

## Cost Action ES1305 (ENRAM): Minutes of MC meeting

11<sup>th</sup> September 2017

Stadmuseum Gent, Godshuizenlaan 2, 9000 Gent, Belgium

### **1.-4. Welcome, Adoption of Agenda and Approval of minutes**

At 09.30 Jason Chapman (JC, Action chair) welcomes all MC representatives who briefly state name and country of origin to check for quorum. A total of 16 countries are represented which means that quorum is attained. The meeting agenda is adopted and the minutes of the previous MC meeting (Rome, February 2017) are accepted by Peter Desmet and seconded by Felix Liechti.

### **5.-6. Update from Action Chair and Grant Holder**

JC widens the scope of the update to incorporate the entire Action period as the last grant period is very short. He stresses that this is an important stage of ENRAM as it ends as a funded COST Action but not necessarily as a network.

JC concludes that ENRAM has done very well, starting as a medium-sized COST action and ending as one of the largest, with 24 countries now participating. Attendance at meetings has been good and quorum been attained in all MC meetings. JC points out that some achievements have been very successful, in particular STSMs, the training school and the International Radar Aeroecology conference.

Silke Bauer (SB) gives an overview of the 44 ENRAM STSMs. In all, 19 females and 25 males have participated. The majority have been early career researchers. STSM participants have been from 13 countries and have been hosted in a total of 11 countries. Main topics have involved calibration works, data handling & infrastructure, visualization, and ecological questions. All STSM reports are now publicly available on the ENRAM website. JC thanks SB for her work coordinating the STSMs.

JC presents the state of the current budget and mentions the final grant period will run until 20<sup>th</sup> of October 2017. The Action has done very well, starting with a budget of 400 000 EUR which has then been increased as more countries have joined. The scientific budget for the last period is 44 000 EUR most of which will be used for the current meeting. 6000 EUR will be used for STSMs. Nir Sapir (NS) asks about future funding of the website and possible COST contribution to open access publication of results. Peter Desmet (PD) adds that future funding of data infrastructure needs to be addressed. JC mentions that the website will remain at least the next few years and that COST have agreed to contribute to open access publication. He also states that different ways of financing the data infrastructure are being actively investigated. The MC thanks the Grant Holder for his work.

### **7. Update from COST Association**

Ms Tania Gonzalez Ovin (TGO) tells the MC about updates at COST and congratulates the Action for its successful years which have gone very well. TGO thanks everyone for the participation and Suzannah Chapman for her work as project administrator. The deadline for reimbursement is now 45

days and TGO encourages everyone to submit documents as soon as possible. The MC thanks TGO and the COST staff for all help and support throughout the Action.

## **8. Monitoring of the Action**

JC concludes that the Action has been very successful and continues to have good involvement by all participants. The final report is needed one month after the Action ends. WG leaders and colleagues are currently drafting parts.

## **9. Implementation of Cost policies on:**

a) Gender balance & Early Career Investigators – Judy Shamoun-Baranes (JSB) states that ENRAM has improved considerably in terms of attracting young female investigators. At the kick-off meeting in Brussels, 2 participants out of 28 were female. In contrast, the Rome Training School had a 40% female participation. The subsequent Conference 25%, STSMs 50%, the West European Flyway workshop in Sempach 35% and the final meeting in Gent has a 30% female participation. The STSMs have been dominated by young and early career investigators. JSB points out that many early career investigators have established themselves during the Action and that the group around the core team has grown as a consequence of the actively contributing early career investigators. Hans van Gasteren (HvG) mentions that it would be good to check the gender balance and early career investigator balance in the scientific output of the Action and to list this in the final report.

b) Inclusiveness Target Countries – developing well within ENRAM with examples from countries such as: Bulgaria, Poland, Portugal, Slovenia, Turkey, Malta. In total, eight inclusiveness countries have participated in ENRAM.

## **10. Follow up on MoU objectives: WG progress report**

### ***WG 1: Classification and Retrieval of Biological Data from European Weather Radars – Adriaan Dokter (AD)***

AD provides updates on several milestones after the Rome meeting and onwards. Vertical Bird Profiles are now being extracted from close to 60 weather radars in 16 countries at the moment. It started with 5 radars in 3 countries. The bioRad R package is being written into a methods paper. WG1 has been actively working with training and outreach activities, among those a training school in Oklahoma in addition to the training school in Rome. The Data Infrastructure and pipeline is in place but has slight teething problems that call for some close work with BALTRAD to solve these issues. AD concludes that the infrastructure is almost there but not entirely and that a final push is needed to have it up and running. AD explains that there is a need to extend and adapt the OPERA-ENRAM license so it can continue after the end of the Action. WG1 has been looking into cost assessments to obtain and maintain OPERA data for different countries and AD points out that a wide network may be costly to maintain but that there are some possibilities to collaborate with server providers such as AWS, Amazon Web Services. A coarse estimate is that it may cost some 10 000 EUR per year to have the data infrastructure running continuously. AD mentions that future training schools and conference sessions related to WG1 topics would be valuable after the Action ends. JSB points out that many of the teething issues we are now aware of, such as differences in radar data filtering, had not been known without ENRAM so substantial progress and harmonisation has been possible thanks to the ENRAM effort. Hidde Leijnse (HL) adds that this is much appreciated by OPERA.

