

WG4 Thessaloniki workshop – Best Practice Guidance

European
Raptor
Biomonitoring
Facility



cost
EUROPEAN COOPERATION
IN SCIENCE & TECHNOLOGY



Objectives

- To define what we mean by **'contextual data'** for contaminant studies and discuss what types of data are useful to collect
- To review what **sampling protocols and best practice guidance for collecting contextual data** is currently available, what is needed and how to provide it
- To consider the structure of the **European Sampling Programme** (ERSamP) and constraints to its effective operation
- To consider the **types and distribution of field participants** across Europe who can contribute to the ERSamP (finish reviewing their availability)
- To consider **next steps in the work of WG4** Field Arena ahead of Florence meetings



Definition

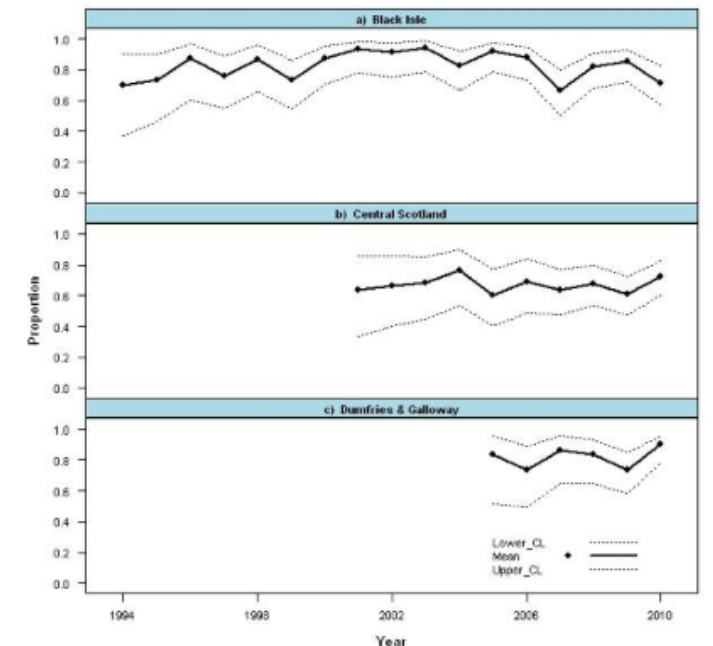
‘Contextual data’

Information on the individual (that is sampled), its population, and the environment where it lives, that is relevant to the interpretation of data on contaminant exposure



Trends in the fledging success (proportion of pairs known to hatch young that fledged at least one young) of Red Kites between 1994 and 2010 for the three subpopulations with sufficient sample sizes for trend analyses. (Source: RSPB data)

© 23RD APRIL 2015 618 x 618 RED KITE



Fledging success (proportion of pairs known to hatch young that fledged at least one young): 1994-2010

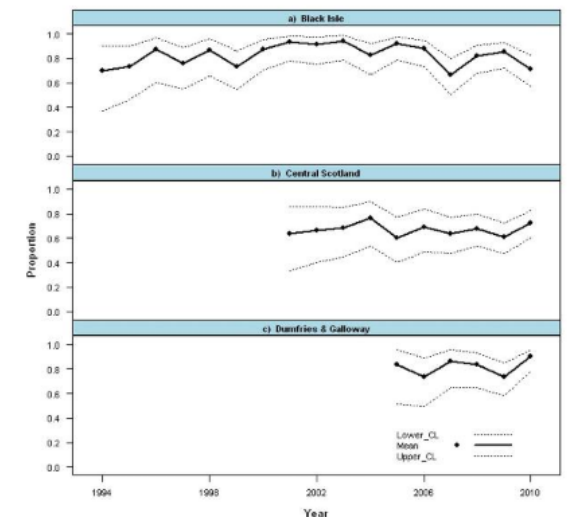
WG4 Types of 'contextual data' for contaminant studies and their interpretive value

1. **Basic obligatory data about the matrix sample collected**
(e.g. date, time, location, collector's name, species, sample type, type of feather, ring number, **unique individual ID**)
2. **Data about the individual bird / pair from which the sample is taken**
(age, sex, condition, body measurements, diet, breeding performance, movements – tracked birds, behavioural observations e.g. aggressiveness, **unexpected observations e.g. abnormalities**)
3. **Data about the population of birds from which samples are taken**
(e.g. population trends, breeding productivity and trends, timing of breeding and trends, population diet, population movements – **relevant contaminant source area**)
4. **Relevant environmental data**
(e.g. local sources of contamination, **local cropping/land management**, photos of immediate surroundings)



Trends in the fledging success (proportion of pairs known to hatch young that fledged at least one young) of Red Kites between 1994 and 2010 for the three subpopulations with sufficient sample sizes for trend analyses. (Source: RSPB data)

23RD APRIL 2015 618 618 RED KITE



Fledging success (proportion of pairs known to hatch young that fledged at least one young): 1994-2010

