



## Introduction to the Newsletter

This, our third newsletter, provides news on the continuing progress being made by our COST Action despite the ongoing pandemic. Since our last newsletter in April, excellent progress has been made on the Proof of Concept work with over 500 tawny owl samples having been shipped to labs across Europe and analyses now in full swing. A WG4 Meeting was held in April taking forward the Advice Hub and work on the European Raptor Sampling Programme. ERBFacility featured in a number of presentations at SETAC Europe 2021, attended by 1600 attendees, in May. A number of missions have concluded, two new missions have been awarded. A number of papers have been either accepted, submitted or are in preparation. You can read more about most of these developments below.

Our General Meeting 4 and Management Committee 5 meetings, a first opportunity to bring the network together since Porto in February 2020, will convene in Murcia, Spain on 7-8 October 2021 as a hybrid event. This will be a key meeting offering the chance to review progress, bring together the work of the analysis, collections and field arenas, and plan activity to the end of the Action in April 2022. We look forward to meeting as many as possible of you there in person or virtually. We also have other events coming up this month and next: a virtual WG4 meeting, a training school on poisoning, and a WG3 meeting. Look out for announcements on the website.

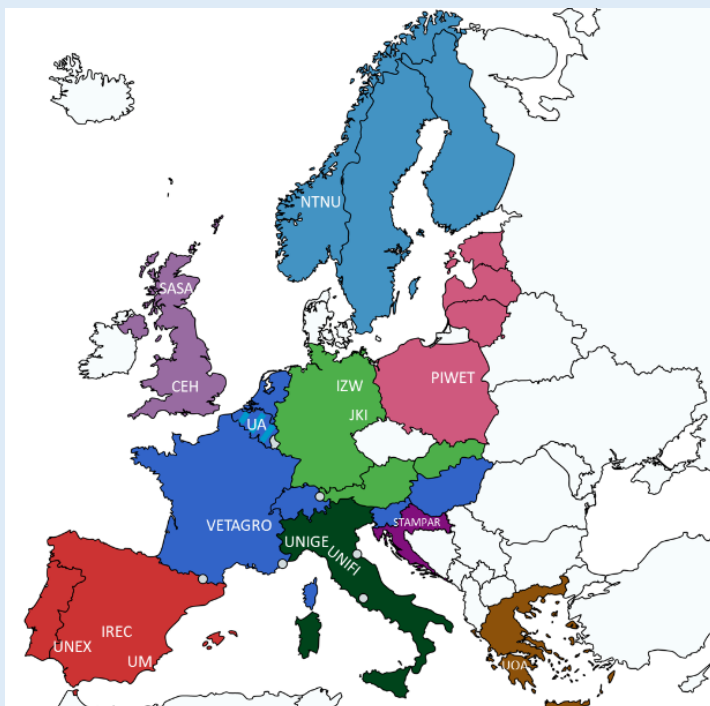
Happy reading!

Guy Duke  
Chair ERBFacility

## ADVANCES IN THE PROOF OF CONCEPT

The ERBF proof of concept is already in an advanced state of execution. More than 500 tawny owl liver samples have been collected in 22 European countries and have been sent to a total of 15 laboratories that are carrying out the analyses for second-generation anticoagulant rodenticides, mercury and lead.

In parallel, an inter-laboratory test is being developed with a reference sample to determine the variability in the results between the different laboratories. It is expected that the analysis of the samples will be completed throughout the month of September.



Laboratories involved in the analysis of samples and countries where the samples have been collected. Samples from countries with the same colour are being analysed by the same laboratory or laboratories.



Tawny Owl *Strix aluco*  
Photo: Al Vrezec

## Review of capacity across Europe to support a European Raptor Sampling Programme – an update

One of the high-level aims of the ERBFacility COST Action Field Arena (WG4) is to characterise the existing capacity across Europe to take part in any future European Raptor Sampling programme, and to recommend priority areas (skills, geographical) where capacity building is needed. A review of this capacity across Europe was started at a WG4 workshop in Slovenia in September 2019 (see the [Slovenia workshop report here](#), particularly Appendix 4). The questions asked by the review are shown in **Box 1** below. The information provided by each country will be used to:

- Identify where the most significant gaps are across Europe in terms of key skills for supporting a European Raptor Sampling Programme and geographical coverage of those skills.
- Decide on priority skills in which to develop training materials during the final stages of the ERBFacility COST Action, and the parts of Europe to which training should be most urgently targeted.
- Compile the final ERBFacility report, in terms of recommendations on future training needs across Europe (skills, geographical coverage) – where should any future training be most urgently and effectively provided and where in Europe are there examples of good practice that can be shared more widely?



