

Cost Action ES1305 (ENRAM) WG1-4 Combined meetings

08 & 09.10.2014 – Casa de la Cultura , Tarifa, Spain

Day 1 – 08.10.2014 - 10:00 – 17:00

10:00 Coffee – Participants are received at venue by host Dr. Gonzalo Arroyo with a morning coffee.

At 10:15 Dr. Jason Chapman (JC) starts the meeting and Dr. Arroyo welcomes all the participants. Dr. Chapman states that this day is mostly dedicated to WG2 but that other WG can meet during the course of the day.

Dr. Felix Liechti (FL, WG 2 leader) presents an overview of WG2 and states that during this day members of WG2 should discuss and plan what to do next given the current status of several calibration experiments.

By 10:25 JC present the sites across ENRAM countries where field data is being collected with biological radars and makes a call to anyone that might contribute with more biological radar data. JC show the data collected with Rothamsted dedicated insect data as well as with the dedicated bird radar which was moved to that location by FL. This location is ideal for calibration experiments as it is in close proximity to an OPERA weather radar from which weather data can be extracted. This is even more relevant as the insect radar located at Rothamsted is the only insect dedicated radar currently in use in Europe. JC finalizes his presentation and answers several questions from the audience.

At 10:45 FL presents the dedicated bird radar raw data collected at Rothamsted and indicates that this is not yet analysed but shows how the data will be analysed. FL shows a table of time synchronized radar measurements and requests that all contributing with biological data to fill in this table in other to ask Opera network for those same time periods and data types so that calibration of weather radars can be as widely as possible across Opera. FL finalizes the presentation and answers several questions regarding dedicated bird radars.

11:00 Dr. Pavel Zehindjiev presents an overview of Bulgarian radars.

10:25 - 5 mins coffee break

10:30-13:00 Several presentations of biological radar data: Robin Brabant (bird radar data from offshore North Sea in 2014); Dr Gonzalo Munoz Arroyo (bird radar data & migration data from Spain & Gibraltar in autumn 2014); Nadja Weishaupt (windprofiler data from Basque Country); Dr Giacomo Dell’Ommo (bird radar data from Italy in 2014); Dr Yossi Leshem (bird & weather radar data from Israel).

13:00-14:30 Lunch

14:30 – Members of WG3 met, with Mr. Hans van Gasteren (WG 3 Leader) indicating that several items need preparation for discussions on the following day. After a short round of presentations, Mr. Peter Desmet presented the Flow Visualization resulting from his STMS to UVA earlier this year. WG members prepared and discussed all data files being set up for the forthcoming data challenge organized by the group.

16:07 – Members of WG 4 met, with Dr Silke Bauer leading the discussion for the preparation of the scientific paper on “The grand challenges of movement ecology”.

Day 2 – 09.010.2014 - 09:00 – 17:25

At 9:08 JC welcomes all to the first full meeting day and presents the day’s agenda. JC presents a brief overview of action to new participants and launches the tasks for the WG for the day: plan activities, budget and expected outputs for second year of action.

9:28 – FL presents an overview of the symposium on radar Aeroecology convened by him at the International Ornithological Congress held in Tokyo, Japan, last August.

By 9:40 JC indicates that the action’s budget for year 1 accounted only for 14 countries (102.000 Eurs) and given the fast growth of the action (now with 22 countries) this budget had been overspent. Therefore, in year 2 all WG need to be careful while preparing their own activities. At 9:53 – Dr. Silke Bauer introduces STSM and Mr. Peter Desmet presents an overview of the STSM he and co-workers have done at Uni. of Amsterdam earlier this year.

Before the coffee break, JC indicates that each WG should budget for activities up to ~22,000 Eurs.