WG4 Thessaloniki

Exploring the value of contextual data in contaminant studies

4 different scenarios

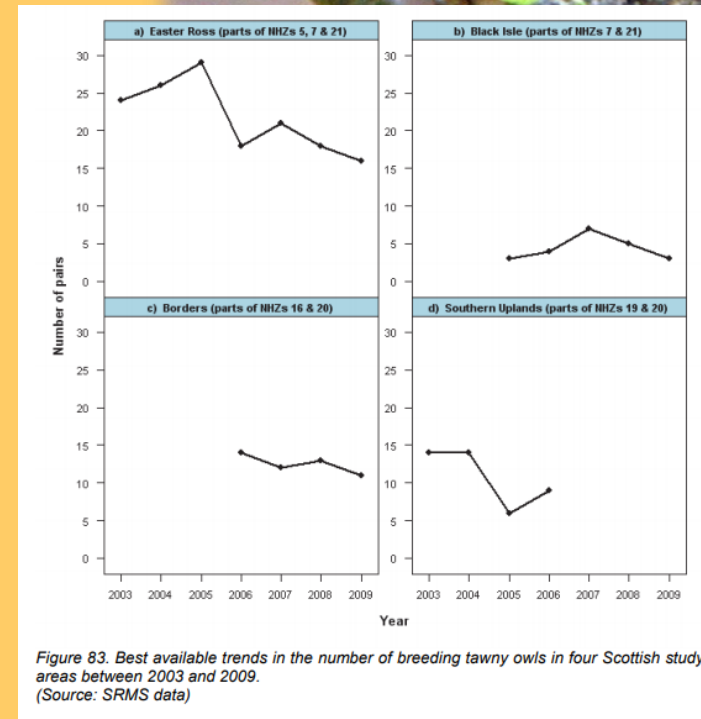
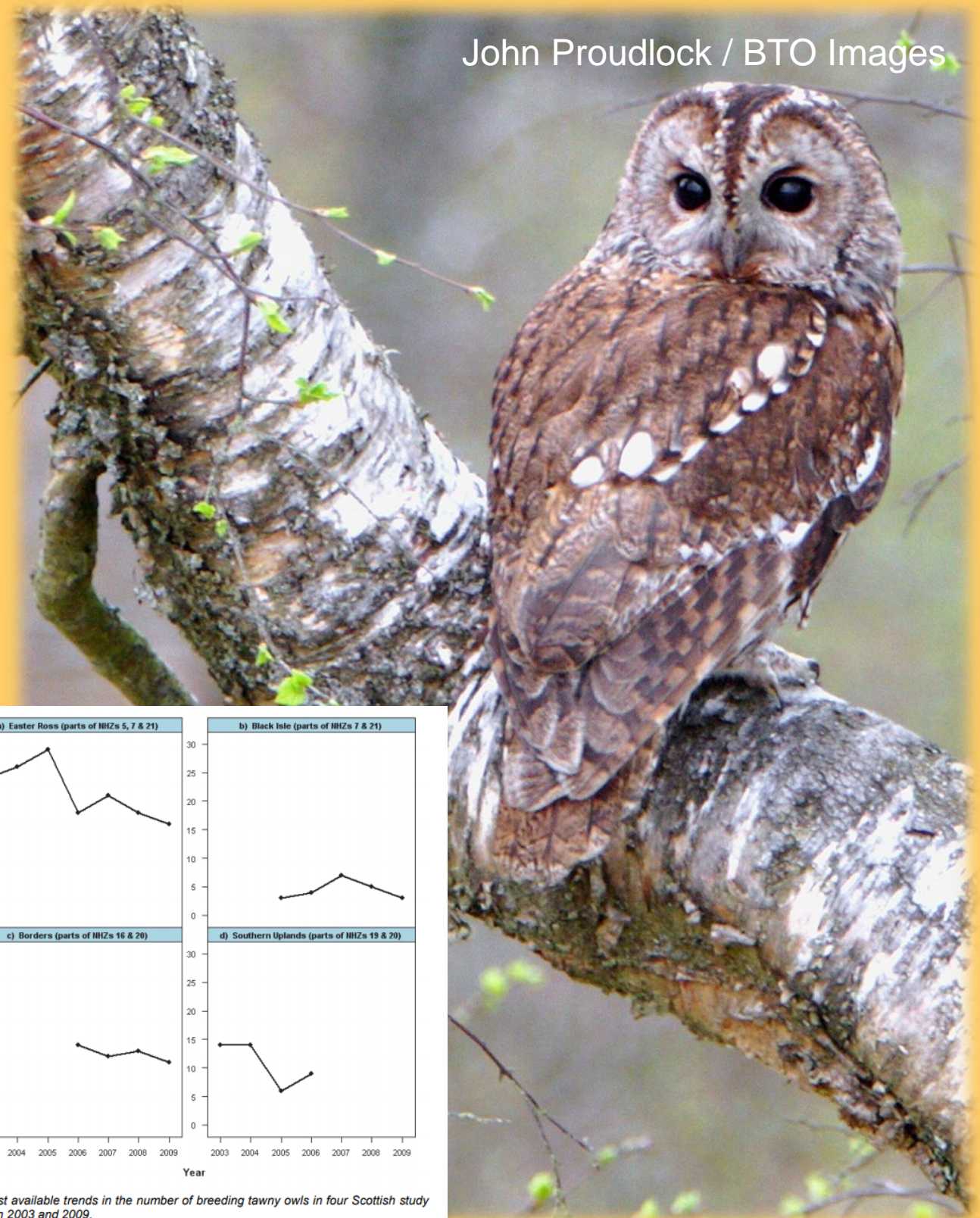
For each type of study and each type of contextual data:

(a) Decide whether it would be useful

(b) Explain the rationale for the decisions

Example 1

In a study of exposure to mercury using feathers from Tawny Owls, would it be useful for researchers to have background information on the population trends of the pairs sampled or on the long-term breeding success of individual pairs?



WG4 Thessaloniki - Development of best practice guidance

- EURAPMON sampling protocols to identify extra needs (with Silvia Espin)
- Falcon best practice guidance for contextual data (with Lucie Michel)
- Vulture best practice guidance (with Jovan Andevski)

Each group should identify:

What (additional) subjects need to be covered?

Where will the information come from and how?

