



European Raptor Biomonitoring Facility

COST ACTION 16244

“Collections Arena”

Florence 5-8 March 2019



Funded by the Horizon 2020 Framework Programme
of the European Union



Aims

Extent of existing raptor collections in Europe

- content of these collections;
- ongoing collection activity;
- available facilities for collection/storage;
- current provision for research access to collections and samples exchange;
- current constraints to ongoing collection, storage, research access and sample exchange;
- raptor collections related contaminant data.





Method

- European natural history museums list (eBEAC website);
- selection of the museums with relevant raptor and owl collections;
- “Google Forms” questionnaire;
- forwarding the questionnaire;
- managing of the data.



We have sent the questionnaire to 178 contacts including Natural History Museums, Environmental Specimen Banks (ESB) and other institutions in 31 European countries with a fixed deadline on 9 November 2018.



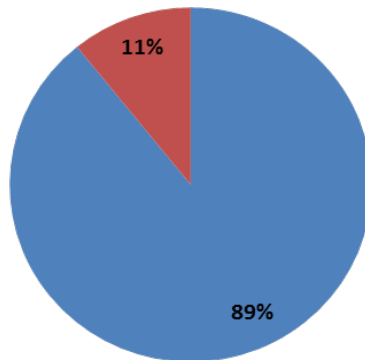


Results

We have received 116 responses.

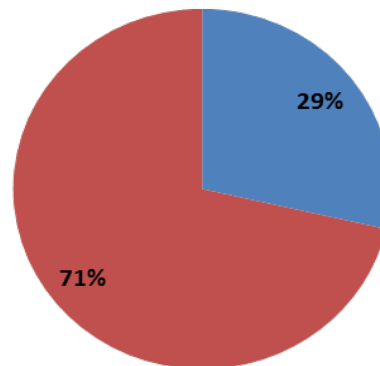
89% of NHMs receive fresh dead raptors and/or owls, significantly more than ESBs (29%) and other institutions (54%): NHMs are therefore in potential important supplier of tissue for contaminant analysis.

NHMs (n = 74)



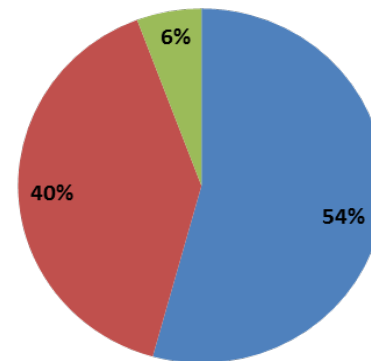
■ Yes
■ No

ESB's (n = 7)



■ Yes
■ No

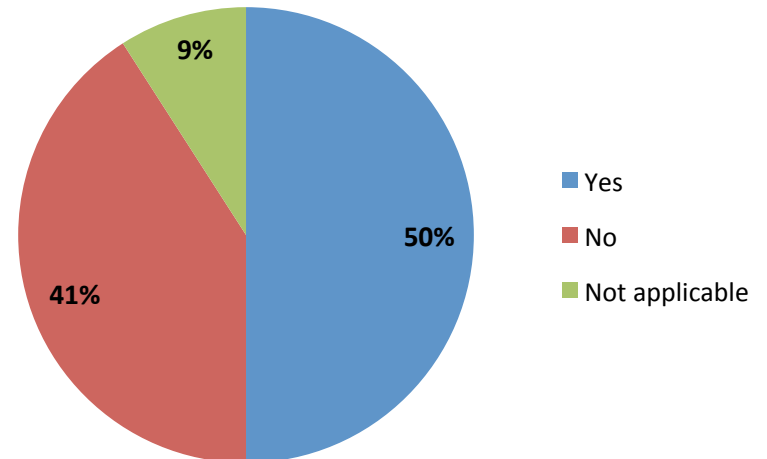
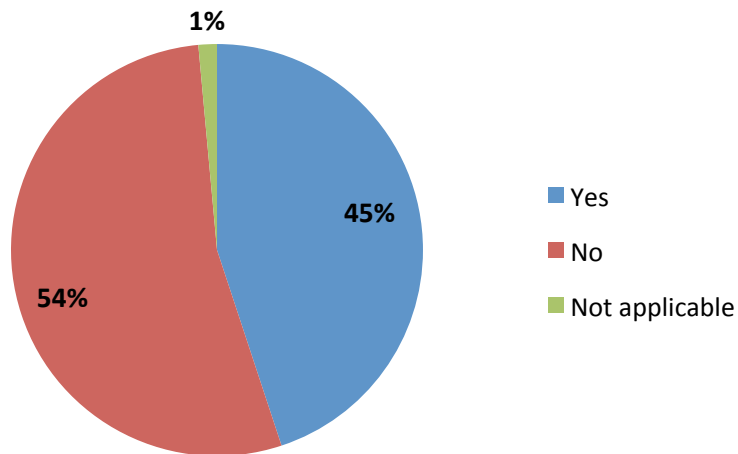
Other Institutions (n = 35)



