



# European Raptor Biomonitoring Facility

**Guy Duke – Chair**  
GM2, Florence, 5 March 2019



# The challenge

- Environmental contaminants:  
€ multi-bn costs to human and wildlife health
- EU objective (7EAP) - a non-toxic environment
- EU chemicals regulations – assess risk, impose risk mitigation measures (restrict/ban)
- Need biomonitoring data to:
  - enhance chemical risk assessment
  - enhance assessment of effectiveness of regulations
  - provide early warning of emerging contaminant problems





# Why 'ERBFacility'

- 'Facility' (from Latin *facilis* – 'easy')
  - not an infrastructure, but a 'provision' or 'package' of key elements
- 3 key elements:
  - European Raptor **Monitoring Scheme** (ERBioMS)
  - *Distributed* European Raptor **Specimen Bank** (ERSpeB)
  - European Raptor **Sampling Programme** (ERSamp)





# The goal

- Underpin generation and use of raptor biomonitoring for EU regulatory applications
- Use raptors as sentinel species to answer:
  1. What are the environmental risks of specific chemicals?
  2. Are chemicals regs effective in reducing environmental exposure to contaminants?
  3. Are there emerging contaminant problems requiring remedial action?
- Thereby:
  - contribute to a non-toxic environment
  - Reduce contaminant toll on human and wildlife health



# The three 'Arenas'

- **Analysis**
  - labs, ecotoxicologists
- **Collections**
  - NHMs, ESBs, other collections
- **Field**
  - field ornithologists/ecologists, raptor conservationists







# Capacity Building Objectives

**R1 Analysis Arena:** assess current analytical capacities, develop framework for **ERBioMS**

**R2 Collections Arena:** assess current collection capacities, develop framework and protocols for distributed **ERSpeB**