10:20-10:40 Coffee break

10:45 – WG1-4 parallel meetings

WG 1 meeting

Gunther Haase, Jeff Kelly, Hidde Leijnse, Adriaan Dokter, Jarmo Koistinen, Sevgi Zubeyde Gurbuz, Mercedes Maruri Machado

Hidde gives short summary Helsinki meeting regarding insect algorithm development for weather radar:

- (1) Insect algorithm design: extract insect information based on physical/mechanistic characteristics of the signals, instead of following a fuzzy logic / machine learning approach

- (2) no dual-pol (yet) – although these moments make the identification of insects easier, this step would involve considerable research, and most readers do not have dual-pol capability.
- (3) Aim for profile algorithm (similar to existing bird profiling algorithm) without spatial info: simple and robust

We identified 5 action points for the upcoming months:

Action point 1: Get insects from bird profiling algorithm as it is (Adriaan). Implement these retrievals for Chenies and Helsinki radars (Adriaan, Hidde), evaluate in Feb already if possible (Viviana).

Action point 2: Continue to work on refactoring the bird algorithm and implementing it in the Baltrad toolbox (Adriaan, Jurriaan). Basic baltrad functionality expected to be available end of April 2015

Action point 3: Validate insect prototype results by expert judgement (Matti)

Action point 4: Look into the anomaly detection and removal algorithm of FMI. Has insect/bird detection implemented as a single class bioscatter. Jarmo will have a look in how useful these methods are for ENRAM.

Action point 5a: Seppo Pulkkinen & Jarmo & Matti: investigate possible designs of a physics-based profiling insect algorithm

Action point 5b: study Rennie paper on automated insect detection (Jarmo/Matti)

Usefulness of a dissemination workshop by Gunther on “how to use Baltrad toolbox” is discussed. This software only runs on Linux systems - primarily useful for those with technical background on radar volume files and their processing. In the future a separate facility will be required for end users interested in accessing (processed) bird data.

Most discussion was devoted to formulating the STSMs for 2015 – see the WG1 workplan for details.

WG1&2 joint meeting to be planned in autumn (October, in NL):

- European wide testing of Baltrad toolbox
- Evaluation insect prototype

International expert to be invited for this meeting:

- Susan Rennie

WG 2 meeting

Participants: Felix, Jason C, Johan, Cecilia, Nadja, Christos, Boyan, Pavel, Jan, Viviana, Yossi, Joris, Robin, Jason Lim, Natalino

STSM plans and the plans for the 2015 field calibration were discussed in detail. Felix decided to circulate a table of radar sites from 2014 and ask everyone to complete technical details, and analyse their data to a common format in time for the Feb 2015 meeting in Israel. The plans for the 2015 calibration campaign will be finalised in Israel. A WG meeting will be co-organised with WG1, following the successful joint meeting in 2014.

WG 3 meeting

Participants: Hans van Gasteren (WG leader, NL) José Alves (WG deputy-leader, PT), Judy Shamoun-Baranes (NL), Carlo Catoni (IT), Pedro Rodrigues (PT), Rui Rufino (PT), Peter Desmet (BE), Tasos Dimalexis (GR).

Mr. van Gasteren chaired the discussion which started with a quick round of introductions. The aim of this meeting was to finish the planning for the visualization data challenge, the major task for WG3 in 2015 and also the budget for the 2nd year. All present discussed the location, timings, prizes, rules and budget.

The visualization data-challenge is set to operate as follows:

Aim: To get several teams to develop and improve visualizations of movement data from multiple weather radar.

Timings: Launching in January 2015 and finish by the end of March with a 2,5 day hackathon;

Location: The challenge will be operated on-line with the hackathon taking place in UVA, Amsterdam.

Hackathon: 1st day centralized presentation about ENRAM for all participants, opportunity for challenge participants to meet researchers who can provide final directions and fine-tuning of visualizations, rest of day free for further developments; 2nd day – free day for participants to conclude visualizations; 3rd day – submission of visualizations until 10:00; short presentations by all teams between 11:00-12:00; selection of winners by jury during lunch; winner announcement at 14:00 and close of event at 16:00; WG3 meeting from 16:00-18:00.

Support and prize: the Hackaton will operate as an workshop capped at 20 people (max 2 people per participating team). Participant teams will be reimbursed for a maximum of 800 Euros per person and will be pre-selected following specific criteria (e.g. portfolio, short description of planned visualization in bullet points, country of origin, female participation, etc.). Winning team will be awarded an STSM of ca. 3000 Euros for both team members to return to Amsterdam and work in the visualization with researchers.

