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ERBFacility
EUROPEAN RAPTOR BIOMONITORING FACILITY
COST ACTION 16224

Working Group 4 Workshop

**BUILDING CAPACITY FOR CONTAMINANT SAMPLING AND
COLLECTION OF SUPPORTING MONITORING DATA FOR
RAPTORS ACROSS EUROPE**

Hosted by National Institute of Biology, Ljubljana at Triglav National Park (TNP)
Info Centre Dom Trenta, Na Logu in Trenta, SI-5232 Soča, Slovenia
Tuesday 17 September 09:00 – Friday 20 September 16:00

WORKSHOP REPORT

This event is organised by COST 16224 Action European Raptor Biomonitoring Facility and supported by COST (European Cooperation in Science and Technology)

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NACIONALNI INŠTITUT ZA **BILOGIJO**
NATIONAL INSTITUTE OF **BIOLOGY**



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WORKSHOP SUMMARY

From 17-20 September 2019, 26 participants, representing 14 countries met for 4 days in Trenta, Slovenia, hosted by the Slovenian National Institute for Biology, for a workshop with the following **objectives:**

1. To share experiences and expertise in how to capacity build for field participants in raptor contaminant sampling and contextual data collection across Europe.
2. To identify organisations and geographical areas where good practice capacity building is already going on or expertise is held, and areas where there are gaps and expertise/capacity are lacking (and the reasons for this).
3. To start to develop best practice guidance on capacity building and training of participants relevant to the types of field participants required by ERBF.
4. To specifically plan the capacity building required for the agreed ERBFacility Proof of Concept study.
5. To start to plan future training activities (to be delivered in Grant Period 4 – May 2020 to April 2021) and the resourcing of these capacity building activities.

The workshop discussed and made **progress in 4 areas of ERBFacility Field Arena (WG4) work:**

1. **Overview of existing capacity to collect samples from raptors and relevant contextual information (such as population trends and demographic data) across Europe, and existing capacity and skills to carry out training in these areas.** We examined these both in terms of the Proof of Concept study that the ERBFacility aims to deliver over the next two years, and in terms of the potential to deliver a European Raptor Sampling programme (ERSamP) to support a European Raptor Biomonitoring Scheme. As well as identifying current capacity, we also tried to assess where current important gaps exist and started to think about how these might be filled in future. We hope that this review can be consolidated by an STSM and perhaps also wider network input at the next General Meeting in Porto in February.
2. **Summary of guidance required for each part of the Proof of Concept study and future ERSamP needs, with ideas on how to take forward its development.** During this session, small task groups worked (a) the specific guidance required to collect samples (carcasses) and contextual data for the two priority Proof of Concept species (Tawny Owl and Common Buzzard); (b) comprehensive guidance already being planned for vultures (as a case study of what may be possible for other species/groups in future); and (c) the structure and content of a web-based 'Advice Hub' that would provide much more general guidance on sample collection and raptor monitoring and under which the other more specific guidance would sit. We discussed the STSMs that will take this work forward.

3. **Assessment of training and capacity building required for each part of the Proof of Concept study and future ERSamP needs, with ideas on how to take forward its development.** A small task group considered the training methods and materials that would be valuable for the Proof of Concept study (collection of carcasses and contextual population data) and for wider capacity building to support a ERSamP, and came up with a range of ideas and approaches dependent on the level of resources that may be available to the network in future. The WG4 Team will use these ideas to shape the Field Arena work programme in the second half of the ERBFacility Action, depending on budget available, and consider the ideas that were generated for bringing in additional funding.

4. **Communication strategies and approaches to enhancing active participation in ERBFacility activities.** A task group considered the specific communication needs for the Proof of Concept study and any future ERSamP, including the possible role and remit of ERBFacility 'Ambassadors' who would act in pivotal roles to link the different audiences and parts of the network together effectively at national (and/or multi-national/regional) level. We also considered how to enhance communication with, and active participation of, the wider existing ERBFacility network (Management Committee and Substitutes) and came up with a range of practical ideas for better engaging them in active roles. WG4 in particular needs more active participation of more people from more countries in order to make the Proof of Concept Study a success and also to demonstrate the future potential of a ERSamP. As part of how to better encourage participation, we together came up with a list of potential benefits to individual participants, organisations, nations and the EU of taking an active part in ERBFacility activities. We also hope to launch a short survey of all existing Management Committee members and Substitutes to understand better their reasons for getting involved and whether or not their hopes are being realised so far. We also discussed some practical ways of feeding back to our network more frequently and rapidly, which we hope to put into practice immediately, and we had a fun exercise to make a short film about the ERBFacility COST Action for the World Owl Conference in India in December (as a starting point for a future more refined version).

INTRODUCTORY PRESENTATIONS – BACKGROUND, SETTING THE SCENE & SOURCES OF INSPIRATION

Introduction and background

The workshop was opened with a [presentation by Al Vrezec \(ERBFacility Vice-Chair\) introducing ERBfacility and the area around Trenta in Slovenia](#), and a short welcome from Triglav National Park. This was followed by a [presentation by Chris Wernham \(Working Group 4 Lead\) reminding people about the objectives of WG4 and feeding back some material from discussions at the Florence workshop in March 2019 \(see report here\)](#) on different types of potential European Raptor Sampling programme (ERSamP) participants and their needs. A [presentation by Rui Lourenço fed back findings on the needs of participants from a review of constraints](#) carried out by himself and Maria Dulsat (Short-Term Scientific Mission holder). Al Vrezec then presented relevant results from the previous [Derlink et al. \(2018\)](#) EURAPMON review of raptor monitoring activity across Europe, and preliminary results of the ongoing review of European raptor ringing activity started by Abigail Maiden (STSM holder) – [view the presentation here](#).

Inspiration for capacity building – approaches and lessons learned

We were privileged during the course of the week to be joined by a number of participants who hold deep expertise in capacity building in the field arena and who were willing to share their knowledge and experiences for the benefit of ERBFacility work.

[Rob Robinson \(BTO & EURING Vice-Chair\) presented details of EURING](#) (the European Union of Bird Ringing) and his thoughts on the potential for ringers across Europe to get involved with the European Raptor Sampling Programme. [Gaby Peniche \(University of Edinburgh\) talked about her project to assess the health of raptor populations in Scotland](#) and her experiences of encouraging field raptor workers to get involved in sample collection.

We heard two inspiring presentations sharing expertise in understanding the motivations of field workers and volunteers to get involved in projects and the values of different approaches to providing guidance and training: [Ben Darvill \(Development & Engagement Manager at BTO Scotland\) shared his experiences from Scotland](#), using examples of BTO projects; and [Damijan Denac \(Director of DOPPS-Bird Life Slovenia\) shared experiences from the work of his organisation in Slovenia](#).

The ERBFacility Proof of Concept study and related capacity building issues

A [presentation from Chris Wernham & Emma Martínez-López](#) updated participants on work already done by the network, led by Rafa Mateo (IREC, Ciudad Real), to develop ideas for a Proof of Concept (PofC) study. The idea of this is to demonstrate the value of any future European Raptor Biomonitoring Scheme (ERBioMS) and associated distributed European Raptor Specimen Bank (ERSpeB) and European Raptor Sampling Programme (ERSamP).

