

WG3 Research Coordination Objective

- **To develop a framework for a distributed European Raptor Specimen Bank (ERSpeB) for contaminant monitoring.**
 - NHM raptor collections have in the past not been made with contaminant monitoring in mind.
 - ESB collections designed to meet contaminant monitoring needs are national in scale (e.g. UK PBMS, Swedish ESB).
 - Research collections provide an important additional resource.
 - ERBFacility will develop an ERSpeB framework which will link existing raptor collections across Europe, and enhance their relevance for contaminant monitoring needs.

WG3 Capacity-building Objective

- To build capacity in the ‘collections arena’ through networking and collaboration among ecotoxicologists and curators (NHMs, ESBs, etc), including through:
 - (a) constructing a *meta-database* of existing raptor specimens and of any existing related contaminant data, and stimulating digitisation of collections, to enhance access and use for contaminant monitoring;
 - (b) stimulating expansion of raptor collections.

Collections – Context

- **ESBs**

- Designed for contaminant monitoring – e.g. protocols to avoid cross-contamination, very low temperature storage
- But, samples from recent years/decades only
- And, few have raptor samples – though there is potential for more ESBs to bank raptor samples

- **NHMs**

- Not designed for contaminant monitoring – but with new analytical methods can extend contaminant monitoring over space and time
- But, large collections (skins, bones and eggs) from most regions of Europe, 18th century to modern times.
- And, many also collect and store contemporary raptor samples with significant potential for biomonitoring

Task 3.1

- **Review existing raptor collections in Europe** [Oct 2017 – Sep 2019], includes consideration of:
 - existing collections
 - current collecting activities
 - storage facilities
 - current provision for research access to collections, samples exchange
 - constraints to collection, transport and storage of samples

Deliverable: Report & peer reviewed paper on existing collections in Europe, constraints (Sep 2019)

Task 3.2

Develop framework for a distributed European Raptor Specimen Bank (ERSpeB) for contaminant monitoring [Oct 2018 – Sep 2020], includes consideration of:

- collecting priorities (in relation to needs of WGs1&2)
- potential for collections to accept new specimens from the field arena
- sources for new specimens (in relation to WG3)
- storage needs
- potential to establish new (regional) collections
- enhanced provision for research access to collections
- measures to resolve constraints to collection, transport, storage of samples

Deliverable: Technical specs and peer-reviewed paper on ERSpeB framework. [Sep 2020]

Task 3.3

Design and construct a *meta-database* (linked to IPChem) of existing raptor specimens and of any related contaminant data [Apr 2019-Jun 2021] involving:

- developing standards for the digital description and online publication of raptor samples and related data
- developing systems and protocols for web-based exchange, analysis and mapping of this data
- stimulating digitisation of collections

Deliverable: Meta-database of raptor specimens, linked to IPChem [Jun 2021]

The **Information Platform for Chemical Monitoring** is the European Commission's reference access point for searching, accessing and retrieving chemical occurrence data collected and managed in Europe. Structured into four modules, including:

Environmental monitoring

Task 3.4

- **Develop guidance on using raptor specimens in collections for biomonitoring [Apr 2020 – Jun 2021]**

Deliverable: **Guidance** on use of NHM and ESB collections for contaminant monitoring [Jun 2021]

WG3 links to other WGs

- **Collections Arena**

- falls between Field Arena (WG4) and Analysis Arena (WGs 1 & 2)
- samples collected from field > stored in collections > used by analytical labs

- **ERSpeB and metadata of samples**

- key resources for proposed ERBioMS being developed by Analysis Arena (WGs 1&2)
- ERSamP (WG4) will be key source of new specimens for ERSpeB

- **Interaction/discussion/coordination therefore vital, e.g. to:**

- agree which species to prioritise, what contextual data required
- agree who has access to valuable samples and for what analyses
- understand potential, needs and constraints of each Arena



THANK YOU !