**WG 2: Improvement of Weather Radar Data Quality and Validation of Biological-classification Algorithms – Felix Liechti (FL)**

FL provides an update on several calibration campaigns. A number of them have brought groups together to calibrate and cross-validate weather radar and bird radar data. Calibration campaigns involve work at Fehmarn, in Germany, France and Switzerland, in Israel, and in Spain. Important cross-validation work has been carried out at Kullaberg in Sweden during 2015 which not only cross-validated weather radar data against bird radars but also did so against bird ringing data from Falsterbo. FL also provides information on cross-validation work along the Belgian and French coast as well as in Bulgaria. The WG2 work has resulted in a refined bird algorithm and the Western Flyway paper headed by Cecilia Nilsson (CN) which is already at an advanced stage, offering a continental-scale migration study based on data 52 weather radars and utilizing the refined bird algorithms enhanced by the work of WG2 campaigns.

**WG 3: Visualizing Spatio-temporal Patterns of Animal Movement – Hans van Gasteren (HvG)**

HvG highlights the continued work on online visualisations following the recent paper in PLOS One that resulted from the hackathon. These visualisations have also been useful in communicating ENRAM findings in other WGs, for instance the migratory patterns the Western Flyway paper. Several STSMs have taken place within WG3 since the Rome meeting.

**WG4: Significance and potential of Animal Movement Research – Ommo Huppopp (OH)**

OH highlights the horizon scan paper led by Silke Bauer (SB) which has now been published in Bioscience. There have been many disseminations in meetings and conferences by WG4 participants since the Rome meeting. One STSM has focused on working on radar and conservation and there are papers being developed, one led by OH on bird and bat conservation work using radars, and one developed by NS focusing on environmental effects on migratory animals during cross-country flight.

Following these four presentations, JC thanks all WG leaders for their efforts.

**11. Scientific planning**

JC begins by explaining that since the Action ends soon, he will merge the sections *Scientific strategy (a)*, and *Action Budget Planning (b)* with the sections *Long-term planning (c)* and *Dissemination planning (d)*.

*c) Long-term planning*

JC initiates the topic by asking for the meeting participants' opinion about what should happen to ENRAM. He lists two alternatives: 1. ENRAM could apply for additional funding from various sources or 2. ENRAM could step back from funding applications and plan to carry on as an informal entity or network. JC asks if participants see external funding as essential to the continued activities of ENRAM? JC mentions that as the COST Action does not fund research, the difference from a non-funded network is maybe smaller than expected. Don Reynolds (DR) asks if ENRAM participants have access to own travel funding or not. If they don't, then this might limit the possibilities of a non-funded network. FL points out that we now have a research network which is successful at recruiting and actively involving young and early career investigators. FL stresses that this should be a future

aim of ENRAM and that this will need funds. JC mentions that it is not necessary that ENRAM itself makes proposals, separate subgroups of ENRAM participants could do this. Some EU level funding possibilities that JC mentions are: Innovative Training Networks (ITN), possibly a new COST Action, or a Horizon 2020 grant should any suitable calls be available. SB states that it has been something of a problem that ENRAM has never had research money and that it would be good if the future state of ENRAM could involve possibilities to employ researchers and technicians. NS adds that there can be problems with informal networks lacking central funding as they may become biased towards faculty members and result in fewer young and early career investigators recruits. Rui Rufino (RR) proposes that the organisational structure of the European Bird Census Council might suit ENRAM. Other alternatives could involve joining an existing society or establishing a trust. Lars Pettersson (LP) mentions that Butterfly Conservation Europe has a trust structure, being formally seated in the Netherlands but with participants from all over Europe. Jarmo Koistinen (JK) stresses that funding on a personal level will likely not work for the meteorological community and as a consequence, its engagement in ENRAM will become considerably weakened. PD adds that EU Science Infrastructure funds could be an additional relevant funding opportunity for ENRAM and that it needs to be investigated. JC sums up the discussion by concluding that applying for EU level funding for ENRAM is preferable. Further, he points out that even if ENRAM chooses to apply for such funding and is successful eventually, there will be at least a 2-year gap before any such central funding will be available.