An STSM was suggested for students at UVA to go to INBO (Belgium) to construct a “User’s Guide and Manual” to CartoDB freeware version. Despite agreement from STSM coordinator (Dr Silke Bauer), Dr Catoni raised the issue that this could be an investment to help a private company and that it is not strictly directly linked to radar work. A discussion about these issues followed and this issue will be brought to the MC committee for further discussion.

In order to comply with WG3 objective of setting a data storage infrastructure, Mr Desmet suggested contacting LifeWatch so that we can use their infrastructure. Dr Shamoun-Baranes will also check with UVA if data storage facilities are also possible in this institution. This point will be followed up in the forthcoming WG3 meeting in Israel in February 2015.

Dr Shamoun-Baranes asks the group if the visualization already produced should be published as a scientific paper and the code provided as annexe so that it is available to all. The group agreed that this could be done after the data-challenge is completed and more visualizations can potentially become part of such publication.

Finally, it was agreed that WG3 in 2016 should look for and organize a “test-case” in coordination with meteorologists to incorporate both animal movement and weather patterns in visualizations.

WG 3 requested Budget –29.500 Euro

- 1.5 day Workshop at UVA (Hackatone) - 16.000 (800*20 ppl);
- WG3 Meeting at UVA – 5.000 Eurs = (100Eurs/night * 2 nights * 8 ppl =1.600 Eurs) + (20 Eurs/Meal * 2 meal/day *2 days *8 ppl = 640 Eur) + Travelling;
- 2 STSM (for 2 people winner of visualization challenge) at UVA = 3.000 Eurs;
- 2 STSM (for 2 people) at INBO, Belgium = 2.000 Eurs;
- 1.500 For publishing at end of hackatone (PLOS); other media;

WG 4 meeting

Participants: Ommo Hüppop (Chair, Germany), Don Reynolds (Vice-Chair, UK), Silke Bauer (Switzerland), Jonathan Carruthers-Jones (Spain), Michał Ciach (Poland), Giacomo Dell’Omo (Italy), Antonio Román Muñoz Gallego (Spain), Nir Sapir (Israel), Michał Skakuj (Poland), Tibor Szép (Hungary)

Discussions focussed on the “Grand Challenges of Movement Ecology” paper, STSMs and on future work and objectives of WG 4.

Action points:

- Silke Bauer transferred the topic list resulting from the horizon to five main chapters for the “Grand Challenges of Movement Ecology” paper:
 1. General description of migration
 2. Environmental influences on migration
 3. Transport & trophic effects of migrants
 4. Prediction of migration (operational vs research)
 5. Human influences on migration, conservationA first draft shall be written throughout the winter to be discussed at the Israel meeting
- STSM “Large scale coincidence of migration on a species level based on ringing data (Baltic/North Sea)” at Wilhelmshaven (Germany)
- Meeting of WG4 in October 2015 in Germany (Hamburg) on these topics:
 1. Large scale coincidence of migration on a species level (output of STSM).

2. Application of radar in conservation and aviation.
 3. Use radar of radar in environmental assessment
- Paper on the results from the above STSM

13:00-14:30 Lunch

At 14:30 Dr Yossi Leshem presented an overview of the forthcoming MC and WGs combined meeting to be held in Israel in February 2015.

WG's presentations

From 14:35 to 15:40 each WG presented their plans for 2015 which were discussed between all present. List of presenters: Adrian Dokter (WG1); Dr. Felix Liechti (WG2); Mr. Hans van Gasteren (WG3); Dr Ommo Hüppop (WG4); see summary reports presented to the MC.

15:40-16:00 Coffee break

At 16:05 Dr. Jeff Kelly invited expert from the University of Oklahoma presented a plenary talk covering his work on radar aeroecology which provided very valuable insights into the radar research currently being carried out in the USA, and the implications for ENRAM.

At the end of this talk the group discussed funding options between US and Europe (NSF/NERC, US/Israel, Marshall Sherfield Fellowships, Marrie Currie EU grants).

At 17:25 JC thanks to all attendees, to the organizers, and especially to Dr Kelly for travelling from the USA and presenting such a stimulating seminar, and closes the day.

