



EUMETNET
EUROPEAN METEOROLOGICAL SERVICES NETWORK

News on the SRNWP-EPS Project

Bartolomé Orfila

36th EWGLAM meeting and

21st SRNWP meeting

Offenbach 29 September-2 October 2014

1. ETEPS presentation in Helsinki
2. AEMET answer to the project proposal
3. Progress in 2013
 - 3.1. Workshop PHY-EPS
 - 3.2. Meeting of representatives
4. Revision of Actions and Deliveries
5. Project Proposal for Phase II
6. STAC and PFAC Views

SRNWP-EPS - Phase 1

- Aim of the project (Phase 1): to provide a feasibility study, which may include a Project proposal where the Phase II for cooperation in Europe in the fields of LAM-EPS is presented
- **18-month project (1 January 2013 – 30 June 2014)**
- Deliverable (June 2014): Phase II project proposal for the EUMETNET Advisory Committees, where a strategy for future cooperation is designed



ftp address where the deliverables (seven) can be found

<ftp://ftp.aemet.es>

user: srnwpeps

passwd:f86hTr

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What should be the content of the Project for the EUMETNET SRNWP-EPS Phase II?

Document for STAC and PFAC Committees in March 2013

Context for requirements

Requirements

Benefits for the members

Concluding Section

Annexes

- 1. ETEPS presentation in Helsinki**
- 2. AEMET answer to the project proposal**
- 3. Progress in 2013**
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- 4. Revision of Actions and Deliveries**
- 5. Project Proposal for Phase II**
- 6. STAC and PFAC Views**

Advices from the STAC/PFAC Committees (April 2014)

The STAC & PFAC members most interested in this project noted the interim report and agreed that this work is heading in roughly the right direction, however the following advice should be taken on board when preparing the final proposal:

- 1.** The team should identify ways to make the proposal as efficient as possible (i.e. lower cost).
- 2.** The 4 work packages in the proposal should be better integrated.
- 3.** There should be an explanation of how the modelling consortia will benefit from the programme if approved.
- 4.** That ECMWF should be consulted to ensure there is no duplication with its plans.

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Advices from the STAC/PFAC Committees (Cont.)

5. The next EPS ET meeting should be used as an opportunity to clarify with ET Members:
 - a. That the proposal is meeting their needs
 - b. That they would be interested in participating in such an optional programme if approved.
 - c. That they are comfortable with the anticipated costs.
6. The ET Members should come to the meeting prepared to address these questions".

Reactions to the Advices

- Meeting in Bologna, early June 2014
- New draft of Deliverable D7 (quasi-definitive)
- End of Phase I
- Concerns of the Secretariat
 - View of the Consortia
 - On verification
 - On common aeronautical use of CP ensemble
- Complementary notes for the STAC and PFAC Committee meetings

EUMETNET SRNWP EPS Activity:

Requirements for the Second Phase

1. Abstract
2. Aim of the Activity
3. History, status and expectations
4. Context for requirements
 - 4.1 Development of products
 - 4.2 Research task
5. Requirements
6. Benefits
7. Duration
8. Budget
9. Resources
10. Essential Requirements
11. Method Statements

2.- Abstract and Aim of the Activity

The present document specifies for the years to come the requirements to complete the second phase of the **EUMETNET cooperation in the field of CP LAM-EPS**

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11. Method Statements

3. - History of the project, current status and what it is expected to be achieved in the second phase of the Project

The project follows the same scheme of the Phase I Project requirements.

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9. Resources
10. Essential Requirements
11. Method Statements

4.- Context for requirements

-Possibility to obtain the greatest benefit by a European cooperation.

-Possibility to identify a few tasks which can be accomplished within a limited amount of time and with a dedicated amount of resources, leading to clear and tangible outcomes

-Coexistence of both operational and (focussed) research activities, in order to satisfy the different needs of the NMSs.

1. Abstract
2. Aim of the Activity
3. History, status and expectations
4. Context for requirements
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 - 4.2 Research task
5. Requirements
6. Benefits
7. Duration
8. Budget
9. Resources
10. Essential Requirements
11. Method Statements

4.- Context for requirements (II)

The Activity is organised as two complementary tasks:

- An application task, where new products and methodologies for calibration of LAM ensembles for extremes and for probabilistic prediction of thunderstorms are developed

- A research task, where the sensitivity and complementarity of the models to soil conditions and PBL are studied on the basis of the forecast of selected phenomena (identified in the application task), on different areas with different LAM ensemble systems.

The complementarity of the two tasks resides in the fact that the research work is taking the probabilistic forecast of selected weather phenomena as test-bed,

1. Abstract
2. Aim of the Activity
3. History, status and expectations
4. Context for requirements
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5. Requirements
6. Benefits
7. Duration
8. Budget
9. Resources
10. Essential Requirements
11. Method Statements

4.1. Context for the application task “development of methodologies for products”

The application tasks is related to the topic “use and interpretation of probabilistic products”.