This was followed by a series of further presentations relevant to the PofC study by: [Marcello D'Amico considering how to motivate a road-kill network to collect carcasses](#); [Ulf Johansson on \(a\) considerations from the perspective of a museum's collection in Sweden](#) and (b) [relevant recent work from Working Group 3 Collections Arena](#); [Oliver Krone on the Life APEX project](#) and experiences so far with sourcing Common Buzzard Carcasses; and [Rui Lourenço on PofC study considerations specific to the focal species](#) (Tawny owl and Common Buzzard and comparing the usefulness of the two species).

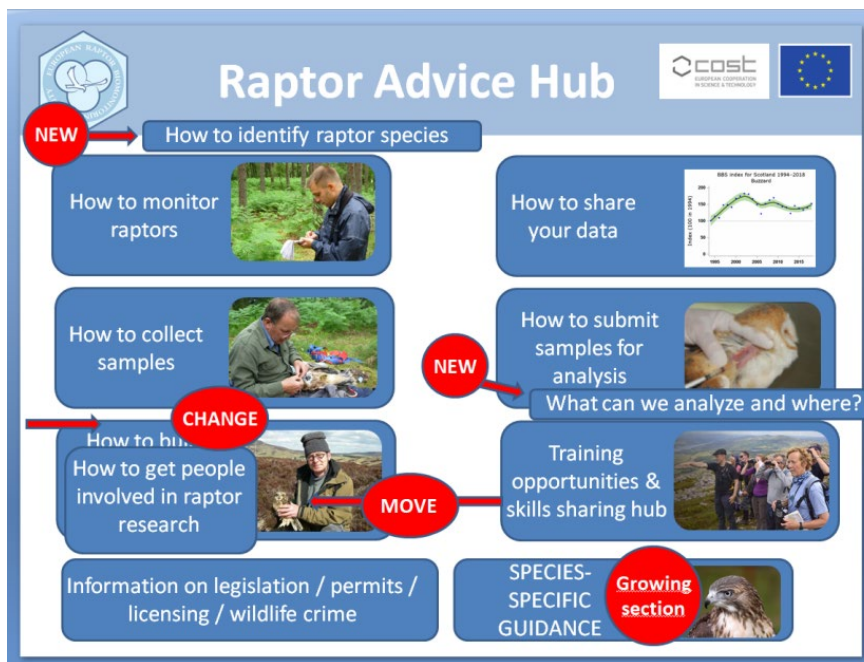
TOPIC 1 – EXISTING FIELD CAPACITY ACROSS EUROPE, GAPS & POTENTIAL FOR BUILDING EXTRA CAPACITY

Before attending the workshop, all participants were asked to consider a series of questions relating to existing capacity within their countries to collect samples and field contextual information, and also about carcass collection possibilities (see Appendix 3). Participants were given a [template](#) to fill in to answer these questions in a standardised way, and time was made available at the workshop to allow them to do this. On Wednesday morning, each participant (or a small group from each country represented at the workshop) was asked to give a 2-minute summary of the main points made in their country response. The filled templates will be used to further inform the work of Working Group 4 in reviewing current capacity, needs and opportunities across Europe – first of all specifically in relation to carrying out the PofC study but also for the future wider development of the ERSamP. Summaries by country of the key points made are provided in Appendix 4.

TOPIC 2 – FURTHER DEVELOPMENT OF GOOD PRACTICE GUIDANCE

This session was introduced with a short [presentation by Chris Wernham on the development of good practice guidance](#) that has taken place already in the ERBFacility programme and to introduce some ideas for the sorts of products and outputs that ERBFacility may want to produce to support capacity building and training of field participants. Most guidance so far has focused on further development of sampling protocols, and on species- or group-specific monitoring guidance. Chris introduced the idea of a web-based structure to provide more general forms of guidance, as well as hosting the species- and group-specific guidance, and initially termed this “The ERBFacility Advice Hub”. This was followed by presentations by [Jovan Andevski with further ideas for the development of guidance specific to vultures](#); and by [Silvia Espín on the latest work on the sampling protocols and training videos from the University of Murcia](#). Participants then chose to join one of four break-out groups to work on different guidance-related tasks.





This break-out group discussed both [the overall structure of the proposed 'Advice Hub' presented by Chris Wernham](#) (see some basic ideas for high-level 'buttons' in the image above) and also suggested content that would sit under many of the individual buttons.

Some of the key suggestions were:

- Consider carefully the different audiences for the hub and design both the structure and content so that each audience can easily find the information most needed by them.
- Consider the need to introduce controlled access via password login, because there may be material on the website to which we would not want to give full public access.
- How to monitor raptors? Include all the suggested section headings from Chris' presentation and appropriate general material from the Hardey *et al.* surveys guide and make sure that health and safety is adequately covered.
- Add a button on how to identify raptors with links to appropriate reference guides.
- How to collect samples? This is where the existing sampling protocols by Espín *et al.* will sit together with 'how to...' videos (on live sampling and necropsies).
- Change a heading to 'How to get people involved in raptor research' or similar and place the section on 'Training and skills sharing opportunities' under this general heading. Provide links to training opportunities. Noted that the presentations by Ben Darvill and Damijan Denac provided some excellent started materials from which to develop this section of guidance (as did the topics suggested in Chris' presentation).
- Legislation/permits/licensing/wildlife crime section. Chapter 7 in Hardey *et al.* has information that can be used here. Must make it clear that people need to consider legal aspects before they embark on sampling/data collection. It would be good to add links through to relevant national legislation but we will need help from country delegates to provide appropriate links (to web pages in their own languages).
- How to share your data? Would be good to review the different existing databases available in which to store relevant data (and then think about how we link these together as part of any future ERSamP/ERBioMS).

- How to submit samples for analysis? This section can be filled partly with material that Silvia Espín has already compiled within her sampling protocols document (to packaging, paperwork, legal considerations e.g. local packaging legislation, shipment conditions).
- What samples can be analysed where? Suggested extra button where we could explain the different contaminants that can be measured from different sample types and potentially provide a list of labs that would be interested in receiving samples and collaborating in future analyses.
- Species-specific guidance? It is likely that the creation of comprehensive species-specific guidance for all species/groups is not possible within the resources currently available within the ERB Facility Action. We agreed that this can be a part of the advice hub that could grow in future. If we can produce some good examples of good practice guidance during the Action (e.g. for the PofC species; Peregrines; vultures) then hopefully these will encourage others to build on the approach for other species/groups in future. We could add guidance for species/groups where this is available and also add contacts for experts or groups where guidance could be sought (if some people are willing to provide their details).
- How to age & sex raptors? Would also be a useful section.
- Forum to exchange knowledge/experiences. It was agreed this might be a good idea but would require moderator and therefore resources or volunteers to act in that capacity.
- How to develop the 'advice hub'? Working Group 4 will further consider this in relation to STSMs and other resources that might be available to help with this work.