**R3 Field Arena:** assess current field capacities, develop framework, standards and protocols for **ERSamP**





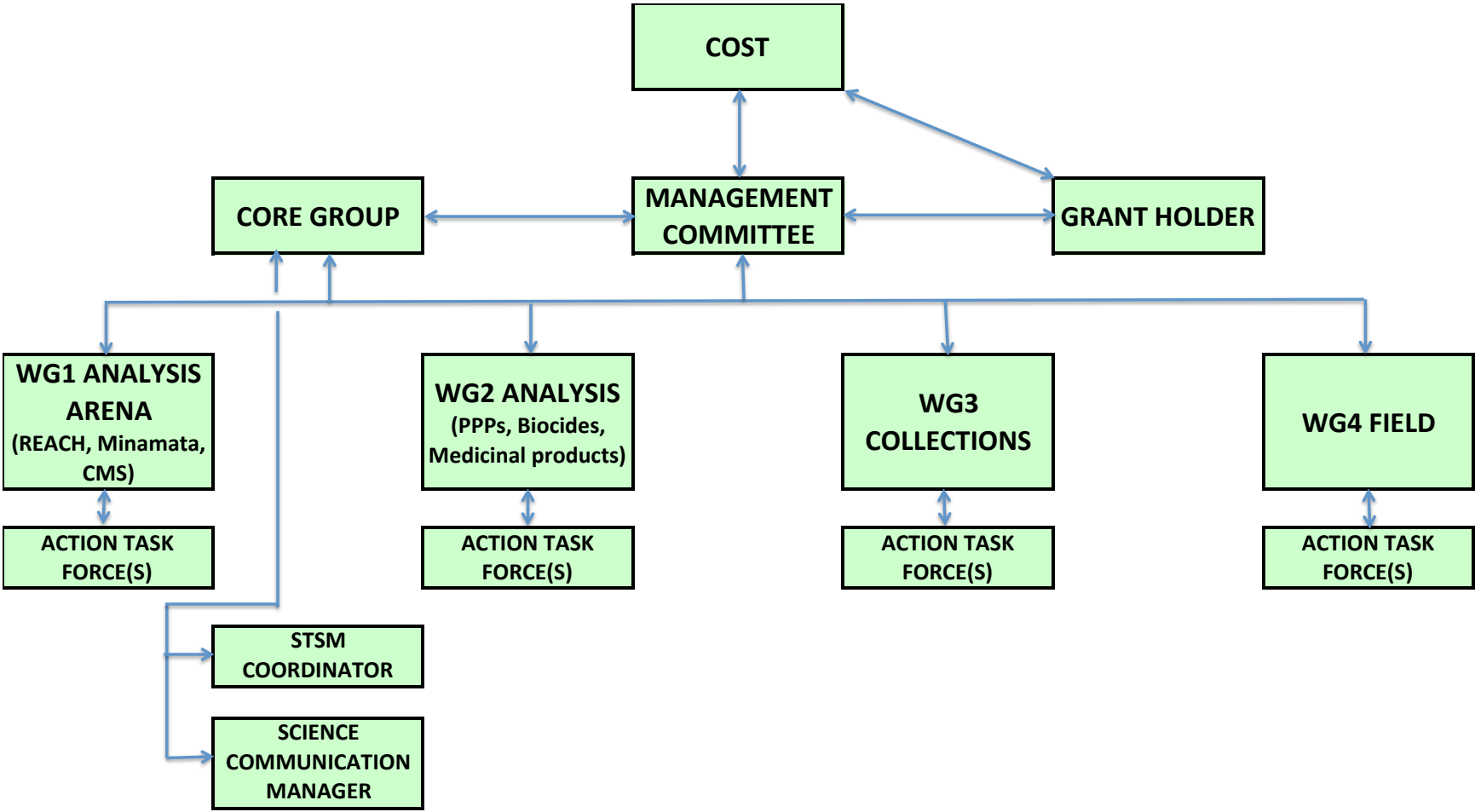
# Research Coordination Objectives

- **C1 - Analysis arena**
  - Collaborative work on ERBioMS
  - Piloting joint assessment and reporting
  - Developing guidance on integrating reports with regulatory assessments
- **C2 - Collections arena**
  - Collaborative work on ERSpeB
  - Constructing meta-database of samples/data
  - Stimulating expansion of raptor collections
- **C3 - Field arena**
  - Collaborative work on ERSamP
  - Stimulating/harmonising collection of raptor samples and contextual data
  - Developing and field-testing sampling framework, standards and protocols





# Management Structure







# Parties to ERBFacility

**26 Parties - more expected to join**

**45 MC Members**

**19 MC Substitutes**





# COST policies

- Geographical coverage/ICT countries

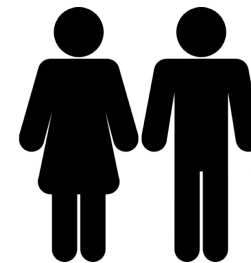
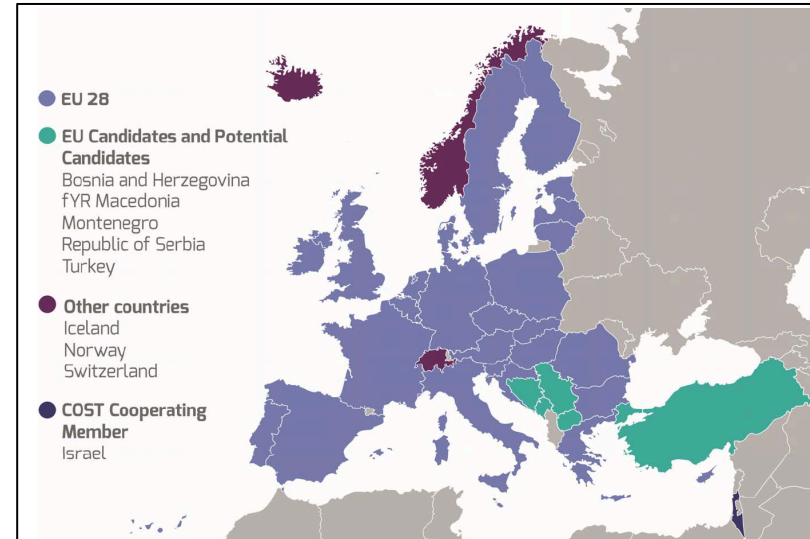
- 26 of 37 COST countries
- 11 of 25 Parties ICT (40%)

- Gender balance

- Only 12 of 44 Members female
- 2 of 4 WG Leads female

- Early Career Investigators

- Several ECIs on MC





# Relations to existing efforts



[EURAPMON](#) – monitoring for and with raptors



[HBM4EU](#) – human biomonitoring



[NORMAN](#) – monitoring of emerging substances



[IPChem](#) – European platform for chemical monitoring

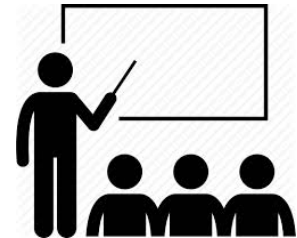


[GBIF](#) – Global biodiversity information facility



# COST Activities

- **Meetings**
  - Management Committee & Core Group
  - General and WG meetings
  - Dissemination meetings
- **Short-term scientific missions**
  - 5-90 days
  - ECI STSMs: 91-180 days
- **Training schools**
  - Joint WG 1&2
  - Joint WG 3&4
- **Dissemination and communication activities**





# Main Deliverables

- **WGs 1 & 2**
  - **ERBioMS technical specs**
  - Papers – lab analyses capacities, ERBioMS framework
  - Pilot reports – selected substances
  - Proof of concept, guidance for integration with regulatory processes
- **WG3**
  - **ERSpeB technical specs**
  - Meta-database of samples & linked data
  - Guidance – use of collections for contaminant monitoring
  - Papers – collections/constraints, ERSpeB framework
- **WG4**
  - **ERSamP technical specs**
  - Best practice guidance, protocols for sampling
  - Guidance – volunteer recruitment
  - Reports – proof of concept, network of collaborating organisations



# Expected Impact

- **Analysis arena**
  - European capability for pan-European assessment of contaminant exposure
  - Pan-European consensus on priority species/samples
  - Clarity on integration of these assessments with regulatory processes
- **Collections arena**
  - New distributed ERSpeB
  - Enhanced access to samples and related data
- **Field arena**
  - New European approach to collection of samples
  - Enhanced sampling capabilities





# European Raptor Biomonitoring Facility



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## ERBFacility website launches

Welcome to our new-born  
ERBFacility website. We hope  
you like it!