JSB points out that ENRAM needs a consortium structure to be able to continue with the data licensing agreement we currently have with the OPERA community. ENRAM continues as an informal structure after the COST funding ends but a formal consortium structure will need to be established. JSB suggests a two-step process. First, ENRAM establishes an informal or temporary consortium. Then, ENRAM will look into alternative organisational structures such as associations, trusts etc. JSB encourages anyone in ENRAM with access to information about different suitable organisational forms to contact JSB and JC who will then discuss this within the Management Committee.

JC proposes that an ITN network may be a suitable funding option for ENRAM. Following a direct question, the majority of the Management Committee members want to participate in this. Lead institutions in an ITN will be academic ones. Non-academic can participate in the network but the main responsibility will be with academic institutions. JC stresses that an ITN offers a way in which ENRAM could evolve into a training network. Training schools offered so far within ENRAM is a step in this direction but a full training network will need to be considerably more than this.

JC states that the successful ENRAM conference in Rome will now be followed by a second radar aeroecology conference, this time organised in Zhengzhou, Henan, east-central China in September 2019. Chinese colleagues have already volunteered to organise and provide substantial funding. The aim is to have the conference in China followed by one in the United States and then a subsequent one in Europe, forming a biannual series in radar aeroecology. JC points out that it will also continue to be valuable to organise ENRAM relevant symposia at large conferences such as the IOC. HL adds that the European weather radar network has biannual meetings with the next one in the summer of 2018. These meetings could host some training sessions. There are also possibilities of contributing to sessions covering non-meteorological use of weather radars. JC concurs that training opportunities are important and that an American training school recently used the same training

framework as in the ENRAM Rome training school. Funding will be needed for such training schools. One temporary solution before such funding has been obtained can be to continue sending ENRAM people to US training schools to keep an active exchange between the US and Europe radar aerocology communities.

JC states that ENRAM needs to pursue opportunities to find funding for the infrastructure required. AD estimates that the minimal cost is some 10,000 EUR annually to run but that it will also involve costs to set it up and that will likely be several 10,000 EUR. FL stresses the great value that the vertical bird profiles extracted from the weather radar network are reliable and open source. AD suggests that big internet companies such as Amazon could be interested in helping and subsidising hosting. FL emphasizes the need for minimum cost estimates and also a safe strategy for long-term data hosting. AD stresses that we should not try to build a data center but to use present ones, preferably with company involvement)

#### *d) dissemination planning*

JC mentions that Ecography has been approached by a proposal for a special issue with ENRAM papers. JS has written to the Editor-In-Chief who has shown preliminary interest and who has asked for a second stage, in-depth proposal. The total number of paper will probably be somewhat reduced and some of the papers may merge as a result of EIC feedback. The updated proposal will be submitted within two weeks.

JC explains that various reports need to be produced following the COST action. One is the roadmap, also called beginners guide, on to how to analyse weather radar data. Final report of the ENRAM COST Action will need to capture all the most important findings of ENRAM, in particular the last 6 months. Examples involve general achievements, disseminations, STSMs, talks at conferences, papers, abstracts etc. In particular, it is valuable to explicitly add any indications that we are aware of how the COST action has changed knowledge of the biology/weather radar interface. Problems but also opportunities should be mentioned. It is also important to explicitly provide details on gender balance and contribution of young and early career investigators in ENRAM publications.

The ENRAM website will be kept it up and running for a couple of years. The mailing list will also be kept for at least a couple of years.

**12. Request to join the Action** – none.

**13. AOB** – no comments were made.

**14. Location and date of next meeting** – not relevant

#### **15. Summary of MC decisions:**

1. ENRAM will most likely not have funding for the next 18-24 months, but will continue in informal capacity
2. The relationship with OPERA will need to be resolved
3. A journal special issue proposal will be finalised within two weeks and resubmitted to Ecography

4. Radar Aeroecology Conferences will continue
  - a. Next meeting in Zhengzhou, Henan, east-central China in mid-September 2019.
  - b. Relevant symposia will be held at IOC
  - c. Other relevant conferences and symposia: please distribute these over the ENRAM email list
5. There will be no ENRAM training school in the next few years, but ENRAM will coordinate with Jeff Kelly over US training school
6. JC will require input for the final COST report which is due November 2017. JC will circulate emails asking for input
7. ENRAM will need to pursue opportunities to find funding for the infrastructure required. AD and colleagues are looking into this
8. Some progress has been made towards a proposal for a Marie Curie Innovative Training Network application

**16. Closing:**

JC thanks all MC members present and closes the meeting at 12:30

*Minutes compiled by Lars Pettersson (12.09.2017)*