ERBF Good practice guidance for vultures

The possible content of good practice guidance for vultures [presented by Jovan Andevski](#) was considered very ambitious by several participants, and some of the points raised were:

- It is good to start with comprehensive ideas but it is important not to underestimate the work involved, and there may be difficulties in agreeing content for some of the suggested sections (e.g. population estimates) which could lead to lower uptake by network participants. It may be best to avoid topics that have the potential to be contentious or just signpost people to published sources that are widely recognised (e.g. BirdLife publications).
- We should be careful not to duplicate effort or introduce inconsistencies in our guidance by including a lot of general material applying across most raptor species in the species-specific guidance. It may be better to write these bits of guidance once (for the higher level sections in the 'advice hub') and then refer to them from the species-specific guidance via links.
- There may be topics that we do not want to publish publicly (e.g. the substances for which we test to investigate poisonings).
- It is important to consider the audience(s) for the guidance and their individual needs (i.e. map individual topics on to specific actor needs). It might be good to produce a shorter version of the guidance with key sections for field participants but a longer version for e.g. organisations wanting advice on how to set up monitoring programmes or for project leaders.
- It would be sensible to prioritise sections to write first in the STSM (essential ones like the sampling and monitoring guidance) and do the others if time allows.

A small break-out group with specific experience relating to vultures then met to discuss the plans further, and their conclusions and next steps can be found in their [summary presentation](#). The group will continue as a time-limited Task Group and will advertise widely within their own networks in the hope of securing good STSM applicants so that a mission can go ahead to deliver this guidance in full.

ERBF Good practice guidance for Proof of Concept focal species - Tawny owl
ERBF Good practice guidance for Proof of Concept focal species - Common Buzzard

These two break-out groups considered the specific guidance required for these two species in order to run the Proof of Concept study successfully. Both groups considered the sections that will be required in the guidance. The Tawny Owl group placed more emphasis on some specific aspects of the written guidance – they compiled a list of existing sources of information (e.g. the monitoring methods section can use the Hardey *et al.* survey guide as a starting point) and identified new sections that would require reviewing and new writing (see [summary spreadsheet of ideas for Tawny owl here](#)). The Common Buzzard good covered some similar topics but also thought more broadly about some of the task required for running the PofC study and obtaining carcasses writing (see [summary document of ideas for Common Buzzard here](#)). These ideas will be used to inform the further development of good practice guidance for these and any other focal species selected for the PofC study, which will hopefully be developed further through STSMs (awaiting applicants).

TOPIC 3 – WALK & TALK SESSION TO CONSIDER HOW TO TRAIN FIELD PARTICIPANTS



On Thursday morning, participants had an outdoor ‘walk and talk session’ during which they were asked to discuss ideas for training different types of actors to be involved in the PofC study and future wider ERSamP. They were also asked to think about what they could offer themselves, or from their organisation, or from other organisations in their country, in terms of training and capacity building expertise. The ideas were captured in more detail during the afternoon workshop sessions. We made a short draft training video clip of a Sparrowhawk kill to inspire others to have a go at creating video training materials ([view it here](#)).

TOPIC 4 – DEVELOPING A EUROPEAN RAPTOR SAMPLING PROGRAMME (ERSamP) – COMMUNICATION & TRAINING NEEDS

This topic was introduced with a [presentation by Chris Wernham on communication needs of the ERBFacility network](#). Chris reminded participants about the structure of our network, the cost policies around inclusiveness, and the need to communicate well with the network if we are to get enough people motivated to run a successful Proof of Concept study and a future European Raptor Sampling programme (ERSamP). She also outlined previous thoughts on the framework for the ERSamP and the different sorts of actors and their functions within the proposed network.

Rui Lourenço then gave a [presentation on the concept of 'ERBFacility Ambassadors'](#), giving some initial thoughts on their potential roles within the network, the sort of person (skills and personal attributes) that would make a good ambassador, and from which sorts of organisations such people might come.

Finally by way of introduction, Madis Leivits (ERBFacility Communications Officer) gave a stimulating [presentation on ways of encouraging more of the ERBFacility network to get actively involved in work activities](#), including thinking about their motivations for taking part, what they would see as the benefits of being involved, and some thoughts on how to communicate with them more effectively. He also outlined suggestions for a questionnaire survey of the Management Committee and Substitutes to assess their aspirations for being part of the ERBFacility COST Action and whether these were being realised (to try to understand how to increase the benefits for them and therefore their ownership of, and active involvement in, the activities of the programme).

Participants then split into 4 break-out groups to work on particular aspects of communication and training/capacity building.

Possible ERBF Ambassadors and their role

The break-out group on this topic added some suggestions to the list of tasks that ERBF Ambassadors could carry out (these are shown in red in the [presentation on the concept of 'ERBFacility Ambassadors'](#)). In the plenary discussion around this topic some observations and key conclusions were:

- There are many tasks that an ERBF Ambassador could do but it important to make clear that not all Ambassadors would have to do all the tasks themselves. Any that they felt able to do would be welcomed but their most important role would be to facilitate delivering all the tasks through building relationships with all the appropriate and necessary individuals and organisations within their country.
- It was agreed that taking on the role of Ambassador for a full future ERSamP would be a large commitment for any organisation or individual, and would require agreement with the parent organisation that sufficient time could be made available and that the organisation was willing to take on the responsibility. A formal invitation from ERBFacility to the appropriate organisation if an individual wishes to take on the role might help to persuade the organisation to agree.
- Partly due to this, it was agreed that it would be useful to start to recruit temporary Ambassadors now with roles limited to delivering the tasks needed for implementing the Proof of Concept study. This would allow some people to try out the roles and us to assess

whether they worked effectively, without each Ambassador making a long-term commitment to the role. It will hopefully be easier to get people to try out the role for a time limited period.

- We discussed the pros and cons of having a smaller number of Ambassadors for larger regions of Europe rather than national Ambassadors but it was generally agreed that this would not be likely to be acceptable to many countries and that national contact points would in any case be required. However, it may be worth considering wider regional coordination (Project Officer-type) roles when we think about recommendations for a fully funded future ERSaMP.



Audiences to train and possible approaches to communication and dissemination of guidance

This break-out group attempted to list the different types of actors that needed to be involved in sample and contextual data collection for the PoFC study (and future ERSaMP) and then discussed the training and engagement needs to get each type more involved and to build capacity further where required. The points that were captured are summarised [here](#).

Some of the key points and new ideas that were suggested were:

- Funding - the scale of our ambition will be limited to some extent by the budget that is available from COST for Grant period 4, to cover STSMs and the possible summer school that is mentioned in the MoU for the ERBFacility COST Action. However, there is also the possibility to apply for external funding to cover some forms of training and skills sharing – like the Erasmus+ programme (see https://ec.europa.eu/programmes/erasmus-plus/opportunities/how-to-apply_en).
- There are also types of mentoring that could be organised more locally for sharing skills and capacity building techniques, for a small group of organisations to get together within a region of Europe, or for small numbers of staff to travel from one organisation to another on ‘study-type visits’. It was felt that this could be done relatively cheaply in many areas.
- The most efficient use of a funded summer school might be for a ‘train-the-trainers’ type course, which would provide representatives from as many countries as possible with the training and knowledge of ERBFacility required to go back and take on a training and/or ambassadorial role in their own country.

- It will be really important to prepare all the necessary guidance (e.g. on sampling, contextual data collection, storage of samples, collection of carcasses and how to train people/capacity build) ahead of running training and skills sharing events. Once people are trained and motivated, we must keep them involved straight away.
- The suggestions from this break-out group will be used by Working Group 4 Team, together with the information on existing capacity and gaps across Europe to start shaping and preparing for the capacity building work that will be carried out during GP4.

Wider communication within the ERBFacility network and beyond

This break-out group carried out a very wide-ranging review of communication needs within the ERBFacility network, and the participants came up with many excellent suggestions for improvements.