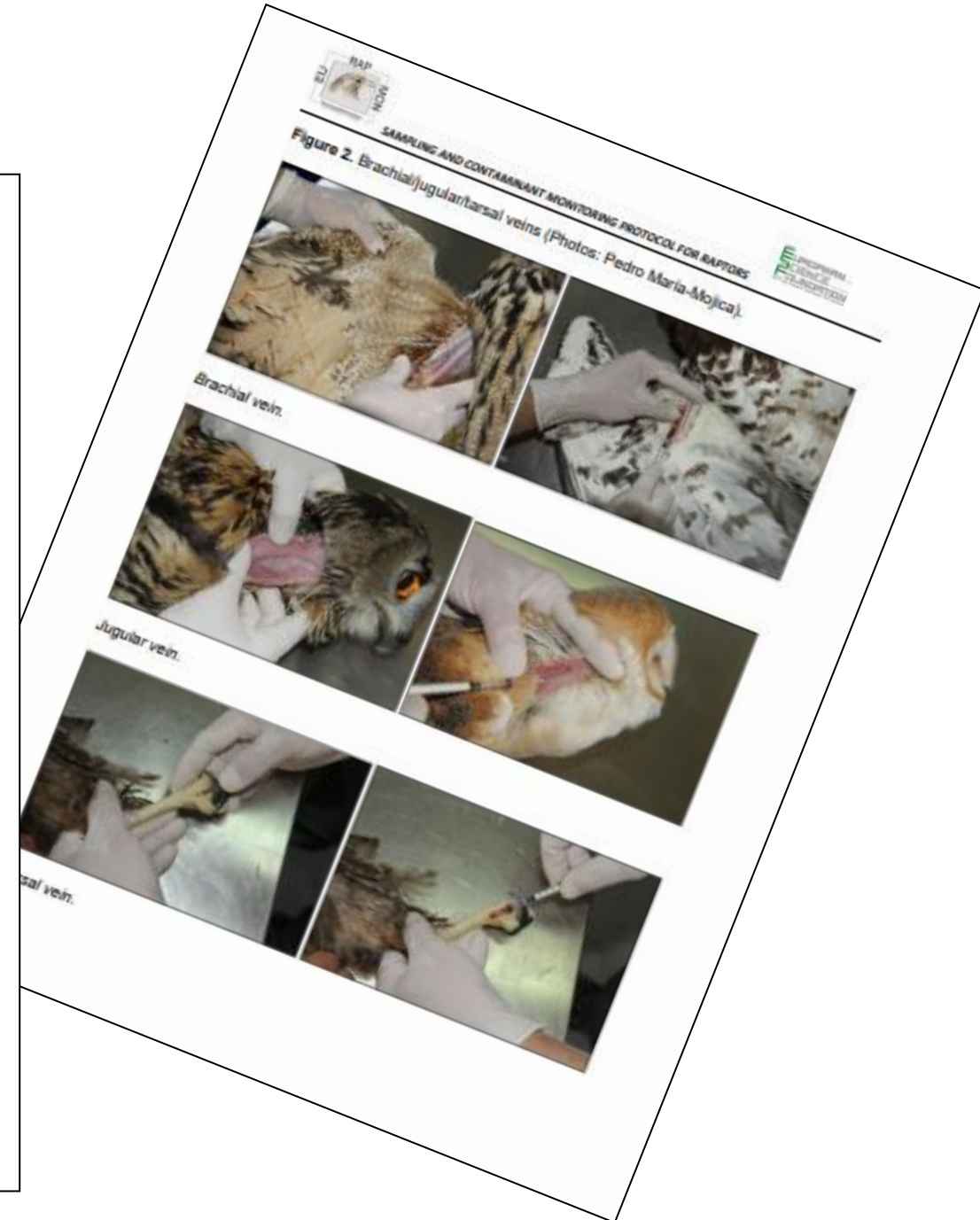
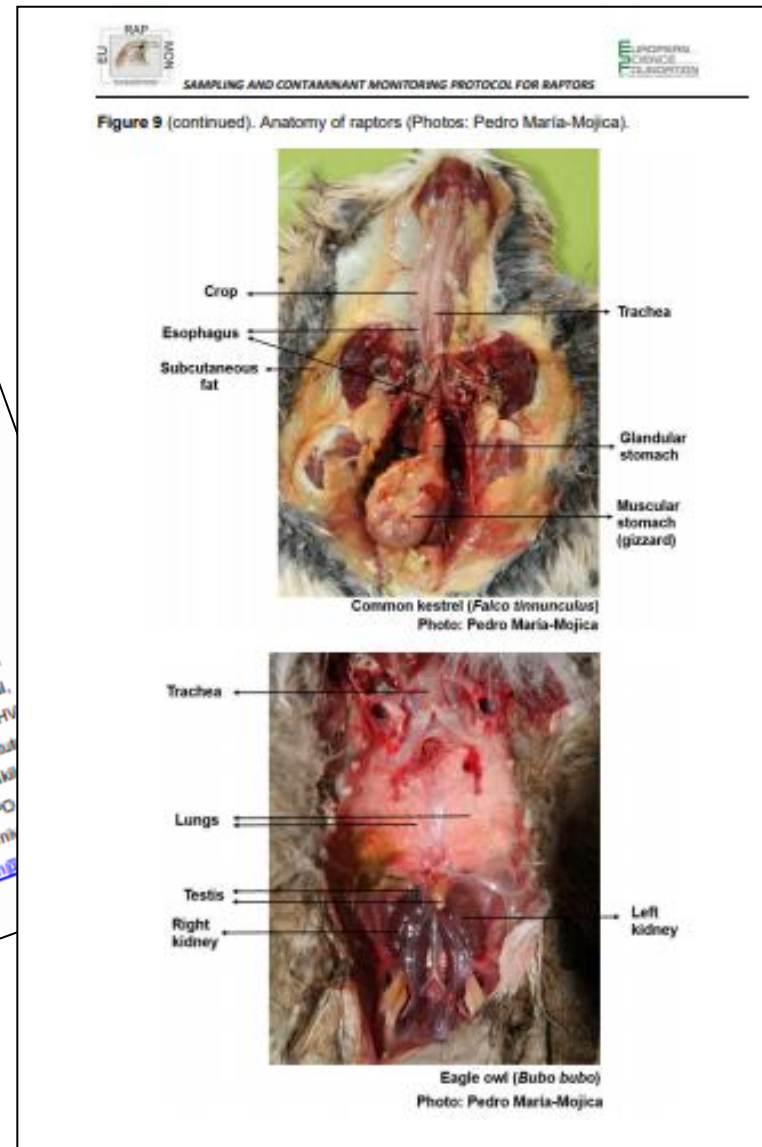
Who will help develop guidance (Task Group)