The following countries have already contributed to the review: Austria, Belgium, Estonia, Finland, Germany, Greece, Iceland, Israel, Italy, North Macedonia, Portugal, Romania, Russia, Slovenia, Spain, Sweden and UK (the map shows coverage to date in green, and countries with coverage still needed in orange; borders only approximate).

Their contributions are available on a Google drive [here](#). We would like to thank all ERBF network members who have already contributed to the review!

We would really like to make this review as comprehensive as possible, so if you could complete the short MS Excel template for your own country to fill a gap, then the blank template is [here](#). You can also use this template if you would like to make suggestions/additions to the submissions that have already been made – please fill in a separate template and return it to [chris.wernham@bto.org](mailto:chris.wernham@bto.org) by 20 September 2021. Many thanks in advance for all your help to make this review complete!

### Box 1 - Questions considered by the ERBF Capacity Review

1. Please think about the different types of 'actors' (field participants) that will be needed to help deliver a pan-European Raptor Sampling programme, for example:

- ringers to collect samples
- rehabilitation centres, vets, the general public to collect samples and carcasses
- raptor monitoring volunteers and professionals to collect contextual population information (e.g. breeding success, survival, population trends data)
- conservation NGOs that influence/support staff and volunteers who could take part
- museums/collections to collect and store samples

For each participant type, please list the relevant organisations within your country and any personal contacts you have with them. The idea is to understand the current capacity to collect more samples and contextual data in your country.

2. For the ERBFacility Proof of Concept study a decision has been made to focus on Tawny Owl and Common Buzzard as focal species. Specifically for these species, what is the current capacity to collect additional samples and contextual population data in your country?

3. What are the most significant gaps in capacity in your country (a) generally for taking part in a pan-European Raptor Sampling Programme, and (b) for taking part in the proof of concept study focused on Tawny Owl and Common Buzzard?

4. What general level of interest/conservation priority is attached to raptors by each of the participant groups in question 1 above? Are there formal or informal organised groups specialising in raptors/ERBFacility focal species? How high on government/NGO priorities are raptors/ERBFacility focal species?

5. In which area(s)/participant group(s) do you think there is the greatest potential to capacity build/train more people to get involved in the ERBFacility sampling programme/proof of concept study? How would this best be achieved?

6. If you found a fresh Common Buzzard or Tawny Owl carcass in your own country what would you do?

Common Kestrel *Falco tinnunculus*  
Photo: Madis Leivits





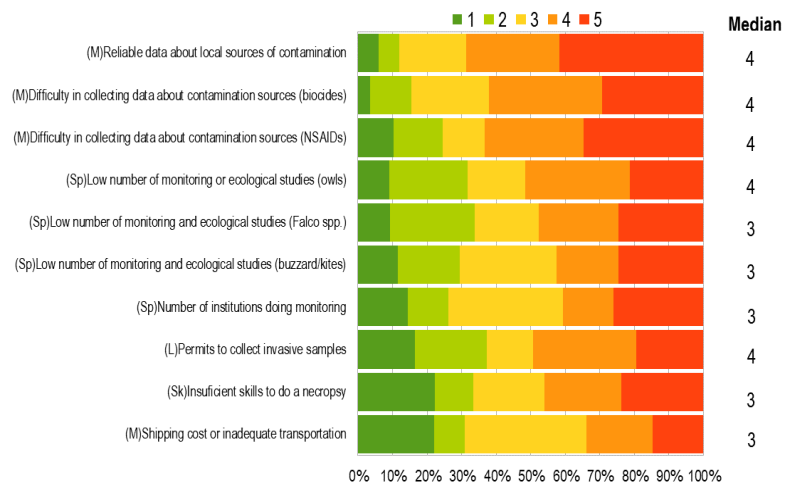
# A review of constraints and solutions for collecting raptor samples and contextual data for a European Raptor Biomonitoring Facility

The creation of ERBFacility is an enormous challenge, with several constraints that needs to be address for a successful implementation of the programme. The aim of this STSM was at first place to identify the main constraints to obtain raptors samples and its contextual data across Europe, and then propose feasible solutions to solve the identified limitations. The study was based on a participatory approach methodology through participation in workshops and distribution of questionnaires to make an effective use of the opinion of experts and people involved in collecting raptors samples and contextual data.