Some of the key suggestions were:

- To increase the general level of engagement from existing ERBFacility network members (Management Committee, Substitutes and others on e-mail list) – people will have taken on these positions for different reasons (some hoping for active involvement; some hoping for access to funding; some just to get a name on a project). It will be helpful to better understand active and passive participants (e.g. through a suggested questionnaire survey).
- The Core Group has responsibility and must take the lead on good communication.
- For all ERBFacility meetings and workshops – there should be a press release very soon after the event with a short summary overview and engaging pictures. It would be good to invite policy makers, local officials and journalists to events (even if just for part of the event) to raise the profile of ERBFacility nationally, which might increase access to local funding or help disseminate findings and increase impact. After events, reports must be finished and published on the website as quickly as possible (more quickly than previously). This can be better achieved by structuring workshops so that products are produced at the event itself in a format ready for reporting (e.g. using templates to fill to record group session outputs). It would also be useful to have an appointed ‘secretary’ for each event to write up a first set of notes, to assist the workshop leader with writing the final report.
- Working Groups - we should communicate more often to the network telling them who is actively involved on each WG (to demonstrate that many people are already involved). WGs should meet regularly (e.g. via Skype) so that members are actively engaged in, and up to speed with, each group’s tasks and achievements.
- Updates for the network – we should send out short communications by e-mail to network members (MC, Subs and others on our mailing list) updating them on activities and encouraging them to forward the updates on to their national networks. These updates therefore need to be engaging and written to be understandable by people not directly involved in the Action currently. This would ensure that activity is more transparent and inclusive and get more information out more widely (so that new people may want to join in).
- Website – information e-mails should be short and engaging and should link to more detailed information posted on the website. There needs to be more regular management of website content (e.g. the latest news on the news tab is currently from February 2019).
- Intranet – we suggested exploring the setting up on an intranet for internal project (working groups) use [but note we have since agreed with Core Group that a Dropbox-type arrangement will be sufficient].

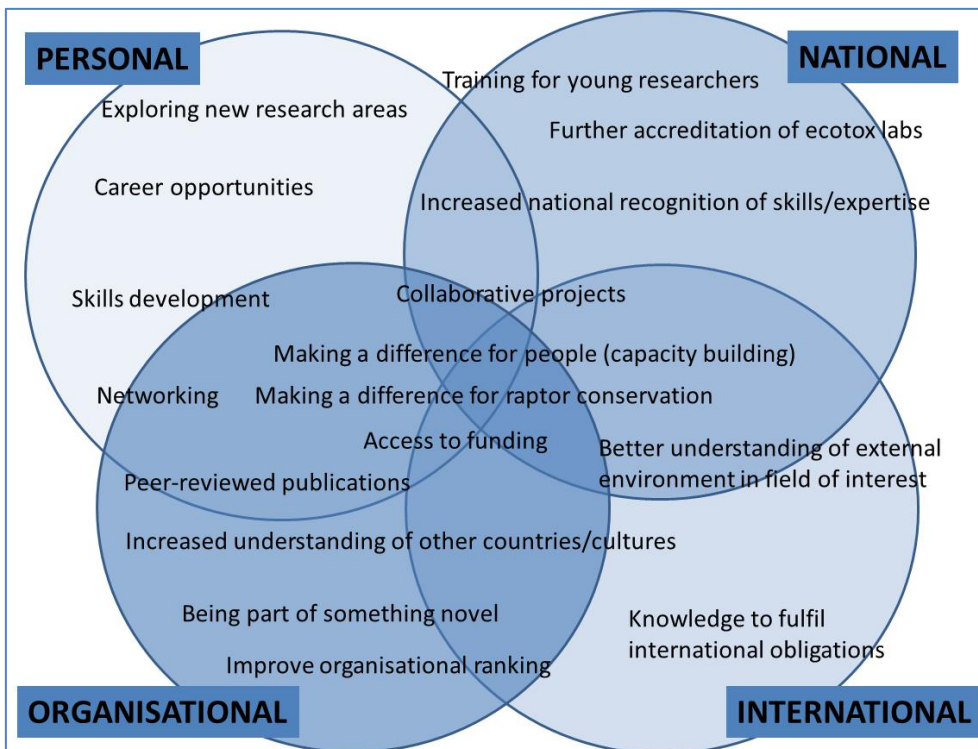
- General Meeting – We should try to move away from this being a passive presentation of completed activities to the network but ensure that it involves discussions/break-out type sessions/opportunities for network members to have real input to the programme and the planned activities.
- Proof of Concept study – this will be a central project and a key activity through which we pull in more active participants, so we must communicate about it well.

TOPIC 5 - BENEFITS TO PARTICIPANTS OF BEING INVOLVED IN THE ERBFACILITY COST ACTION

The session on communications identified that in order to get more people actively involved in ERBFacility activities and the forthcoming Proof of Concept study it was valuable to understand their motivations for getting involved in our network in the first place, and to think about the benefits that they could expect from being involved. In our final session on Friday, we discussed this as one group, and tried to list the benefits of getting involved from the perspective of:

- Individuals
- Organisations
- Countries
- International bodies (e.g. EU/EC)

The full list of benefits that we assembled is available [here](#). We will use these ideas in further communication with the ERBFacility network and others to encourage them to take part, and refer to them as we start to implement the PofC study and other ERBFacility activities (e.g. capacity building and publications).



CONCLUSIONS & NEXT STEPS

Our concluding session on Friday included a Skype call to ERBFacility Chair, Guy Duke, at which we fed back on the main topics we had discussed and some of the key suggestions, and alerted him to ideas and issues that would benefit from further discussion at the next Core Group meeting [particularly some of the ideas on communications, which contributed to a very full discussion of enhanced communications for the Action at the following Core Group meeting].

We agreed to extend the deadline for WG4 STSMs until the end of October and that the 4 current STSMs were still appropriate ways of packaging work if we get suitable applicants:

- **STSM1 Overall review of existing capacity and development of training and capacity building guidance and activity planning.**
- **STSM2 Development of good practice guidance for sample collection and contextual data collection for Proof of Concept focal species (Tawny Owl and Common Buzzard).**
- **STSM3 Review of existing pan-European contextual population and demographic data for Proof of Concept focal species (Tawny Owl and Common Buzzard).**
- **STSM4 Good practice guidance development for vultures.**

Working Group 4 team will need to further consider how we find the resources to develop the overall advice hub and will use the information collated by participants at the workshop to plan future capacity building and training ideas - most of which will be delivered during Grant Period 4 (May 2020 to April 2021).

ERBFACILITY PROMOTIONAL VIDEO

One of our workshop participants, Ingrid Kohl, will be attending the next World Owl Conference in Pune, India 29 November – 2 December 2019 and offered ERBFacility a 30-minute slot in which she could introduce a video to promote our COST Action. We only became aware of this opportunity when Ingrid arrived at the workshop mid-way through the week. We decided that if we could find the time straight after the formal workshop finished on Friday afternoon, and if it was still light, we would attempt to film a 20-minute video about ERBFacility, involving a selection of participants representing different working groups and parts of the Action. The script covered the following parts of the Action:

1. Introduction to ERBfacility (Al Vrezec, Deputy Chair)
2. Introduction to the Proof of Concept study (Chris Wernham, Lead WG4)
3. Species chosen for the Proof of Concept study (Rui Lourenço, Deputy-Lead WG4)
4. The work of Working Group 4 (Jovan Andevski, WG4 Team)
5. The three arenas and their inter-linkage (Madis Leivits, Communications Officer)
6. The Analysis Arena (Emma Martínez-López, WG1&2)
7. The Collections Arena (Ulf Johansson, WG3)
8. Summary of the value of ERBFand the website (Oliver Krone, STSM Coordinator)

The short verbal summaries spoken to camera will be interspersed with interesting videos of owls, collection material and people doing lab analyses in the final video. We did not have time to consult widely on the content of this video or to think deeply about the script but we regard this as a first attempt that can be improved in future to produce a high quality promotional video about ERBFacility activities. In any case it was a fun exercise and very good for team-building. The video can be viewed [here](#) (when it is ready).