Timescales (action plan)

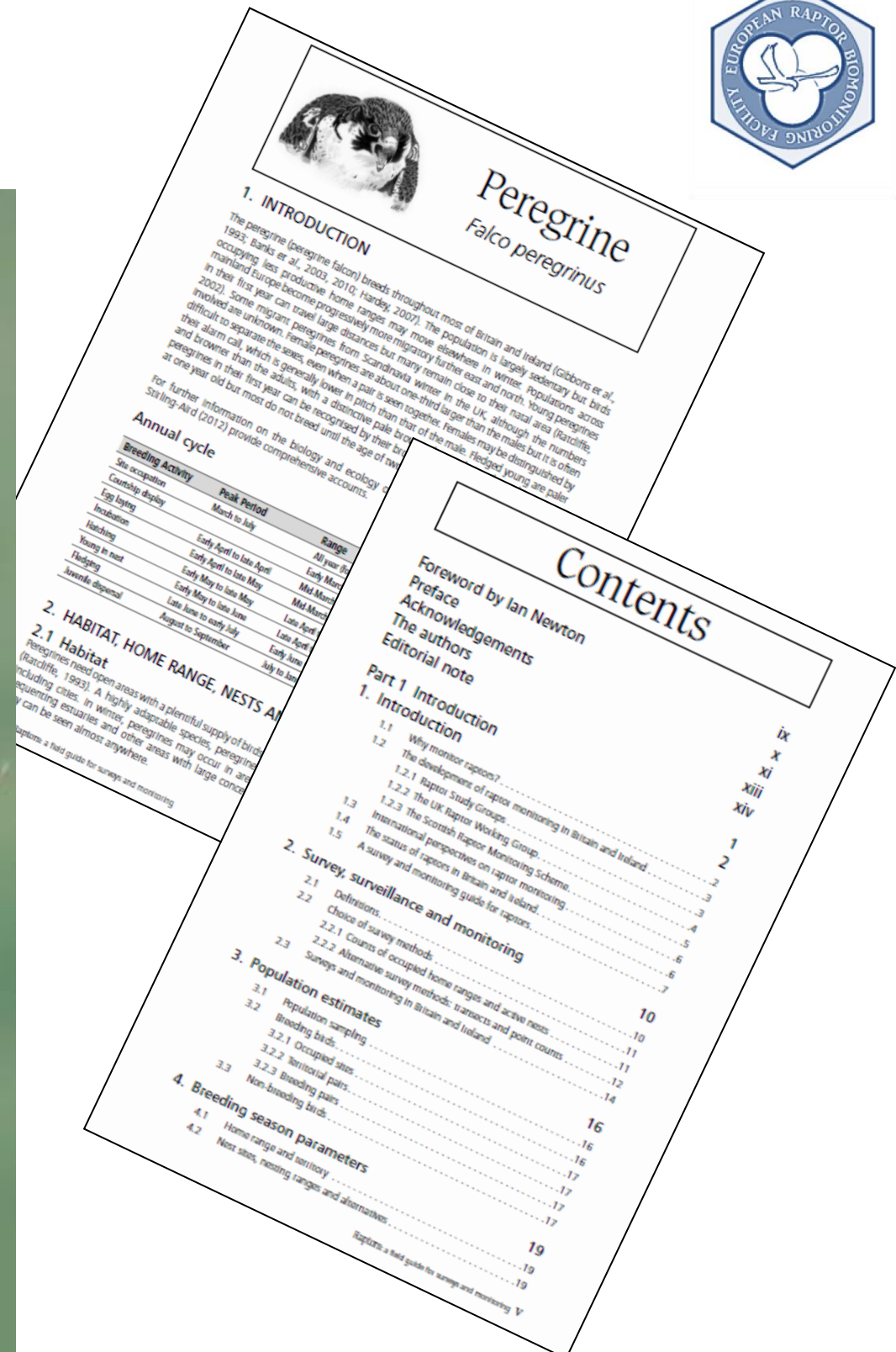
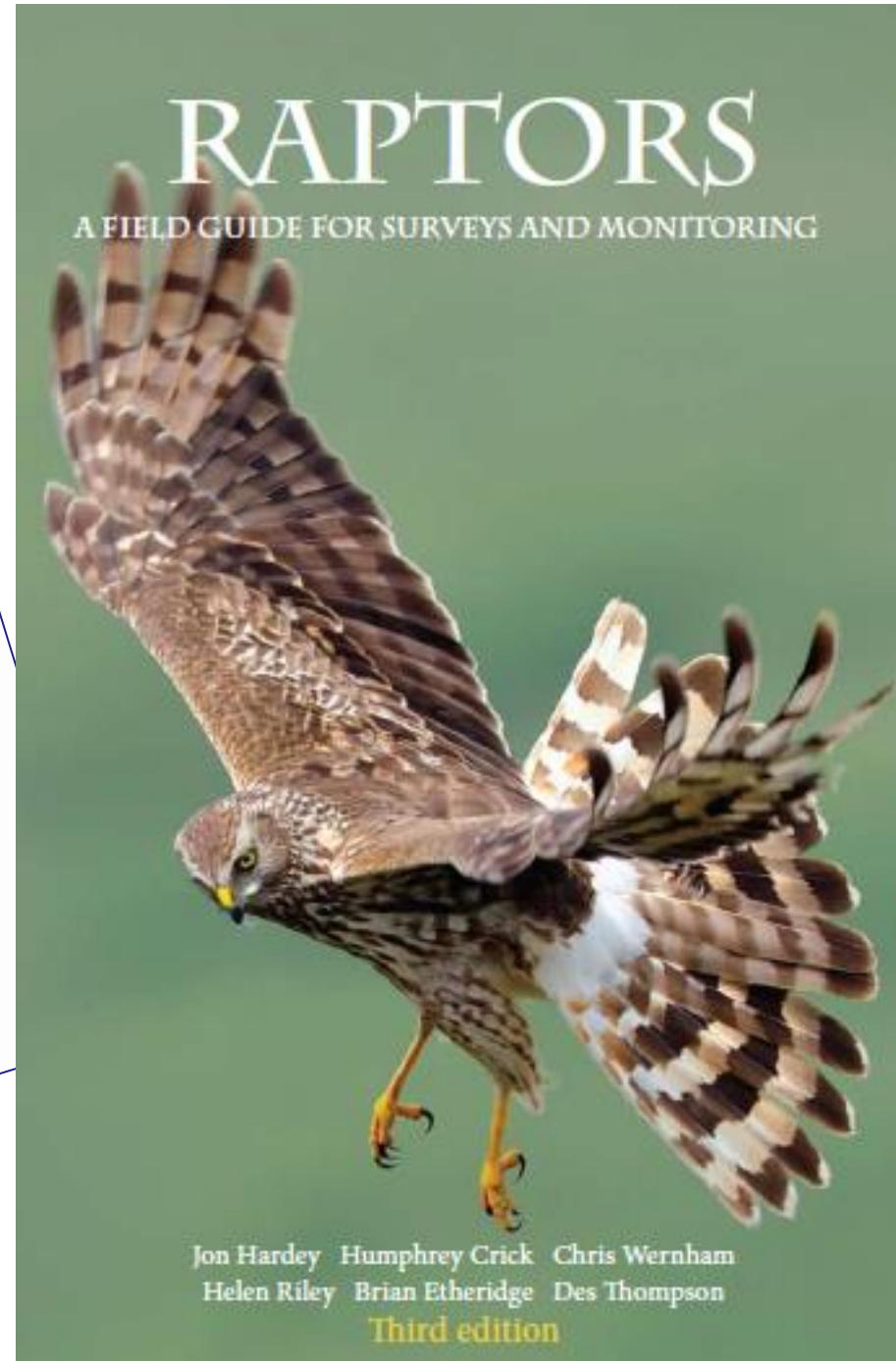