It refers to how is our ability to really improve ensemble and how to really make use of the extra information that the "new" ensembles are providing

1. Abstract
2. Aim of the Activity
3. History, status and expectations
4. Context for requirements
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5. Requirements
6. Benefits
7. Duration
8. Budget
9. Resources
10. Essential Requirements
11. Method Statements

4.2 Context for the a research task “sensitivity and complementarity of the models to soil conditions and PBL on selected phenomena”

The research task included is related to the topics:

“Modelling and data assimilation of ground surface properties” and

“How could EPS contribute to help understand model sensitivities

1. Abstract
2. Aim of the Activity
3. History, status and expectations
4. Context for requirements
 - 4.1 Development of products
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- 5. Requirements**
6. Benefits
7. Duration
8. Budget
9. Resources
10. Essential Requirements
11. Method Statements

5. Requirements: For the “Application task”:

Develop new products and methodologies for calibration of LAM ensembles for extremes and probabilistic prediction of thunderstorms and fog:

- (pre-requisite) inventory of existing methods and SW already developed by the members (and literature review) (1 person working for 3 months, funded);
- define and develop new products and methodologies for computation/elaboration (1 person working for 2 years, funded);
- calibration of ensembles, mainly for extremes (wind, precipitation, temperature, ...);
- products for probabilistic prediction of thunderstorms (clear benefit, link with research, link with EMMA),
for

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2. Aim of the Activity
3. History, status and expectations
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 - 4.1 Development of products
 - 4.2 Research task
- 5. Requirements**
6. Benefits
7. Duration
8. Budget
9. Resources
10. Essential Requirements
11. Method Statements

5. Requirements: For the “Research Task”

- cooperate on understanding the sensitivity and complementarity of the models to soil conditions and PBL on selected phenomena (identified in the application task) on different areas with different LAM ensemble systems;
- investigate the sensitivity of the models to the soil moisture content;
- investigate the impact of soil moisture assimilation on forecast;
- investigate the ratio of sensitivity to different sources of surface and upper air uncertainty at the CP scale:
 - IC (soil moisture and temperature);
 - model (turbulence and surface);
 - physiographic data,

5. Requirements: For the “Research Task” (II)

- use as diagnostics the products identified in the application task (thunderstorm, fog, T extreme...):
 - select similar cases (same phenomenon) in different areas and use those for diagnostics;
- in kind work by NMSs (0.3 FTE per NMS in kind, around 3-5 FTE in total) + computing resources by an ECMWF Special Project (20 M SBU) + money for travelling for the persons working in kind on the project (equivalent to 1 travel per year per country).

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3. History, status and expectations
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5. Requirements
6. Benefits
- 7. Duration**
8. Budget
9. Resources
10. Essential Requirements
11. Method Statements

7. Duration

The project will run for 30 months: from 1 July 2015 till the 31 of December 2017

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8. Budget

Budget of the EPS Project (Phase II) 2,5 years				
Year	2015	2016	2017	TOTAL
Management				
Salary of the Manager, 0,2 FTE (six months) plus travel costs)	10	20	20	50k€
Application task				
One scientist working in the task 0,8 FTE (24 months), including travel cost	40	80	80	200k€
Research task				
In kind contributions from participating NMSs 0.3 FTE/year for a total of around 3-5 FTEs	-	-	-	
Travel cost	7.5	15	15	37,5k€
Meeting organization	5	10	10	25K€
TOTAL	62.5	125	125	312.5k€

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6. Benefits
7. Duration
8. Budget
9. Resources
- 10. Essential Requirements**
11. Method Statements

10. Essential Requirements

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WP1.1	Develop new products and methodologies for calibration of LAM ensembles for extremes and probabilistic prediction of thunderstorms and fog: inventory of existing methods and SW already developed by the members (and literature review)
WP1.2	Define and develop new products and methodologies for computation/elaboration <ul style="list-style-type: none"> •calibration of ensembles, mainly for extremes (wind, precipitation, temperature, ...); •products for probabilistic prediction of thunderstorms (clear benefit, link with research, link with EMMA), fog
WP2.1	The research task includes: <ul style="list-style-type: none"> •cooperating on understanding the sensitivity and complementarity of the models to soil conditions and PBL on selected phenomena (identified in the application task) on different areas with different LAM ensemble systems; •investigating the sensitivity of the models to the soil moisture content; •investigating the impact of soil moisture assimilation on forecast.
WP2,2	The research task includes: <ul style="list-style-type: none"> •investigating the ratio of sensitivity to different sources of surface and upper air uncertainty at the CP scale like: <ul style="list-style-type: none"> –IC (soil moisture and temperature), –model (turbulence and surface), –Physiographic data. <p>using as diagnostics the products identified in the application task (thunderstorm, fog, T extreme...) by selecting similar cases (same phenomenon) in different areas and use those for diagnostics.</p>
WP3.1	Internal coordination between the Application and Research tasks.
WP3.2	Coordination with (external) partners (ECMWF, EWGLAM, Nowcasting,) and identification of possible follow up activities

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11. Method Statements

MS1	How to ensure proper communication and exchange of information among participants (e.g. define how many face to face or webex meetings are needed and how available expertise can be applied).
MS2	How to ensure proper links between application and research tasks.
MS3	How to ensure consistency between work packages and national plans (specify how the contacts with management bodies of the Members are established).
MS4	How to maintain communication with ECMWF for an optimal coordination mainly with regards to the issue of boundary condition provision for LAM-EPS and availability of computing capacity. Use of TIGGE-LAM data
MS5	How to ensure feasibility of the work packages activities in terms of the burden of the technological infrastructure , e.g. requirements for data transfer.
MS6	How to connect relevant bodies at member services for an exchange of experience with users of probabilistic forecast.

THANKS YOU FOR YOUR ATTENTION