WG Minutes prepared by Jose Alves, and revised by Jason Chapman

Cost Action ES1305 (ENRAM) MC meeting
10.10.2014 – Casa de la Cultura, Tarifa, Spain

Welcome to participants, Adoption of agenda & Approval of minutes and matters arising of last meeting

The MC meeting started at 9:10 with Dr. Jason Chapman (Action Chair & Grant Holder Manager; JC) welcoming all participants. The agenda was approved by Dr. Judy Shamoun-Baranes and the minutes of the previous meeting were approved by Dr. Carlo Catoni.

Update from the Action Chair

JC provided an update of the action mentioning that the action is currently only 10 months into the funding, as the first 3 months (October-December 2013) were not funded. During this period the number of member countries went from 14 to 21 making our action rather large. Another two countries are about to join, Turkey and Austria, bringing the total to 23. Jonathan Carruthers-Jones has joined as the MC member for France, which was great news, as France had not had an MC representative for several months. JC welcomed all the new MC members and countries to our Action

Dr. Shamoun-Baranes noted that by having a larger number of member countries we need to make sure that 2/3 of those countries are represented in future MC meetings. JC suggested that MC members (or substitutes) commit to attending the meetings well in advance to allow time for requesting other members their presence when needed. JC asked those present to confirm their presence in the next MC meeting in Israel (see below), and it was possible to assure that enough members will be present.

JC noted that several countries have yet to appoint MC substitutes and this should be a priority to all countries that have so far failed to do so. This will provide more options for each country to be represented in future MC meetings.

Promotion of gender balance and of Early Stage Researchers (ESR)

JC mentioned that ENRAM is currently heavily male biased and that the action needs to maintain its efforts in attracting female participants during its events. WG 3's workshop (see WG 3 report below) will try to promote female participation by favouring teams with female members as a criteria for selecting teams which tied in all other aspects of their application.

Update from the Grant Holder

JC presented the budget for the 2nd year of the action. New rules were suggested and approved: (i) cap for flights of 500 Euros for attending meetings; (ii) members are required to committing to a meeting well in advance and before a given deadline. After this deadline members can attend the meeting but will not be eligible to claim expenses.

Total budget for the action's 2nd year is likely to be 145,000 EUR, with 120,000 EUR dedicated to science. [**Note: this was reduced to 134,000 EUR at a later date**]. Each WG will have ca. 22,000 EUR to budget their activities during the next 2-3 weeks and should favour STSM's (only 4 have happened in year one, with one more planned until the end of year) and workshops in order to achieve their aims (22 STSM projected for 2nd year – see below under WG's reports).

Dr. Silke Bauer suggested STSM's could have an application period e.g. November-February, but it was decided to keep applications continuously open. Mr. Peter Desmet highlighted that all STSM's should be communicated in the action's website (www.enram.eu) to which Dr. Shamoun-Baranes indicated that these currently are announced under "Activities" but that these will be moved to a new heading referring only to "STSM". It was also suggested that institutions hosting STSMs could be mapped in the website and Dr. Shamoun-Baranes will check if this is feasible.

Update from the COST Office & from the DC Rapporteur

Neither the COST officer nor the DC Rapporteur were present in this meeting so there was no update from them.

Annual Progress Conference (APC)

JC presented an overview of the APC held last May in Dubrovnik, Croatia where 25 action chairs gave presentations of all on-going actions. ENRAM had a positive report from the DC rapporteur (Dr. Teresa Abrantes). Overall the action report and presentation were well received but points were raised regarding gender balance and low number STSM's for year 1. It was agreed that both issues need to be tackled.

The date for the next APC is not yet agreed but JC noted that WG's leaders need to start preparing the annual report to be presented then and JC will request via email that this action is taken.

JC noted that COST officials view inactivity as extremely negative and the action should therefore have several aims in order to make sure it avoids that status. Particularly ENRAM should aim not to have an underspent in budget, and strive to go beyond the minimums of 15-20 STSMs and 1 specific WG meeting per year. Dr Shamoun-Baranes reinforced the idea that we

need to capture all outputs of the action and should indicate those to JC thus making sure all outputs are included in action's the annual report. For instances, all papers on animal movement involving the action's theme resulting from on-going collaborations of action members from 2 ENRAM countries need only to acknowledge ENRAM/COST to be considered an action output.

