

## ENRAM working group 4 meeting – Hamburg, 11 November 2015

### Minutes of the meeting

**Attendees:** Ommo Hüppop & Don Reynolds (WG chair and vice chair), Silke Bauer, Adriaan Dokter, Primoz Kmecl, Elena Patcev, Nir Sapir, Baptiste Schmid, Judy Shamoun-Baranes, Phillip Stepanian, Wolfgang Vogl, Christian Voigt, Charlotte Wainwright.

**Minutes:** Judy Shamoun-Baranes

#### 1. Overview of Grand Challenges paper by Silke.

- Silke gave a brief explanation of the trajectory of the paper from first ideas to the current paper. Shift to focus on diverse stakeholders that could benefit from continental scale tracking. Paper is almost ready for submission.
- Giacomo suggested by email to integrate knowledge from radar campaign – but it was agreed that this is more suitable for a different paper.
- Key questions collected through the original ‘horizon scan’ organized by Jason Chapman are still available and can be used if anyone is interested. They could be used to design or steer new studies, or broken down into mini-reviews. A suggestion by Nir to post them on the ENRAM website was met with general approval. One possibility would be to provide a brief introduction about how the questions were compiled and turn this into a "white paper".

#### 2. Ideas and suggestions for other publications

- During this discussion we had several (useful) digressions to provide additional background information on the possibilities for new research based on current initiatives in the network, particularly those arising from the recent WG1/WG2 meeting in Utrecht. Below are some of the points discussed.
  - Nir reported that Israel is starting to archive data from 2 military weather radars; this cannot be linked to European effort yet, but this may happen in the near future. Currently there is also a bird tracking radar in Israel (collaboration with Felix Liechti) providing new opportunities for research.
  - Briefly discussed current ideas circulating in ENRAM about new calibration campaign for spring 2016.
  - Question posed about how far WG2 is in getting towards continental-scale data on migration. Brief explanation of current status (given by Adriaan Dokter). Currently plugging the current bird detection algorithm into the BALTRAD toolbox is almost in the pipeline; this will produce output for all radars linked to toolbox that actually deliver the right data -- finally this comes down to about 7 countries. Note that old archived data is problematic. Adriaan also presented a composite image of the Europe-wide radar network which really has a lot of (visual) information in it, even before applying an algorithm. However, it was interesting to note the ‘between-country’ differences in the information displayed. The raw data and even some processed data is still not readily accessible, or is apparently not in the correct format.
- Concrete plans for papers:
  - Estimation of temporal patterns of migration, integrating different sources of information – **Baptiste is leading this** as part of his postdoc, first focusing on Switzerland but this should have aspects that are relevant to other countries.
  - Review of contribution of radar to understanding the influence of external factors on migration (**Lead by: Nir, Don, and - maybe - Michal Skakuj**). This paper may ‘pick up’ some topics and material that fell outside of Silke’s Grand challenges paper. Clear that local studies have contributed a lot, sometimes even conflicting information, what will large-scale perspective add?