ACKNOWLEDGEMENTS

The workshop in Slovenia had 26 participants representing 14 countries (Austria, Estonia, Finland, Germany, Iceland, Israel, Italy, Northern Macedonia, Portugal, Romania, Slovenia, Spain, Sweden and UK).

The amazing local organisation for this workshop was carried out by AI Vrezec (National Institute of Biology, Ljubljana), with some administrative support from Rebecca Cranston (BTO Scotland, Stirling) and AI's brilliant team members - Špela Ambrožič Ergaver, Stiven Kocijančič and Aljaž Mulej - to whom we are extremely grateful. We also thank the staff of the Info Dom Trenta, Triglav National Park, who welcomed us so warmly and catered for all our needs.

Development of the scientific programme was led by AI Vrezec (ERBfacility Vice-Chair and WG4) and Chris Wernham (WG4 Lead), with the help of Rui Lourenço (WG4 Deputy Lead) and other WG4 Core Team members (particularly Jovan Andevski, Yael Choresch and Ulf Johnasson). We are very grateful to other ERBfacility colleagues and invited guests who participated so actively by giving presentations, and leading and contributing so enthusiastically to discussions (Emmanuel Baltag, Marcello d'Amico, Ben Darvill, Damijan Denac, Guy Duke, Silvia Espín, Fulvio Genero, Gunnar Thor Hallgrímsson, Ingrid Kohl, Oliver Krone, Madis Leivits, Emma Martínez-López, Gabriela Peniche, Rob Robinson, Pablo Sánchez Virosta, Pertti Saurola, Metodija Veleviski).



LIST OF PRESENTATIONS

[Al Vrezec – Introduction to ERBFacility and the area around Trenta in Slovenia](#)
[Chris Wernham – Introduction - Objectives of WG4 and feed back from discussions at the Florence workshop in March 2019](#)
[Rui Lourenço - Findings on the needs of participants from the review of constraints](#)
[Al Vrezec – EURAPMON raptor monitoring inventory and raptor ringing review](#)
[Rob Robinson – EURING and engaging ringers](#)
[Gaby Peniche - Project to assess the health of raptor populations in Scotland](#)
[Ben Darvill – Capacity building experiences from Scotland](#)
[Damijan Denac – Capacity building experiences from Slovenia](#)
[Chris Wernham & Emma Martínez-López – ERBF Proof of Concept study](#)
[Marcello D’Amico - How to motivate a road-kill network to collect carcasses](#)
[Ulf Johansson - \(a\) Considerations from the perspective of a museum’s collection in Sweden](#)
[Ulf Johansson \(b\) - Relevant recent work from Working Group 3 Collections Arena](#)
[Oliver Krone - The Life APEX project and sourcing carcasses](#)
[Rui Lourenço – Proof of Concept study considerations specific to the focal species](#)
[Chris Wernham - Development of good practice guidance so far](#)
[Jovan Andevski - Development of guidance specific to vultures](#)
[Silvia Espín - Latest work on sampling protocols and training videos](#)
[Chris Wernham - Communication needs of the ERBFacility network](#)
[Rui Lourenço - The concept of ‘ERBFacility Ambassadors’](#)
[Madis Leivits – Approaches to communication](#)

LIST OF OTHER SUPPLEMENTARY DOCUMENTS

[Template for participants to fill on current capacity, gaps and opportunities](#)
[Development of guidance specific to vultures – break-out group summary](#)
[Summary spreadsheet of ideas for Tawny Owl](#)
[Summary of ideas for Common Buzzard](#)
[Short video clip of field training example](#)
[Summary spreadsheet of training ideas](#)
[Summary spreadsheet of benefits of participating in the ERBFacility COST Action](#)
[ERBFacility promotional video for World Owl Conference \(not yet ready\)](#)

APPENDIX 1 - PROGRAMME

Monday 16 September	Transfers to Trenta from Ljubljana to arrive on Monday evening
Tuesday 17 September	DAY 1 - CURRENT CAPACITY & GAPS
<i>09:00 - 11:00</i>	<i>SESSION 1 - SETTING THE SCENE (BACKGROUND & EXPERTISE)</i>
09:00 - 09:15	Welcome from workshop host and National Park (Al Vrezec)
09:15 - 09:35	Background, objectives and relevant outputs from Florence on actor groups (Chris Wernham) 15 MINUTES + QUESTIONS
09:35 - 09:55	Field participants' needs as identified during the constraints review work (Rui Lourenço) 15 MINUTES + QUESTIONS
09:55 - 10:15	Relevant findings from the EURAPMON inventory (Derlink et al. review) and ERBF ringing review - existing monitoring capacity. (Al Vrezec) 15 MINUTES + QUESTIONS
10:15 - 10:45	EURING and the potential of ringers across Europe (Rob Robinson, EURING Vice-Chair) - 25 MINUTES + QUESTIONS
10:45 - 11:00	TIME FOR SHORT DISCUSSION
<i>11:00 - 11:30</i>	<i>COFFEE BREAK</i>
<i>11:30 - 13:00</i>	<i>SESSION 2 - EXISTING EXPERTISE, GOOD PRACTICE, CAPACITY & GAPS ACROSS EUROPE</i>
11:30 - 12:10	Engaging and inspiring field participants - an overview perspective about motivations, challenges and the value of different approaches to training and guidance, with examples from BTO experience (Ben Darvill, BTO Scotland) - 30 MINUTES + QUESTIONS
12:10 - 12:30	A case study of the challenges of encouraging new raptor sample collection - Gaby Peniche (Scotland) - 15 MINUTES + QUESTIONS
12:30 - 12:50	Capacity building for raptor ringing - Pertti Saurola (Finland) - 15 MINUTES + QUESTIONS
12:50 - 13:00	TIME FOR SHORT DISCUSSION
<i>13:00 - 14:00</i>	<i>LUNCH</i>
<i>14:00 - 16:00</i>	<i>SESSION 3 - INTRODUCING THE ERBF PROOF OF CONCEPT STUDY & RELATED PROJECTS</i>
14:00 - 14:30	Introduction to the Proof of Concept study (Chris Wernham & Emma Martínez-López) 20 MINUTES + QUESTIONS
14:30 - 14:50	General considerations for motivating a road kills network - sourcing carcasses (Marcello d'Amico) - 15 MINUTES + QUESTIONS
14:50 - 15:10	General considerations from the perspective of museum collections (Ulf Jonasson) - 15 MINUTES + QUESTIONS
15:10 - 15:30	The Life APEX project - experiences so far with sourcing of samples for Common Buzzard (Oliver Krone) - 15 MINUTES + QUESTIONS
15:30 - 16:00	TIME FOR DISCUSSION
<i>16:00 - 16:30</i>	<i>COFFEE BREAK</i>