Moss Taylor / BTO Images

WG4 - Sampling protocols and best practice guidance for the collection of contextual data



WG4 Best practice guidance



1. Legal constraints

(relating to the legislation for handling and sampling raptors and moving samples around – focus on within country movements)

2. Methodological constraints

(relating to best practice guidance for sampling and collecting contextual data and its availability)

3. Constraints posed by spatial distribution of monitoring coverage

(use of information from Gomez-Ramirez *et al.* and Derlink *et al.* EURAPMON inventory work)

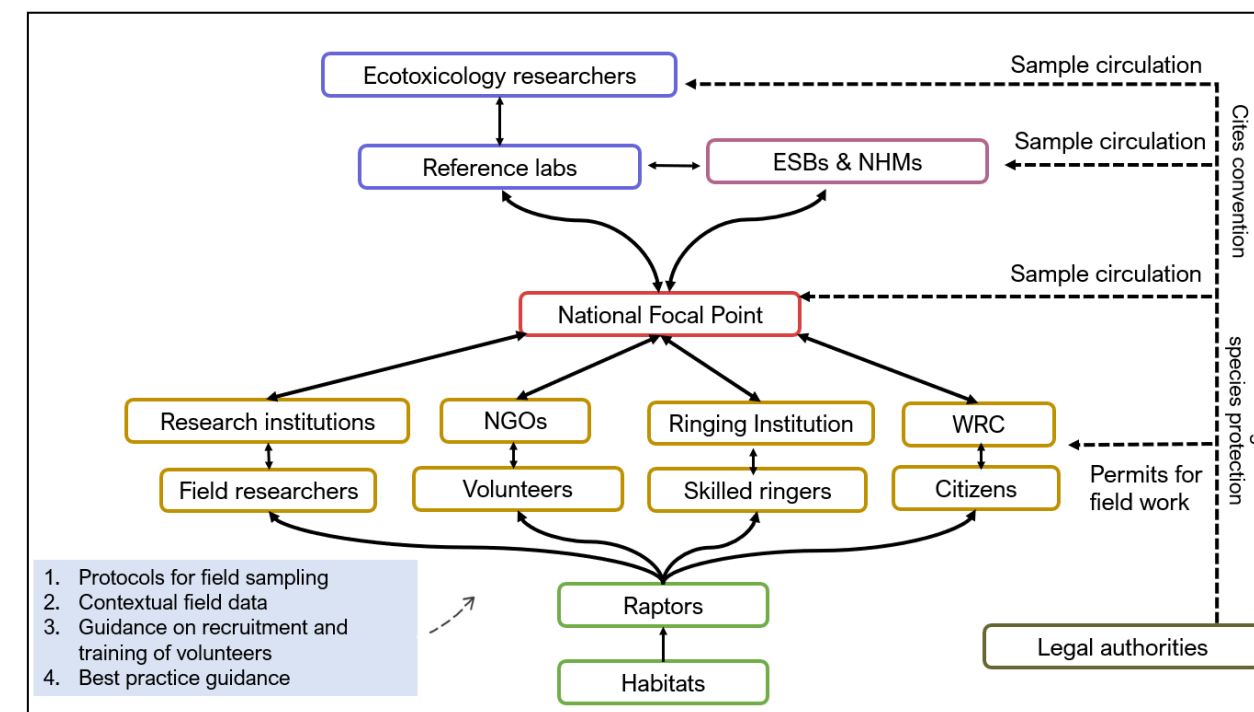
4. Constraints posed by need for skills and knowledge in the field

(which types of field participants could help collect samples)

Helped to shape the questionnaire survey now being run by Maria Dulsat



WG4 Constraints and solutions work



Review of ringing activity of raptors across Europe

General comparisons between countries....