Follow-up of MoU objectives (Progress report of working groups)

Dr. Hidde Leijnse formalized his request to step down as WG 1 leader but proposed Dr. Adrian Dokter to take this role which was accepted unanimously by all MC members present. Dr. Leijnse also mentioned that despite this change, WG 1 is well on track to get the bird-detection algorithm implemented in the OPERA network (due to happen in early 2015) and that an insect-detection algorithm will be developed throughout 2015. Both Dr. Leijnse and Dr. Dokter will be responsible for WG 1's section of the forthcoming annual report.

WG reports

WG1: Adriaan Dokter

The following action points for 2015 were identified:

Action point 1: Get insects from bird profiling algorithm as it is (Adriaan). Implement these retrievals for Chenies and Helsinki radars (Adriaan, Hidde), evaluate in Feb already if possible (Viviana).

Action point 2: Continue to work on refactoring the bird algorithm and implementing it in the Baltrad toolbox (Adriaan, Jurriaan). Basic baltrad functionality expected to be available end of April 2015

Action point 3: Validate insect prototype results by expert judgement (Matti)

Action point 4: Look into the anomaly detection and removal algorithm of FMI. Has insect/bird detection implemented as a single class bioscatter. Jarmo will have a look in how useful these methods are for ENRAM.

Action point 5a: Seppo Pulkkinen & Jarmo & Matti: investigate possible designs of a physics-based profiling insect algorithm

Action point 5b: study Rennie paper on automated insect detection (Jarmo/Matti)

WG1&2 joint meeting to be planned in autumn (October, in NL):

- European wide testing of Baltrad toolbox
- Evaluation insect prototype

International expert to be invited for this meeting:

- Susan Rennie

WG2: Felix Liechti

The following action points for 2015 were identified:

- Radar data from first field calibration campaign (held at several sites during summer / autumn 2014) to be analysed by all participants to a general format, and initial results presented at the next meeting (Israel, Feb 2015).
- Plan and organise the next field calibration campaign, with a focus on fewer sites with greater instrumentation, to be carried out in summer / autumn 2015
- Encourage STSMs in this area
- Publish the results of the field calibration campaigns

WG1&2 joint meeting to be planned in autumn (October, in NL):

- European wide testing of Baltrad toolbox
- Evaluation insect prototype

WG3: Hans van Gasteren

The following action points for 2015 were identified:

- Organise a 1.5 day Workshop at UVA (Hackathon) to design software for migration data visualization
- Hold WG3 Meeting at UVA to select winner of Hackathon and discuss ways of implementing winning software
- 2 STSM (for 2 people winner of visualization challenge) at UVA
- 2 STSM (for 2 people) at INBO, Belgium
- Publish peer-reviewed paper

WG4: Ommo Hüppop

The following action points for 2015 were identified:

- Silke Bauer transferred the topic list resulting from the horizon to five main chapters for the “Grand Challenges of Movement Ecology” paper:
 1. General description of migration
 2. Environmental influences on migration
 3. Transport & trophic effects of migrants
 4. Prediction of migration (operational vs research)
 5. Human influences on migration, conservation

A first draft shall be written throughout the winter to be discussed at the Israel meeting
- STSM “Large scale coincidence of migration on a species level based on ringing data (Baltic/North Sea)” at Wilhelmshaven (Germany)
- Meeting of WG4 in October 2015 in Germany (Hamburg) on these topics:
 1. Large scale coincidence of migration on a species level (output of STSM).

2. Application of radar in conservation and aviation.
 3. Use radar of radar in environmental assessment
- Paper on the results from the above STSM

Scientific planning

a. Scientific strategy

JC noted that several activities are already planned for each WG (see WG reports above) but that all need to keep in mind that people actually have to commit their time so that the proposed activities are executed and completed.

b. Action Budget Planning

Each WG leader needs to present their budget in the next 2-3 weeks to be included in the action's annual budget.

c. Long-term planning (including anticipated locations and dates of future activities)

It was decided that ENRAM will from the 2nd year onwards have one large meeting per year (MC and WG combined meetings) and that each WGs should organize a second meeting each year where this is appropriate. WG1 and WG2 will hold a joint meeting in autumn 2015. WG3 plans to meet in Amsterdam in March/April 2015 and WG4 will likely meet in Hamburg (pending confirmation) in September/October 2015. JC noted that WG dates and locations of meetings need to be confirmed by early November 2014 to be included in the action's annual plan.