A list of 31 constraints were identified, including six concerned legal aspects, 13 were methodological constraints, 5 related to the skills of the participants and seven to spatial coverage. An online questionnaire was distributed to obtain a classification of the relative importance of each constraint as it is perceived by different countries and by different groups of people involved in collecting raptors samples and contextual data.

We obtained 74 answers, from 24 of the 39 COST countries. A list of possible solutions was drafted for each constraint and was discussed at ERBFacility workshop at Florence, involving 23 experts in raptor sampling, ecology, and ecotoxicology.

Legal constraints appear to less importance to respondents than methodological, skills and spatial coverage constraints. Most of the constraints highlighted referred to methodological aspects of collecting samples and contextual data. Disseminating existing protocols could be an effective way to harmonize methodological procedures to obtain raptor samples for contaminant monitoring across Europe. Our approach suggests that establishing a long-term European Raptor Sampling Programme as a key element of a ERBFacility is feasible considering that all identified constraints may be solved by reasonable solutions.

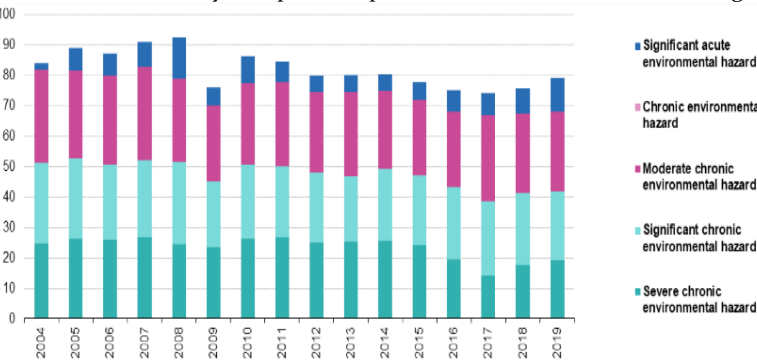


Scoring of the top ten questions regarding constraints to the sampling of raptors. Scores indicating the importance of constraints from 1 (low importance) to 5 (high importance). Letters in brackets preceding the constraint indicate its type: (L) Legal; (M) Methodological, (Sk) Skills; (Sp) Spatial coverage.

URL for the article: <https://www.sciencedirect.com/science/article/pii/S0048969721036718>  
DOI: <https://doi.org/10.1016/j.scitotenv.2021.148599>

## ERBFacility Poster on Role of Collections presented at SETAC Europe 2021

At SETAC Europe 2021 (<https://europe2021.setac.org/>) a poster was presented by Dr Paola Movalli (Naturalis, NL) and colleagues that highlighted 'A novel role for natural science collections in European contaminant monitoring'. The poster described the extent of the challenge to manage the use and release of hazardous chemicals into the environment, and the EU's ambition to utilize biomonitoring to understand and prevent chemicals related risks. Focussing on the use of raptors as sentinel species the poster described how European Raptor Biomonitoring Facility has worked with natural science collections (NSCs) to enhance the utility of raptor samples for contaminant biomonitoring.

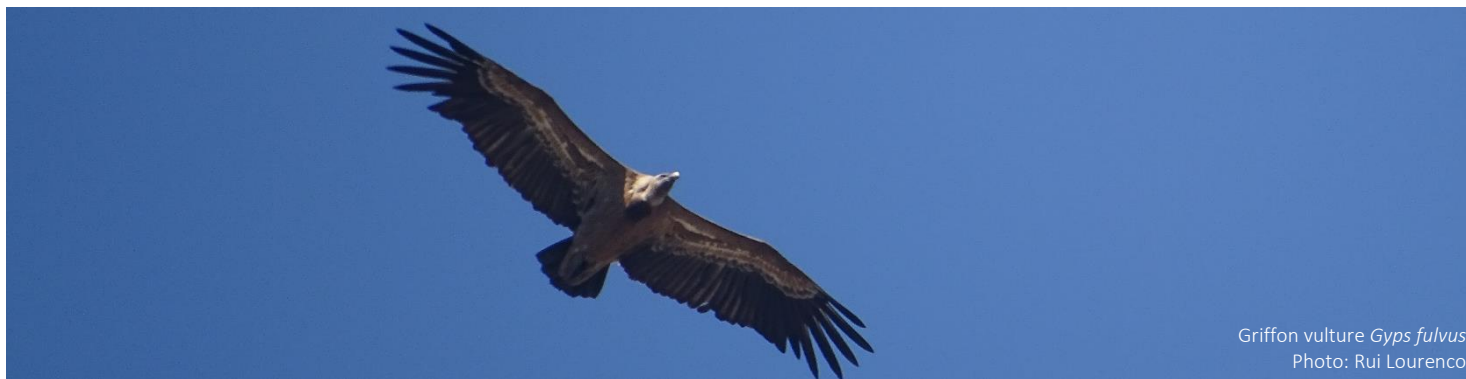


EU consumption of chemicals harmful to the environment, 2004-2019 (million tonnes)  
source: EUROSTAT