What is the process for getting ringing permits?

How long does it take?

What training is required?

How often do permits have to be renewed?

Permits for radio- and satellite tracking?

Preliminary discussion of how the data collected in the questionnaire survey will be analysed and interpreted



WG4 Thessaloniki

Starting to think further about capacity building for sample collection



Thessaloniki workshop

Any questions?



WG4 Field Arena

**Grant period 3
(May 2019 – April 2020)**



WG4 Field Arena - Tasks



T4.1 Develop framework for European Raptor Sampling Framework (ERSampP) (a) focal species & sample matrices (b) existing sampling coverage and gaps (c) opportunities to fill gaps (d) contextual data for interpretation of contaminant exposure	Grant Period 1-2 First draft by April 2019
T4.2 Review key constraints (legislative/practical) to activities (e.g. nest visits, transfer of samples between countries) for sampling and contextual data; identify how to resolve constraints	Grant Period 1-3 Mission by April 2019
T4.3 Develop best practice guidance and protocols for raptor sampling and contextual data capture; trial with one or more case study species from several European countries; review and amend as appropriate; disseminate guidance and protocols	Grant Period 2-3 Mission by April 2019 Vulture Task Group 2 Missions in 2019
T4.4 Expand stakeholder involvement in raptor sampling and contextual field data gathering - assessing potential; identifying ways to involve more professional and amateur ornithologists in raptor biomonitoring (working with NGOs and raptor ecologists in the network); developing guidance on recruitment and training	Grant period 3-4 Mission in 2019 Workshop in 2019 Training school
T4.5 Deliver proof of concept involving, for a case study focal species (or group of species), applying the framework, guidance and protocols to collect new raptor samples and contextual field data through existing and/or novel networks	Grant period 3-4 Workshop in 2019 Funding discussions Missions



WG4 Workshop

Slovenia

September 2019

Objective

To develop plans for capacity building and related guidance on engaging, motivating and training volunteers to collect samples and contextual data

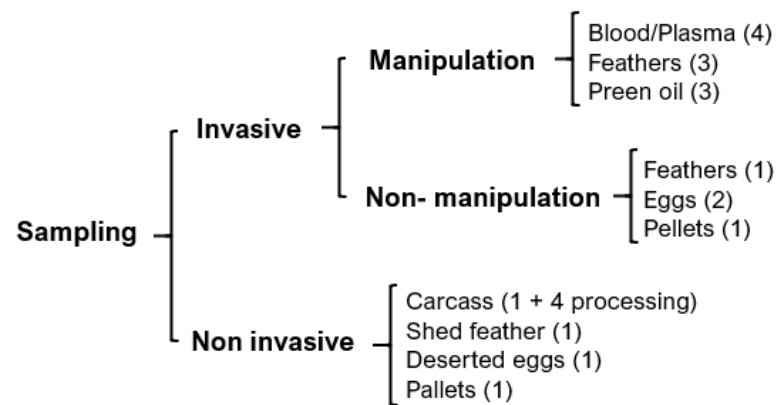


WG4 Field Arena

3 or 4 short-term missions in GP3

1. Develop guidance for training and volunteer recruitment (and plan the Slovenia meeting)
2. Best practice guidance for vultures
3. Best practice guidance for species group(s) for proof of concept study
4. Plan and coordinate field data collection/collectors for proof of concept study





WG4 Workshop Florence

The skills required for sampling and monitoring are divided in four different groups:


1. No specific skills required
2. Experience in species monitoring
3. Permits for handling live birds (e.g. field researchers, ringers and veterinarians)
4. Permits for extraction of specific samples as blood and holding dead birds (e.g. necropsies)

WG4 – Capacity Building (and developing guidance)

Review existing relevant projects and share experiences in recruiting, motivating and training volunteers



← → ↻ ⓘ Not secure | raptormonitoring.org/need-advice-on-monitoring



About ▾ SRMS Partners ▾ Species ▾ Raptor Conservation ▾ Data ▾ Advice ▾ Getting Involved ▾ Annual Report ▾ Contact ▾

Scottish Raptor Monitoring Scheme

RECENT POSTS

Article about the work of the SRMS published in Bird Study

JOB ADVERT: Scottish Raptor Monitoring Coordinator – Maternity Cover

SRMS 2017 Annual Report now published

Scottish Raptor – July 2018

SRMS 2016 Annual Report now published

Scottish Raptor – September 2017

Scottish Raptor – November 2016

SRMS 2015 Annual Report now published

Forthcoming event – The North of England Raptor Conference 2016

Scottish Raptor – May 2016


Advice

The Scottish Raptor Monitoring Scheme has published a field guide which provides expert advice on surveying and monitoring raptors.