Mr. Jarmo Koistinen noted that MC members and others can be involved in more than one WG and can attend several WGs meetings. In those cases WG leaders must point this to JC so that official invitations are sent out to those interested. JC added that there is likely to be a limit in the number of people that can attend the meetings budget wise but that all are welcome to attend if self-funded.

JC indicated that a training school and conference/symposium need to be planned as indicated on the action's objectives in 2016. Dr Shamoun-Baranes mentioned that Uni. of Amsterdam (UVA) plans to host a summer school in July 2015 and suggested that ENRAM could be involved by co-organizing it and having dedicated course work (e.g. specific module) covering radar work. Dr Leijnse and Mr Koistinen were supportive of this idea which was voted unanimously by all present. ENRAM will thus co-organize and support the training school in UVA 2015. Mr. Matti Leskinen mentioned that he is involved in organizing summer courses in Finland and that this could also become an ENRAM training school in 2016.

Mr. Jarmo Koistinen stated that an ENRAM symposium could be organized as an independent event but Dr Shamoun-Baranes suggested that such symposium should be linked to a meeting, e.g. Malta in 2016 which was agreed as the best option.

d. Dissemination planning (Publications and outreach activities)

Dr José Alves and Dr Shamoun-Baranes will propose a symposium on radar aeroecology/avian movement to be integrated in the official programme of the forthcoming European Ornithologist's Union Conference, to be held in Badajoz (Spain) in August 2015. ENRAM will support the talk to be presented by Dr Alves whom together with Dr Shamoun-Baranes will convey the symposium.

It was suggested that the action communicates with Bird Strike organizations and Mr Hans van Gasteren will be presenting ENRAM at the Bird/Wildlife Strike Prevention Conference held in Mexico City, Mexico from 20th to 24th October 2014. Dr Michal Ciach mentioned that the European Bird Strike Group is about to be (re-)setup and he will make the bridge with ENRAM

Dr Natalino Fenech has drafted an action flyer which will be presented and distributed soon.

Requests for new members

This is a large action already and given potential issues with attendance of MC meetings it was decided not to encourage active submission of new members, unless they commit with attendance to all MC meetings.

Non-COST applications to the Actions

During the first year of the action we had 4 international experts visiting the action and JC asked for names to be invited during the action's 2nd year. It was agreed that Prof Gil Bohrer and Dr David La Puma (both from the USA) should be invited to the Israel meeting (see below), and Dr Andrew Farnsworth (also from the USA) should be invited to the WG3 workshop in Amsterdam, and they will be formally invited by JC.

Dr. Leijnse asked if meetings could be hosted by non-ENRAM countries, e.g. Ireland and this is not the case.

AOB

Sevgi Gurbuz mentioned that the European Conference on Radar in Meteorology and Hydrology (ERAD) will take place in October 2016 in Turkey and this would be a good venue in which to disseminate ENRAM. Sevgi will provide further information to JC.

Dr Shamoun-Baranes mentioned that several sources of funding are currently available for interdisciplinary research and this could be an option to fund Phd's or Post-doc's in the interface between meteorologists and ecologists, for instances to work with scientists in WG1 and WG2.

Location and date of next meetings

Besides the WG's own meetings (see above) the annual action meetings (MC+WG) are planned as follows:

24-25 February 2015- Israel, hosted by Dr Yossi Leshem (MC members/substituted need to commit by end of October 2014).

22-23 March 2016 – Malta, hosted by Dr Natalino Fenech

Summary of MC decisions & Closing

At 11:25 JC made a summary of decisions and closed the meeting thanking all attendees and particularly to the local organizer Dr. Gonzalo Arroyo

MC Minutes prepared by Jose Alves, and revised by Jason Chapman