■ Yes
■ No
■ Not applicable



- **61%** (RI), **79%** (NHMs) and **100%** (ESBs) keep record of what they have in their freezer which allows for easy updating the LIFE/COST database (in the making) of EU freezer content.
- > **56%** of NHMs keep tissue in ethanol making it of less or no value for contaminant analysis, while > **72%** ESBs/RI preserve tissue frozen.
- Short-term storage of specimens is restricted by freezer capacity for **46%** (n = 42), which might implicate non-acceptance or loss of valuable fresh specimens.
- 27 of 49 institutions (**55%**) destroy samples of fresh dead raptors and owls...destroying valuable samples for contaminant analysis.



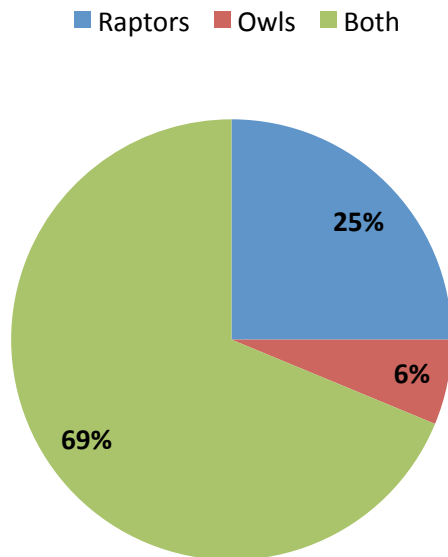
- **43%** of all respondents is actively involved in raptor/owl research (n=109 – 31 institutions, 4 ESBs, 74 museums), so **57%** is NOT.

The species studied by most organisations are: white tailed eagle *Haliaeetus albicilla*, buzzard *Buteo buteo*, sparrowhawk *Accipiter nisus*, gyps vulture *Gyps fulvus*, tawny owl *Strix aluco* and little owl *Athene noctua*.

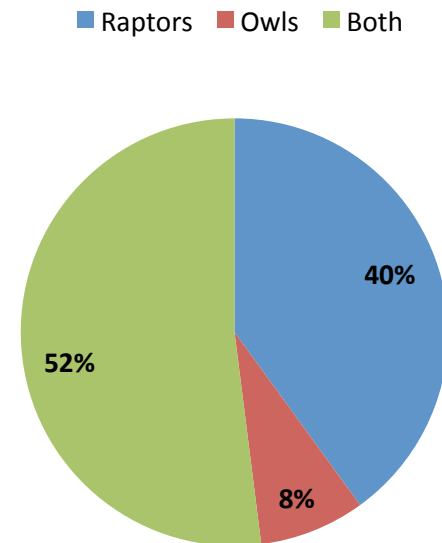
- **59** (56 museums + 3 institutions) organisations add skins and **60** add other tissues from these fresh specimens to their collections.

Of 61 responses **30%** add wet tissues, **13%** add dry tissues and **57%** add both tissues.