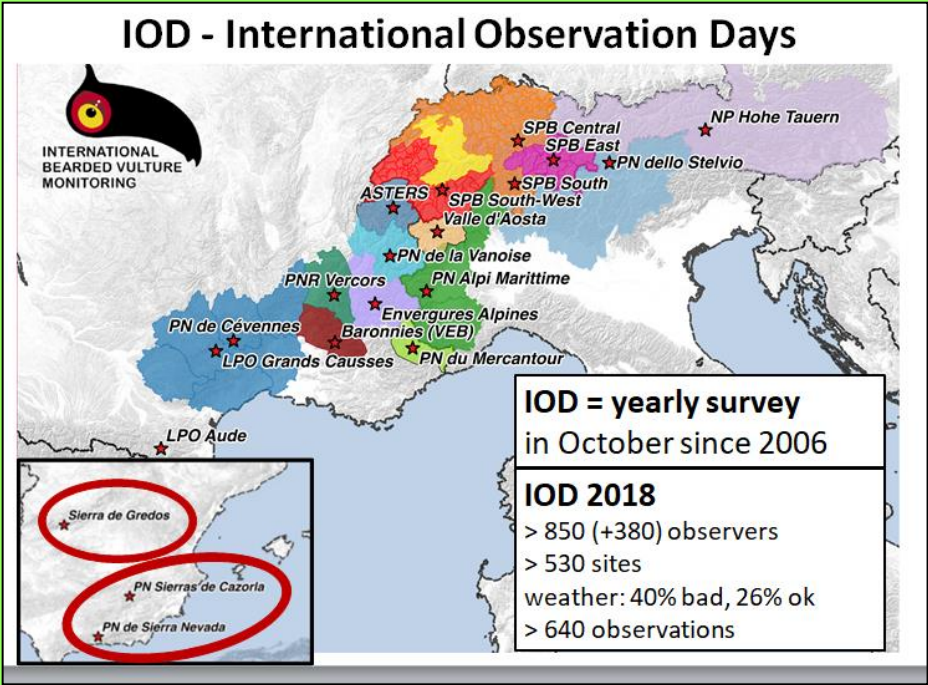
Now onto its third edition the *Raptors: A Field Guide for Surveys and Monitoring* details the survey techniques that should be employed to successfully survey each of the raptor species which regularly occurs in Britain.

Chapters can be accessed through following the links below:

- Part 1: Introduction
- Part 2: Species accounts
 - Honey Buzzard
 - Red Kite
 - White-tailed Eagle
 - Marsh Harrier
 - Hen Harrier
 - Montagu's Harrier
 - Northern Goshawk
 - Eurasian Sparrowhawk
 - Common Buzzard



Hardy, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. & Thompson, D. (2013). *Raptors: a field guide to survey and monitoring* (2nd Edition). The Stationery Office, Edinburgh.



My BTO

Home ▾ About birds ▾ Volunteer surveys ▾ Science ▾ Research & data services ▾ My BTO ▾ News & events ▾ Support us ▾ Shop ▾

Project Owl ▾ Tawny Owl Point Survey ▾ Tawny Owl Calling Survey ▾

Online data entry

Tawny Owl Point Survey

Survey Completed Autumn 2018

Despite being widespread, we know surprisingly little about our Tawny Owl population. The BTO's core monitoring schemes do suggest a recent decline but as they are daytime surveys, they can't show us the full picture.

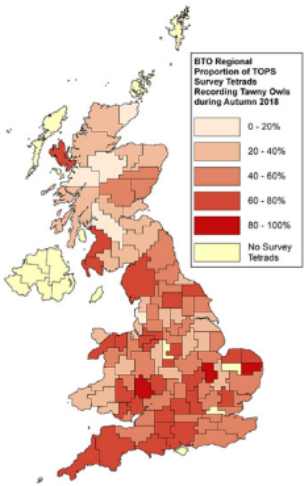
Why survey Tawny Owls nationally?

We get better information on how Tawny Owl populations are doing by carrying out periodic targeted surveys. BTO previously carried out national structured surveys for Tawny Owls in Britain in the autumns of 1989 and 2005. So by carrying out a comparable survey during autumn 2018 (August 15th - October 15th 2018) that also takes advantage of modern statistical techniques, we aimed to get an up to date measure of change in their occupancy and populations as well as habitat associations and geographical patterns. Through this, we hope to learn more about our noisy but often mysterious neighbours.

Tawny Owl Point Survey structure


This survey involved volunteers visiting random preselected tetrads (2x2km squares). In total there were over 6,000 tetrads available at the start of the survey, of which approximately 2650 were surveyed previously in 1989 and/or 2005. Over 2900 of these tetrads were surveyed during autumn 2018 making it the largest and most in-depth survey of Tawny Owls ever.

The survey was carried out during the autumn of 2018. Provisional results can be viewed on the map to the right. To release more complete results, please wait until the next update. Thank you to everyone.



Click the map to view some provisional results!

← → ↻ ⓘ Not secure | raptormonitoring.org/getting-involved/raptor-patch



About ▾ SRMS Partners ▾ Species ▾ Raptor Conservation ▾ Data ▾ Advice ▾ Getting Involved ▾ Annual Report ▾ Contact ▾

Scottish Raptor Monitoring Scheme

RECENT POSTS

Article about the work of the SRMS published in Bird Study

JOB ADVERT: Scottish Raptor Monitoring Coordinator – Maternity Cover

SRMS 2017 Annual Report now published

Scottish Raptor – July 2018

SRMS 2016 Annual Report now published

Scottish Raptor – September 2017

Scottish Raptor – November 2016




SRMS 2015 Annual Report now published

Forthcoming event – The North of England Raptor Conference 2016

Scottish Raptor – May 2016

Raptor Patch

You do not need to already know lots about raptors or raptor monitoring to be able to take part in Raptor Patch. Everything you need to get started is available here on the SRMS website. Click [here](#) to understand how you can progressively develop your skills and experience at a pace that suits you or take a look at the three leaflets below:



My BTO

Home ▾ About birds ▾ Volunteer surveys ▾ Science ▾ Research & data services ▾ My BTO ▾ News & events ▾ Support us ▾ Shop ▾

Project Owl ▾ Tawny Owl Point Survey ▾ Tawny Owl Calling Survey ▾

Join the Tawny Owl Calling Survey

New to BTO surveys? register account

Existing Surveyor? sign up now

Go to Data Entry

Tawny Owl Calling Survey

Take part in the Tawny Owl Calling Survey

Why we need your help

Are there Tawny Owls calling in your area? By listening out for them in your garden or nearby green space you could help us to

My BTO

Home ▾ About birds ▾ Volunteer surveys ▾ Science ▾ Research & data services ▾ My BTO ▾ News & events ▾ Support us ▾ Shop ▾

Research services ▾ Data services ▾ Publications ▾

LifeCycle

LifeCycle is the magazine of the [British & Irish Ringing Scheme](#) and the [Nest Record Scheme \(NRS\)](#), published twice a year, in the spring and autumn.