16:30 - 18:00	<i>SESSION 4 - PROOF OF CONCEPT STUDY (CONTINUED)</i>
16:30 - 16:50	Considerations specific to Tawny Owl (Rui Lourenço)
16:50 - 17:10	Considerations specific to Common Buzzard (Chris Wernham & Ben Darvill)
17:10 - 17:50	General discussion about initiatives/contacts focused on these two species (2 break-out groups)
17:50 - 18:00	FEEDBACK & SUMMARY OF DAY 1 (Facilitators and Chris Wernham)
19:00	<i>MEET FOR DINNER</i>

Wednesday 18 September	DAY 2 - CAPACITY NEEDS BY ACTOR TYPE
09:00 - 11:00	<i>SESSION 5 - PERSPECTIVES FROM DIFFERENT COUNTRIES / REGIONS OF EUROPE</i>
09:00 - 09:15	Example 2-minute talks from Working Group 4 Team members (Jovan Andevski, Yael Choresh, Ulf Johansson, Rui Lourenço, Al Vrezec, Chris Wernham) setting the scene for the areas we would like each participant to cover in their short summary (Chaired by Chris Wernham)
09:15 - 10:45	Two-minute summary from each participant highlighting their own COUNTRY PERSPECTIVES. Each participant will be provided with guidance on topics to consider before they arrive at the workshop and a template of questions to fill in (to include: current capacity and skills from different actor types and organisations; gaps in skills and capacity and reasons for these gaps; possible approaches and solutions to filling the gaps). Include introducing themselves and why they value attending the workshop. ASSUMES MAXIMUM 20 TALKS @ 2 MINUTES EACH PLUS TIME FOR SOME QUESTIONS/GENERAL DISCUSSION. ALL PARTICIPANTS WILL BE ASKED TO COMPLETE THEIR TEMPLATE OF QUESTIONS IN A LATER WORKSHOP SESSION (AFTER FURTHER DISCUSSION) TO MAKE SURE WE CAPTURE THEIR INFORMATION AND IDEAS FOR THE WORKSHOP REPORT. (Chaired by Chris Wernham)
10:45 - 11:00	Introduction to break-out group session after coffee.
11:00 - 11:30	<i>COFFEE BREAK</i>
11:30 - 12:30	Workshop session to make full list of existing initiatives/contacts and to group them by actor groups - getting all participants to think about organisations and initiatives in their regions of Europe and list all of these together with key contacts, and to think about capacity building and solutions to filling gaps (both for the ERBF Proof of Concept Study and wider pan-European Raptor Sampling Programme (ERSamP).
12:30 - 13:00	Feedback from break-out groups
13:00 - 14:00	<i>LUNCH</i>
14:00 - 16:00	<i>SESSION 6 - DEVELOPMENT OF GUIDANCE & TRAINING/EXPERTISE SHARING OPPORTUNITIES</i>
14:00 - 14:30	ERBF Guidance Framework and guidance development so far (Jovan Andevski, Silvia Espín & Chris Wernham). We will address needs with respect to the Proof of Concept study and the ERBF programme as a whole (in relation to ERSamP).
14:30 - 15:30	Workshop session - What sort of guidance works best for different groups of actors? Each group to work on one actor type e.g. how to get enough carcasses for the PofC study; how to encourage collection of buzzard monitoring data from around Europe to inform the PofC contaminant findings; how to source blood samplings from chicks if we expand the PofC study in future?

15:30 - 16:00	Feed-back from break-out groups.
16:00 - 16:30	COFFEE BREAK
16:30 - 18:00	<i>SESSION 7 - DEVELOPING THE WORK PLAN FOR FURTHER GUIDANCE & TRAINING/EXPERTISE SHARING OPPORTUNITIES</i>
16:30 - 17:00	Capacity building experiences with volunteers for large scale bird surveys and projects in Slovenia (Damijan Denac) - 25 MINUTES + QUESTIONS
17:00 - 18:00	Further work by break-out groups- What sort of capacity building do we need to do (a) for the Proof of Concept study, and (b) to underpin a future successful ERSamP? What products do we need? How could we best implement training / skills sharing for different target groups of actors? Break-out groups by actor type (ringers/contextual data/carcasses etc).
18:00 - 18:15	SUMMARY & CLOSE OF DAY 2
19:00	MEET FOR DINNER

Thursday 18 September	DAY 3 - TRAINING METHODS & NETWORK COMMUNICATION
	SHORTER DAY OF WORKSHOP SESSIONS, TO INCLUDE OUTDOOR SESSIONS & SOME TIME FOR INFORMAL NETWORKING
09:00 - 12:30	<i>SESSION 8 - WALK & TALK FIELD SESSION TO EXPLORE OPPORTUNITIES FOR CAPACITY BUILDING & TRAINING</i>
	<i>Questions for discussion will be suggested ahead of the walk and talk session. The aim will be to have informal bilateral or small group discussions about existing capacity, skills gaps and opportunities for expanding capacity & training field participants. Ideas will be captured later in the workshop programme.</i>
12:30-13:30	EARLY LUNCH
13:30 - 16:00	<i>SESSION 9 - EUROPEAN RAPTOR SAMPLING PROGRAMME & THE POSSIBLE ROLE OF AMBASSADORS</i>
13:30 - 13:45	Introduction to ERBF communication needs - general and to underpin ERSamP (Chris Wernham)
13:45 - 14:00	The idea of ERBF Ambassadors and their possible roles (Rui Lourenço)
14:00 - 14:30	Other ideas for increasing involvement of the ERBF network (Madis Leivits & Nermina Sarajlic) - 20 MINUTES + QUESTIONS/DISCUSSION
14:30 - 15:45	Workshop session break-out groups to explore a number of areas of communication
15:45 - 16:30	Feedback from break-out groups and summary of the day.
16:30-17:00	COFFEE BREAK
17:00 - 19:00	Free time to explore before dinner - and more time to fill the templates we wish participants to fill in.
19:00	MEET FOR DINNER

Friday 19 September	DAY 4 - FORWARD PLANNING & NEXT STEPS FOR WORKING GROUP 4 (DRAFT PROGRAMME TO BE REFINED)
<i>09:00 - 11:00</i>	<i>SESSION 10 - FINALISING THE FORWARD WORK PLAN</i>
	Task Groups to finalise planning of each work area - how will it be implemented, how will it be resourced, who will lead it and who else will assist.
	Feedback on plans in plenary.
<i>11:00 - 11:30</i>	<i>COFFEE BREAK</i>
<i>11:30 - 12:30</i>	<i>SESSION 11 - SUM-UP SESSION AND WIDER DISCUSSION OF WG4 TOPICS/FUTURE WORK</i>
	Chris Wernham and WG4 Team to lead
	Including time to finalise products for workshop reporting and for participants to fill and return templates.
<i>12:30 – 13:00</i>	Skype session with Guy Duke, ERB Facility Chair – feedback & discussion
<i>13:00 - 14:00</i>	<i>LUNCH</i>
<i>14:00 - 15:30</i>	<i>SESSION 12 - KEEP FREE AS FORWARD PLANNING SESSION (and contingency time to take account of any slippage)</i>
	WG4 Team forward planning / next steps
	Task Groups forward planning / next steps summaries
	Planning/writing of workshop report
<i>15:30 - 16:00</i>	<i>COFFEE & WORKSHOP CLOSE</i>