- **Christian Voigt** is leading a paper comparing bat and bird migration, from physiology to behaviour from a conservation perspective (e.g. stopover ecology). Comparative analysis of flight behaviour in temperate zones. Also potentially link to what is known about insects (bat food).
- **Silke Bauer** is leading a paper on the capacity of migrants to disperse micro-organisms and other biota.
- **Adriaan Dokter** will lead a study on biomass estimates across large areas of Europe.
- **Christian** is involved in a paper on wind farm developments and future directions. This paper is already in a very late stage.
- Ideas for other possible lines of research:
  - Conservation focus. NOTE: There is a gap in our knowledge about migration flyways in the Adriatic region; this information is really needed for bird conservation and by organizations such as BirdLife International, e.g. by compiling data on migration – phenology, intensity, flight altitudes for conservation. Consider quantifying in separate areas and combining in a single paper. Integrating single site studies with a focus on the importance of such information for conservation could have a nice impact. Should include recommendations regarding methods.
  - Impact of long-term change on migrations. Would be a very interesting topic for a paper, influence of land-use change, sea level rise, establishment of wind turbine parks, etc. Other issues mentioned – air pollutants, chemical pollutions, competition for airspace. Also emphasizes why we need a baseline now, so that we can study these impacts, especially as we expect much to change in the near future. Consideration could be given to the use of simulations in such a study.
  - Airspace as habitat: main focus on conservation; consider link to MPAs (Marine protected areas) and work towards idea of aerial protected areas (concept already exists in many countries in different ways especially in military aviation with examples from Israel and the Netherlands). Note the paper by Rob Diehl ('The airspace is habitat' in *Trends in Ecology & Evolution*, 28, 377-9). Consider also international and national conventions that already exist for migrants but these only address the issue when the migrants are on the ground. Consider including someone with a strong background in the legal aspects of nature conservation (Ommo has a potential contact person). **According to Nir, Michal Skukaj is considering leading this.**
  - Consider publishing maps of bird sensitive areas for e.g. BirdLife International. Would be an additional output, and could potentially get some funding for something of this sort. Currently six countries have produced maps like this.
- Suggestion to prepare a wish list – what are the questions we would like to tackle, bearing in mind the technical limitations and timeline of ENRAM, what do we need to achieve this, what examples are already out there.
- People that would like to lead a paper and solicit partners and feedback could write and distribute a brief A4 description of their idea.

### 3. Recent and future STSM's

Recent STSM's – brief overview of 2 STSM's that Nir Sapir was involved in (Nir's visit to Rothamsted, and Paolo Beccui's collaboration with Nir). These are both listed under WG4 and there are potentially more STSMs that have a cross working group character (see Nir Sapir's presentation, [sapir\\_stsm\\_reports.pdf](#))

## Future STSMs

- Ommo (DE) – Judy (NL). Compare simulations and radar measurements at sea to study potential sources of migrants at offshore platforms.
- Nir (Israel) – Baptist (Switzerland). Aeroecology as measured by radar in Israel.
- Adriaan (NL) – Cecilia (Sweden). Swift ascents and roosting activity....Note from Christian, possibility for tracking swifts in Berlin.

Call for collaboration (from Christian Voigt): He is interested in measuring insects at bat migration sites, current research site in Latvia, but could also go to other sites where bats are migrating and people are measuring insects.

Further decisions on STSMs to be discussed in Malta. Consider STSMs for working on review papers.

## 4. Budget 2015/2016

WG4 meeting in Malta

- Approximately 15 people (max), working on papers.
- Mail to be sent out by Suzannah Chapman to all WG members to find out how many people are planning to attend the WG sessions.
- Consider also soliciting people with expertise that is needed.

Dissemination

- Consider sending someone from working group to next EBCC (European Bird Census Council) meeting in Halle, Germany (September 2016), to strengthen bond between radar monitoring and ground based monitoring.
- Publication fees for Grand Challenges paper (Silke to check).

1 STSM in first quarter, possibly 2 if budget allows.

Suggestions for the International Symposium & Training School:

- Two day meeting. 3 types of presentation (plenary – 30 min, regular talks – 15 min, flash poster presentations – 1 min).
- Maximum of 100 people involved in radar aeroecology, either from an ecological perspective or methodological perspective.
- Should not only be for ENRAM members, but to disseminate and exchange beyond ENRAM. Reach out broadly to radar communities, through own networks.
- Poster session in evening during general reception (that way everyone stays around).
- Need to get several people together to create scientific committee to select and organize abstracts.
- Invite external expert from US – Jeff Buler.
- Potential locations/hosts: Vienna University & Austrian Ornithological Institute – contact Prof. Leonida Fusani OR Potsdam University & BioMove – contact Prof. Florian Jeltsch.
- The training course which will be 2 days with ‘hands on’ activities, back to back with the 2 day symposium, preferably before the symposium. The workshop will focus on analysis of weather radar data, i.e. visualisation, understanding strengths/limitations/biases of weather radar data, best practices radar inter-comparison, use of spatial imagery (incl. dual-polarization), use of VPB data (vertical profiles of birds generated by automated algorithm). It makes sense to invite Jeff Buler also as a trainer for the workshop, since he recently organised a similar one day "weather radar ecology 101 course" during the last AOU meeting in Oklahoma. The training school should have a maximum of 15-20 people.