Museums

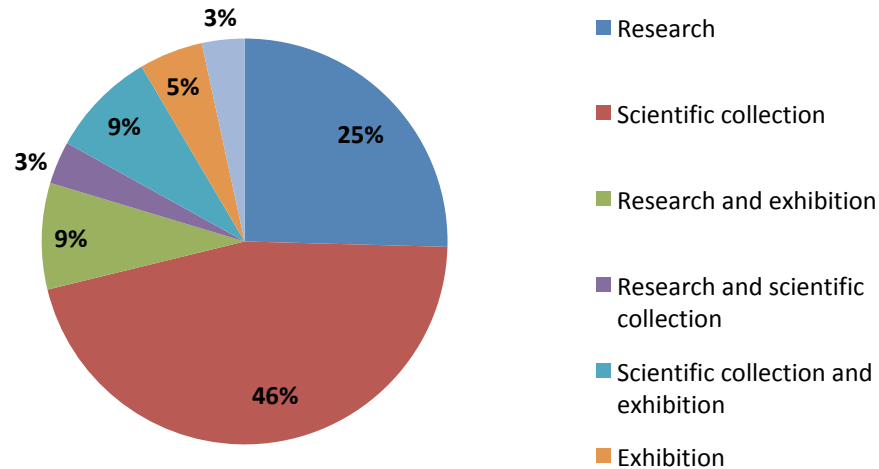


Institutions

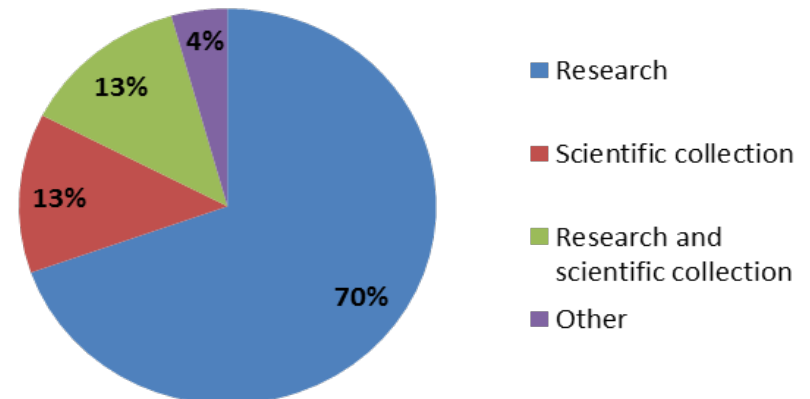


ESBs (100%) and other institutions (70-83%) do more raptor research than NHMs (25-37%).

Museums



Other Institutions (n = 23)



20% of all institutions use raptor and owl samples for ecotoxicological studies, so **80%** does not use these samples for ecotoxicological studies.

This suggests that there is significant scope to encourage more organisations to engage in contaminant studies. The compounds most frequently studied are metals/semimetals, PCBs, insecticides and anti-coagulant rodenticides.

Museums	
PCBs	4
Metals/Semimetals	5
Acaricides	0
Nemacides	0
Insecticides	2
Anticoagulant rodenticides	1
Molluscicides	0
Fungicides	0
Herbicides	0
Pharmaceuticals	1
Flame retardants	2
PAHs	2
POPs	1
FRs	1
PFASs	1
Other	0

Institutions	
PCBs	11
Metals/Semimetals	15
Acaricides	1
Nemacides	1
Insecticides	10
Anticoagulant rodenticides	8
Molluscicides	1
Fungicides	2
Herbicides	2
Pharmaceuticals	5
Flame retardants	5
PAHs	4
POPs	0
FRs	0
PFASs	0
Other	4

A young barred owl is perched on a tree trunk, looking directly at the camera. The owl has brown and white mottled feathers and large, dark eyes. The tree trunk is covered in moss and has a rough, textured surface. The background is a dark, out-of-focus forest.

**THANK YOU FOR
YOUR ATTENTION!**



Questions?