A newsletter for volunteers...

LifeCycle is primarily a magazine for the dedicated ringers and nest recorders who contribute so much time and effort to collecting essential data on the breeding success, survival and movements of Britain & Ireland's birds. As such, it includes practical ringing and nest finding tips, details of novel techniques and summaries of successful monitoring projects that demonstrate the initiative, hard work and skill of existing volunteers, while hopefully inspiring others to set up their own studies. Many of the articles are written by ringers and nest recorders, the people with the field expertise, and we would welcome ideas and contributions for future editions.

...and also a magazine for those interested in birds



Please register your interest with any WG4 member!

ERBF book proposal draft



BOOK
(Elsevier, Springer, Cambridge University Press, Oxford University Press etc.)

EUROPEAN RAPTOR BIOMONITORING FACILITY – ASSESSING ENVIRONMENTAL CONTAMINATION AT A PAN-EUROPEAN LEVEL

Sections:

Introduction

- A. Establishing the background for raptor biomonitoring**
- B. Raptor contaminant reference guidance: methods, matrices and reference values**
- C. Guidance on field sampling and monitoring of raptor populations**
- D. Raptor samples storage: collections and specimen banks**
- E. Case studies**

EUROPEAN RAPTOR BIOMONITORING FACILITY – ASSESSING ENVIRONMENTAL CONTAMINATION AT A PAN-EUROPEAN LEVEL

Section A. Establishing the background for raptor biomonitoring
Chapter 1. Rationale for the use of raptors for contaminant biomonitoring
Chapter 2. Framework for a European Raptor Biomonitoring Scheme
Chapter 3. Framework for a distributed European Raptor Specimen Bank
Chapter 4. Framework for a European Raptor Sampling Programme

EUROPEAN RAPTOR BIOMONITORING FACILITY – ASSESSING ENVIRONMENTAL CONTAMINATION AT A PAN-EUROPEAN LEVEL

Section B. Raptor contaminant reference guidance: methods, matrices and reference values

Chapter 5. Prioritisation of contaminants, matrices and indicator species: a decision framework

Chapter 6. Pharmaceuticals (NSAIDs)

Chapter 7. Perflourinated chemicals

Chapter 8. Agrochemicals

Chapter 9. Rodenticides

Chapter 10. Heavy metals

EUROPEAN RAPTOR BIOMONITORING FACILITY – ASSESSING ENVIRONMENTAL CONTAMINATION AT A PAN-EUROPEAN LEVEL

Section C. Guidance on field sampling and monitoring of raptor populations
Chapter 11. Raptor monitoring in Europe: population, conservation and ringing
Chapter 12. Importance of contextual data to interpret ecotoxicological results
Chapter 14. Constraints to sampling and collecting contextual data for ecotoxicology... ...and solutions!
Chapter 15. Protocols for collecting samples from raptors for ecotoxicological analysis
Chapter 16. Raptor diet parameters for ecotoxicology
Chapter 17. Methods and protocols to monitor raptors nests and assess reproductive performance
Chapter 18. Protocols for a raptor nestbox monitoring programme
Chapter 19. Specific protocols for collecting samples from vultures
Chapter 20. Best practice guidance for monitoring urban falcons

EUROPEAN RAPTOR BIOMONITORING FACILITY – ASSESSING ENVIRONMENTAL CONTAMINATION AT A PAN-EUROPEAN LEVEL

Section D. Raptor samples storage for ecotoxicology: collections and specimen banks

Chapter 21. Short-term storage of raptor samples for analysis of current state of contaminant level in raptors

Chapter 22. Long-term storage of raptor samples for historical retrospective contaminant biomonitoring in raptors

Chapter 23. Raptor collections in Europe: museums and specimen banks

Chapter 24. Raptor specimens/samples exchange and CITES

EUROPEAN RAPTOR BIOMONITORING FACILITY – ASSESSING ENVIRONMENTAL CONTAMINATION AT A PAN-EUROPEAN LEVEL

Section E. Case studies
Chapter 25. Ecotoxicological analysis using eagle owls
Chapter 26.
Chapter 27.

EUROPEAN RAPTOR BIOMONITORING FACILITY – ASSESSING ENVIRONMENTAL CONTAMINATION AT A PAN-EUROPEAN LEVEL

Introduction

- A. Establishing the background for raptor biomonitoring**
- B. Raptor contaminant reference guidance: methods, matrices and reference values**
- C. Guidance on field sampling and monitoring of raptor populations**
- D. Raptor samples storage: collections and specimen banks**
- E. Case studies**



WG4 Team

Management of WG4 work programme

Chris Wernham

Al Vrezec

Rui Lourenço

Arianna Aradis

Ándrás Kovacs

Yael Choresch

WG4 Task Groups

Vulture guidance

Jovan Andevski

Rafa Mateo

STSM Mission hosts

Giacomo Dell'Omo

Jari Valkama

Rui Lourenço

WG4 Corresponding members
including other WG Leads

WG4 Field Arena



Please register your interest with any WG4 member!

Discussion!