APPENDIX 2 - LIST OF PARTICIPANTS

Full participants		
Jovan Andevski	Vulture Conservation Foundation	Spain
Emmanuel Baltag	Universitatea Alexandru Ioan Cuza	Romania
Yael Choresh	Shamir Research Institute, University of Haifa	Israel
Marcello D'Amico	Institute of Environmental Assessment and Water Research	Spain
Damijan Denac	DOPPS-BirdLife Slovenia	Slovenia
Silvia Espín	University of Murcia	Spain
Fulvio Genero	University of Udine	Italy
Ulf Johansson	Swedish Museum of Natural History	Sweden
Ingrid Kohl	Schutzgebietsverwaltung Wildnisgebiet Dürrenstein	Austria
Oliver Krone	Leibniz Institute for Zoo & Wildlife Research	Germany
Madis Leivits	Estonian University of Life Sciences	Estonia
Rui Lourenço	Universidade de Évora	Portugal
Emma Martínez-López	University of Murcia	Spain
Gabriela Peniche	University of Edinburgh	Scotland (UK)
Rob Robinson	British Trust for Ornithology (BTO) & EURING Vice-Chair	UK
Pablo Sánchez Virosta	University of Murcia	Spain
Pertti Saurola	Finnish Museum of Natural History, University of Helsinki	Finland
Gunnar Thór Hallgrímsson	Institute of Life and Environmental Sciences	Iceland
Metodija Veleviski	Macedonian Ecological Society	Northern Macedonia
Al Vrezec	National Institute of Biology, Slovenian Museum of Natural History	Slovenia
Chris Wernham	BTO Scotland	Scotland (UK)
Inputting via Skype		
Ben Darvill	BTO Scotland	Scotland (UK)
Guy Duke	ERBFacility Chair (University of Oxford)	UK
Other staff assisting locally		
Špela Ambrožič Ergaver	National Institute of Biology	Slovenia
Stiven Kocijančič	National Institute of Biology	Slovenia
Aljaž Mulej	National Institute of Biology	Slovenia

APPENDIX 3 - PRE-WORKSHOP PREPARATION

We asked all workshop participants to take an active role in the workshop, and everyone was asked to give some thought to the following questions before the workshop. At the workshop we asked each participant (or country if views were combined) to give a 2-minute verbal summary of the most important aspects of their response to the questions below and then to fill in a more detailed response to the questions in a spreadsheet template.

The questions that were considered:

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 ERB Facility 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/ERB Facility focal species? How high on government/NGO priorities are raptors/ERB Facility 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 ERB Facility 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?

APPENDIX 4 – SUMMARY OF RESPONSES ABOUT EXISTING CAPACITY AND GAPS FROM EACH COUNTRY

AUSTRIA – SUMMARY TO COME

ESTONIA - Madis Leivits

Collection of carcasses is depending on the protection status of species. I and II category protected species have to be notified to Environmental Board and it usually refers those to Estonian University of Life Sciences, where they are stored, necropsied and sampled. After this, they are either sent to NHM (if they are interested) or to the finder if they have permission to obtain the body after necropsy. III category birds are often notified, but decided on case by case if needed to be collected for research or education purposes. Poisoning cases are referred by the Environmental Inspectorate to a specialist veterinarian for mortality cause determination. Keeping of it by general public will still need permit from Environmental Board. Logistic of bodies can be very organic, depending on the location and time. Often Environmental Board offices or biologist store them short term until suitable transportation is available. Invasive sampling is only allowed by special permit from the Environmental Board. Injured or diseased protected species are in most cases collected by Environmental Board and Estonian University of Life Sciences clinic or local veterinary clinic. Biological specimens are collected in Estonian University of Life Sciences where a specimen bank is in development. Additionally, there is laboratory technical capacity, and analytical methods are under development. The biggest gap is that it is not funded - it is either project based or personal interest and funds. But hopefully, providing important impact on environmental monitoring and management we can obtain base funding for this working scheme. Biggest danger is if the center-piece person of this stops activities or is prohibited due to universities financial decision, it will stop fully.

FINLAND – SUMMARY TO COME

GERMANY - Oliver Krone

In Germany only registered institutions (museums, research facilities) are allowed to collect raptors, private persons including ringers are not allowed. The best way would be to contact the country representatives and encourage them to spread the information/requests within their networks and legally collect the samples/carcasses needed. In general more carcasses of Common Buzzards are found than Tawny Owls. Monitoring information should be easily collected via the three ringing centres and the raptor monitoring program (MEROS).

ICELAND - Gunnar Thor Hallgrímsson

In Iceland there is a general high interest in raptors. Out of six breeding species of raptors, two (White-tailed Eagle and Gyrfalcon) are well monitored (population trends and breeding success) and visits made to their nests by skilled ornithologists. Other raptors are less well monitored and with irregular visits to nests for ringing and sampling. People finding dead or injured raptors commonly report them to the Icelandic Institute of Natural History or to the regional nature centres. No regulations stand in the way of the public to pick up carcasses, freeze them and send to these institutes. It seems feasible to aim for this type of sampling. Neither of the target species proposed for the ERB Facility (Tawny Owl and Common Buzzard) are found in Iceland but perhaps the resident Long-eared Owl could be used as a substitute for the tawny owl. It should be relatively easy to build up capacity to take appropriate samples from reported and delivered raptors found by the public. In spite of low human population size (hence lower chances of getting birds reported), the general high interest in raptors and the simplicity of the institutional system and low law restrictions make this strategy feasible.

ISRAEL - Yael Choresh

The Israel Nature and Parks Authority (INPA) is the only official and authorized organization to be engaged actively in nature conservation activities like ringing, monitoring etc. The activities are conducted and coordinated by the Avian Ecologist, both nationally and locally: monitoring, permits, ringing training, nest surveillance, annual surveys, local surveys, volunteers, transfer of injured and dead birds especially raptors etc. Volunteers are participating in national counts, routine national ringing projects, nest surveillance and transfer of animals. Researchers are required to get a permit and have to renew it every year; they are usually involved in a specific project and not in an on-going routine monitoring scheme. The active NGOs that are routinely involved in ringing and monitoring are doing so under the permit and supervision of the INPA.

ITALY – SUMMARY TO COME

NORTHERN MACEDONIA – SUMMARY TO COME

PORTUGAL - Rui Lourenço

The main actors and the current capacity for sampling and monitoring Tawny Owl/Common Buzzard are relatively limited. These comprise: wildlife rehabilitation centres (WRCs) which can provide samples; NGO's (mostly – SPEA, LPN, Quercus) which can provide mostly contextual data (monitoring programmes, but also powerline victims (generally not fresh carcasses)); researchers (a few projects involving raptors) which can provide samples (roadkills, captures) and contextual data (diet, breeding parameters, population trends). Main gaps relate to the low number of raptor projects; low number of raptor ringers; lack of training in collecting samples; need for best practices for transportation of samples. There is high potential for training of most types of actors. Strengths for the Proof of Concept study: the country is not very large and people know each other very well, so it is relatively easy to coordinate. It should be relatively easy to involve WRC, NGOs, and researchers in collecting samples and centralizing contextual data.