Work highlighted included a review of raptor collections in Europe, development of a protocol for gathering, processing and storing raptor samples, guidance on shipping raptor samples, collaboration with the Distributed System of Scientific Collections (DiSSCo) and input to the Proof of Concept study being carried out as part of the ERBFacility. The poster concluded that while monitoring contaminants in raptors presents a new challenge for many NSCs, these challenges can be met and that ERBFacility is helping to address these issues, and that the ERBFacility is well placed, inter alia, to contribute to key initiatives under Horizon Europe such as the European Partnership for Chemical Risk Assessment (PARC).



Raptor specimens at Naturalis Biodiversity Center



Griffon vulture *Gyps fulvus*  
Photo: Rui Lourenco

## Call for STSM/VM for WG3 Collections Arena - deadline 17 September 2021

ERBFacility is seeking applicants for a Short-term Scientific Missions (STSM) or Virtual Mission (VM), from individuals who would like to play a key part in delivering the objectives of the Action. Applicants will benefit from experienced Host Institutions, and will be involved in work that should lead to technical reports and/or scientific publications and allow them to develop their networks of contacts across Europe.

Missions are open to applicants with all levels of experience from Masters degree student to doctoral student to postdoctoral researcher to senior researcher to Professor level. Track record will be assessed in relation to level of experience, so that less experienced researchers are not disadvantaged.

Early Career Investigators (up to 8 years experience post-PhD), candidates from participating COST Inclusiveness Target Countries and women are in particular encouraged to apply.

More details and apply documents can be found on <https://erbfacility.eu/call-stsmvm-wg3-collections-arena-deadline-17-september-2021>

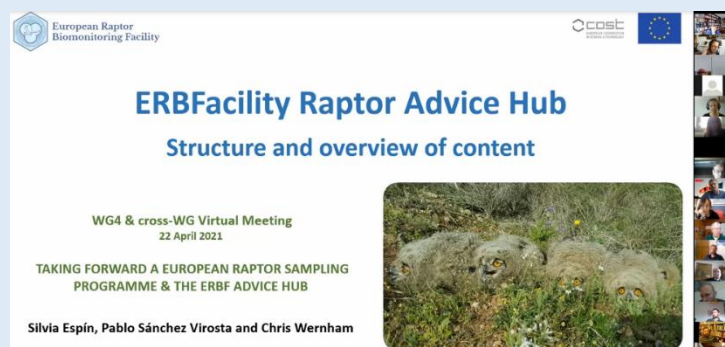


Tawny owl *Strix aluco*  
Photo: Blaž Koderman

## ERBFacility Working Group 4 virtual meeting – “Taking forward a European Raptor Sampling Programme and the ERBF Advice Hub” – 22 April 2021

The objectives of this meeting were:

1. To update all interested ERBFacility network participants from all 3 arenas (field, collections and analysis) on the work that has taken place and the stage of development of the framework for a European Raptor Sampling Programme (ERSamP) and a related web-based ERBF ‘Advice Hub’.
2. To inform the ERBFacility network about the existing structure and content of the Advice Hub – and seek suggestions, particularly on any gaps in the advice provided currently, and to give an opportunity for members of the ERBFacility network to get involved in the development of any additional guidance materials.
3. To seek suggestions on how best to disseminate the contents of the Advice Hub and encourage wide use of the guidance materials that it contains, including potential future development and maintenance of ERSamP and the ERBF Advice Hub during the lifetime of COST Action 16224 and beyond.
4. To inform the network about the current state of knowledge of training and capacity building needs in relation to ERSamP across Europe, and seek to fill gaps in this knowledge by country.



We are grateful to everyone from the ERBF network who gave up time to attend the meeting and interact fully with the helpful discussions. You can watch a full recording of the Zoom meeting [here](#).

A report that summarises the presentations that were given and all the discussions (both verbal and from the ‘Chat’) is available [here](#), where you can also access all the presentations given at the meeting.

Find the news about future meetings and events at <https://erbfacility.eu/events> and on ERBFacility Facebook page.

Stay safe and healthy,  
ERBFacility Core Group

