdata.asp?schema=proevningsdata&akk=411	Chemical analyses
France	Toxlab	http://www2.vetagro-sup.fr/ens/toxico/	Philippe Berny	Philippe Berny	toxlab@vetagro-sup.fr	(+33) (0)4 78 87 26 30	Marcy l'etoile	Toxicologie Vetagro Sup Campus vétérinaire, 1 av Bourgelat, F-69280 Marcy l'etoile	✓	ISO 17025 (2017) in progress. Over 20 publications with analytical details	Analytical toxicology (and expertise)
Germany	Dept. Wildlife Diseases, parasitological/toxicological	http://izw-berlin.de	Oliver Krone	Oliver Krone	krone@izw-berlin.de	49(0)30516821 2	Berlin	Dept. Wildlife Diseases, parasitological/toxicological laboratories, Alfred-Kowalke-Str. 17, 10315 Berlin	✓	https://www.researchgate.net/profile/Oliver_Krone	Analysis and Forensic toxicology service (necropsies)

Footnotes:

Contact lab for additional information and conditions.

To the best of our knowledge, this is the list of labs providing certain analytical services (related to contaminants in wildlife) in Europe.

This is not a close list, please contact us if you would like to be included.

Only labs following quality control standards are included in the list.

■ Laboratories performing analyses in Europe