ROMANIA – Emanuel Baltag

In Romania there are very few bird study centers (NGO/Institute/University), but most of the monitoring studies are conducted by two NGOs (Romanian Ornithological Society / BirdLife Romania and Association for Bird and Nature Protection “Milvus Group”). These NGOs cover mostly species monitoring but not ecotoxicological studies which are mainly uncovered. They can provide species population, densities, distribution or trends. Also, they can provide volunteers to collect carcasses or samples, most of the ringers being affiliated (working or volunteering) to these NGOs. There are few laboratories working in ecotoxicological studies, but with other species of animals or plants, so they need training and collaboration to be able to develop also this research direction. Regarding the Wildlife Rehabilitation Centers, we really do not have some well establish network or even centers, but there are some people trained to work/treat birds. There are some small groups of people who are somehow covering this sector, but they do not have a real capacity to step forward for a bigger role. However, we have some museums collecting carcasses and they are willing to get new specimens, at least up to now. These museums could be involved in the network and they can provide samples if their people will be trained to do that. Probably it will be easier or it will work better if we ask them to provide the samples (liver) and to let them to keep the carcasses because they are able to conserve them for a long term. Regarding the legislation, the carcasses can be collected by authorities and only the Environmental Protection Agency (41, one for each county) can decide who will take the carcass or what will happen to it. This is a limitation for the project, but after we have the carcasses we can ask for a general permit of their custody (for all collected carcasses) and then we can use them for studies.

SLOVENIA - Al Vrezec

There is relatively high interest in raptors, especially in owls, in research and by volunteers, less from conservation policy makers. There is increasing raptor ringing interest, especially in owls, but also in Kestrel and Common Buzzard using colour rings. There is increasing use of tags in owls (6 out of 10 breeding species so far) and increasing popularity of nestboxes among ringers (with new nestboxes funded by some recent projects). Raptor monitoring schemes are only local and not national for the majority of species. There is long-term monitoring of breeding productivity and population monitoring established for Tawny, Ural, Scops and Eagle Owl (some for more than 20 years). There is also monitoring of migrating raptors at bottlenecks. An existing citizen science platform by BirdLife Slovenia collects random observation data from volunteers (in the last approx. 5 years 1175 data on Tawny Owl, and 2167 data on Common Buzzard were collected through platform: <http://atlas.ptice.si/atlas/><<http://atlas.ptice.si/atlas/index.php?r=user/login>). To enhance raptor monitoring adopt the Raptor Grid Scheme (breeders). There is a recent increase of breeding and migrating raptor ringing. A special licence is needed for raptor ringing (not all raptors species are allowed to be ringed). Raptors have been protected in Slovenia from 1921. There is poor monitoring of diurnal raptors. Carcasses of Tawny Owl and Common Buzzard are regularly obtained in museum (by law) - preserved skin, bone, but not tissues. There is no Environmental Specimen Bank. There is an established Tawny Owl nest-box monitoring scheme and regular population monitoring. For Common Buzzard, there is ringing of non-breeders and they are annually surveyed in the scope of Farmland Bird Index. Slovenia has best practice to share - Tawny Owl monitoring scheme. There is some lab capacity for contaminant analyses (needs to be adjusted for raptors). There is one Wildlife Rehabilitation Centre and many veterinary stations (network of obtaining injured raptors).

SPAIN – Jovan Andevski, Marcello D’Amico, Silvia Espín, Emma Fernández-López & Pablo Sánchez Virosta

In general we consider that Spain has good capacity for collecting samples. The main participants would be Wildlife Rehabilitation Centres (more than 60) and researchers due to their experience and access to both carcasses and live raptors, and also ringers since they handle many individuals and they are well organized, but they would need personal licences and training/protocols to collect blood and other samples. In Spain, there is a high level of interest in raptors, they are protected by law since 1960s and they are established as good indicators of contaminants. Also there are several research groups working with them. We would need a national coordination to share information from different regions and increase possibilities to get funding for field sampling, and we also need training courses. We already have protocols for sample collection (EURAPMON, VenenoNO Life project). If we find a carcass of a raptor we should call the authorities or WRC. Regarding Tawny Owl and Common Buzzard, there is no population monitoring at national level, but in general we can collect samples from different regions of Spain.

SWEDEN - Ulf Johansson

A well-established network with ringers and an interested general public already exist, and with information through these channels these groups can probably be motivated to send in more material to the museum of Common Buzzards and Tawny Owls. My impression is that there are fewer persons active and willing to send in material than previously. There are some squares in areas with few people, but both Tawny Owl and Common Buzzard basically occur in areas where there are more people in Sweden. The Swedish Museum of Natural History receives a lot of other species (e.g. due to the Swedish Game Act). As the museum at the moment receives large amounts of specimens, processing this incoming material is time consuming and if large numbers of two new species (Common Buzzard and Tawny Owl) start to come in, this will take resources (personnel) from other projects already running and active at the museum. The possibility to process all incoming material at the museum may therefore be a bottleneck.

UK – Gaby Peniche, Rob Robinson & Chris Wernham

In the UK there are large number of volunteers at all skill levels: ringers/nest recorders/Scottish Raptor Study Group/Northern Ireland Raptor Study Group/Northern England Raptor Forum and other local groups across England and Wales – highly skilled; many participants in other bird survey schemes (e.g. BBS/BirdTrack/GBW) – moderately skilled; many volunteers for other NGOs (e.g. RSPB/Wildlife Trusts/National Trust etc) – less specifically skilled but perhaps pool of people to look for carcasses). The well- established study groups are an advantage but the long-running tradition of certain approaches to raptor work can sometimes make some innovations and trying new approaches difficult to achieve. There is a national Scottish Raptor Monitoring Scheme involving 9 partner organisations in Scotland, and well-coordinated monitoring in Northern Ireland but no overall coordination in Wales or England. There is high policy and conservation interest in the scarcer raptors and those on Schedule 1 or subject to high profile persecution by humans but generally lower specialist interest in the commoner species. Some raptors have very high public profile but there can be great sensitivity around raptor issues (particularly persecution issues and association with the grouse shooting industry). Raptor ringing is subsidised because raptors are ‘top predators’. Common Buzzard has been relatively low interest in the past but there are now increasing numbers of studies in Scotland and the recent range increase perhaps provides increased opportunities across the UK. For Tawny Owl – there is some potential already, with some nest monitoring studies and a recent BTO survey. There is a need to build additional monitoring capacity on the commoner species, for example by expanding the current ‘Raptor Patch’ initiative. Most raptor ringers and the best organised groups are in Scotland, with less opportunity to train others in the south and east of England. Workshops to share peer knowledge for the commoner species might work well for building capacity (recent examples for Barn Owl have been successful). BTO (British and Irish Ringing Scheme) gets quite a few requests annually for ringers to take samples, and there may be the need for a more efficient way of linking ringers with toxicology studies. The current carcass collection system is strong in Scotland. This appeal feeds samples to the Raptor Health Study (University of Edinburgh) and provides around 70 birds per year, out of which 10% are Tawny Owls and 35% are Common Buzzards. This numbers could increase if repeated appeal is made to reiterate interest. England has a strong carcass system encouraged by the Predatory Bird Monitoring Scheme run by CEH. Awareness and communication can be maintained and can continue to improve in order to keep collaboration across the country and to strengthen raptor interest across all actors. Carcasses at the moment will follow 4 main routes: (i) Police; (ii) Scottish Raptor Health Study (Scotland); (iii) PBMS (England); and (iv) National Museum of Scotland.