## Welcome

### Welcome to the European Raptor Biomonitoring Facility COST Action ([CA16224](#))

We are an open network of researchers and practitioners working towards **coordinated Europe-wide monitoring of contaminants in raptors** (birds of prey) with a view to **supporting the implementation of EU chemicals regulations** and thereby **reducing chemical risks to raptors themselves, to the wider environment and to human health**.

If you are interested to join us, please see the [Join page](#).



📷 White-tailed eagle *Haliaeetus albicilla*, Mull - Jacob Spinks - CC by 2.0 via Wikimedia Commons

## Forthcoming Events

### Review of Raptor Collections, Scoping of ERSpeB Framework

10 December 2018 - 12:30

## Latest News

### LIFE APEX: new €3m project to demonstrate use of apex predators for EU chemicals management

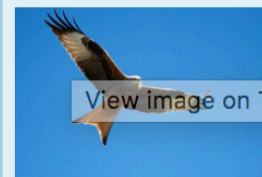
1 September 2018

## Latest Tweets

 **ERB Facility**  
@ERBFacility



European Raptor  
Biomonitoring Facility -  
ERBFacility - welcomes  
interest to join the COST  
Action from suitably qualified  
and experienced researchers  
and practitioners. Visit  
[ERBFacility.eu](#)



View image on Twitter



Oct 15, 2018

 **ERB Facility**  
@ERBFacility



ERBFacility is an open  
network working towards  
coordinated Europe-wide  
monitoring of contaminants in  
raptors with a view to  
supporting the  
implementation of EU



# MISSIONS TO 30 APRIL 2019

## (end of Grant Period 2)

### WG3

- **Assessment of the extent of existing raptor collections in Europe** – **Gloria Ramello**, Museo Civico di Storia Naturale, Carmagnola, Italy - hosted by **René Dekker**, Naturalis Biodiversity Center, Netherlands – Oct 2018 (1 month)

### WG1&2

- **Review of existing monitoring data for lead contamination in raptors in Europe** – **Laura Monclús Aglada**, Autonomous University of Barcelona, Spain – hosted by **Oliver Krone**, Leibniz Institute for Zoo and Wildlife Research, Germany – Oct-Nov 2018 (2 weeks)
- **Review of presence, concentrations and bio-analytical methods for emerging and legacy organic contaminants in raptors** – **Soledad Gonzalez Rubio**, University of Córdoba, Spain – hosted by **Veerle Jaspers**, Norwegian University of Science & Technology, Trondheim, Norway – Oct-Dec 2018 (3 months)
- **Review of the detection of veterinary pharmaceuticals in avian scavengers** – **Marta Herrero Villar**, IREC, University of Castilla La Mancha, Spain – hosted by **Mark Taggart**, Environmental Research Institute, Caithness, UK, Jan-Apr 2019 (3 months)



# MISSIONS TO 30 APRIL 2019

(end of Grant Period 2)

## WG4

- **Review of constraints for collection and sharing of raptor samples in Europe** – **Maria Dulsat**, IDAEA-CSIC Barcelona, Spain – hosted by **Rui Lourenco**, University of Evora, Portugal - dates (75 days)
- **Review of ringing effort in Europe** – **Abigail Maiden**, Northern Ireland Raptor Study Group – hosted by **Jari Valkama**, Finnish Museum of Natural History, Helsinki – Jan 2019 (10 days)
- **Review of protocols to inform best practice guidance for peregrine sampling** – **Lucie Michel**, University of Giessen, Germany – hosted by **Giacomo dell'Omo**, Ornis Italica, Rome, Italy – Jan-Apr 2019 (ECI) (3 months)



# MEETINGS TO 30 APRIL 2019

(end of Grant Period 2)

- **10-11 Dec 2018: WG3 workshop** – Review of raptor collections, ERSpeB Framework - Royal Belgian Institute of Natural Sciences, Brussels (c. 18 participants)
- **4-6 Feb 2019: Joint WG1, WG2, WG3 & WG4 workshop** – Developing the scope for pan-European monitoring of contaminants in raptors: prioritisation of species and sample types - Hotel Metropolitan, Thessaloniki, Greece (c. 25 participants)
- **6-8 Feb 2019: WG4 workshop** – Best practice guidance for collecting raptor samples and contextual data - Hotel Metropolitan, Thessaloniki, Greece (c. 35 participants)
- **5-6 Mar 2019, 2<sup>nd</sup> ERBFacility General Meeting** - Museo La Specola, Florence, Italy (c. 60 participants)
- **7 Mar 2019: 3<sup>rd</sup> ERBFacility Management Committee Meeting** – Museo La Specola, Florence, Italy (35-40 participants)
- **7-8 Mar 2019: WG4 workshop** – Taking forward key aspects of the European Raptor Sampling Programme – Museo La Specola, Florence, Italy (c. 20 participants)
- **April 2019: Joint WG1, WG2, WG3 and WG4 workshop** – Leveraging funding for pilots – Scotland (c. 10-15 participants)