



The SRNWP-EPS Project

Expert Team on Predictability and EPS

SRNWP-EPS

**SRNWP cooperation on Limited-area Ensemble
Prediction systems:
preparatory phase on the time scale 2013-2015**

Part of the Forecasting Programme

The project proposal has been approved by the
EUMETNET Assembly (May 2012)

Motivation

- Enhancement of cooperation on LAM-EPS was recognized as a high priority goal by EUMETNET members. A 2-phase approach to tackle this task was outlined in the Forecasting Roadmap
- Phase 1: preparatory phase. Make a feasibility study to formulate how capabilities for convection-permitting ensembles can be strengthened through cooperation between the European countries
- The preparatory phase is needed due to
 - the **broad ranges of priorities for Members** and
 - the **relatively new scientific and technical issues** to handle

define the ground for cooperation to address scientific and technical issues, optimising the use of resources

Why a dedicated project

- A preparatory work is needed to define the aim and the scope of the cooperation in this field, to ensure broad benefit. An agreement on the ground for cooperation should be established.
- To reach this aim, the coordination within SRNWP ET-EPS is not enough:
 - more dedicated meetings should be organised
 - status and plans of the participants should be collected
 - review documents should be prepared

not only Expert Team!

Why a dedicated project

- The actual project proposal (Phase II) will be determined by the needs of the NMs participating to the Phase I
 - > all relevant interests should be represented
- A good definition of scientific and technical issues to be tackled rely on the expertises involved
 - > a broad range of expertises is needed!

expertise will depend on the participation to the project!

SRNWP-EPS - Phase 1

The phase 1 focuses on:

- **Review the status** of ensemble developments in the NMSs in Europe
- Prepare an **analysis/overview of the plans** in the NMSs in Europe and identify common issues
- **Make a proposal for a research plan** aiming to develop the next generation ensemble system
- Identify major **technical open issues**
- **Prepare a shared and long-term SRNWP-EPS project proposal from 2014 onwards**

enable joint planning to use resources for challenging problems

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



Essential requirements	WP1	assessment of priorities from Members and user needs
	WP1.1	provide a comprehensive (scientific and technical) overview of presently accessible ensemble systems and know-how, with special focus on the convection-permitting ensembles
	WP1.2	perform an analysis of the ongoing activities and plans for operational ensembles at 10-20 km grid mesh, including ECMWF
	WP1.3	review the plans of all the involved NMSs in the field of ensemble forecasting, identifying common needs and areas where improvements can be achieved by cooperation/collaboration, also considering user needs
	WP2	Identification of the major research issues that needs to be addressed in Phase II
	WP3	Strategic planning of the actions which may be shared among participants, which may increase the possibilities of success towards the development of LAM-EPS capability in the participating NMSs
	WP3.1	perform an analysis of the technological infrastructure needed for systems development, i.e. evaluate the data transfer needed for receiving boundary conditions, evaluate the timeliness of the different possible solutions, evaluate the required computer power to run the systems; identify possible cooperation
	WP3.2	define the common requirements towards third partners (ECMWF, EUMETNET)
	WP3.3	assess the financial and resource needs
	WP4	Preparation of the LAM-EPS project requirements for the second half of the new EUMETNET phase (2015-2017)

SRNWP-EPS resources

- The Coordinating Member provides a 0.2 FTE employee for the management of the project.
- The proposed budget for the coordination is 25K€/year, which covers the salary of the Project Manager and the related travel costs.
- Then, 10 K€/year are also required for meeting organization.
- The full budget is 35 K€/year

Budget of the EPS project (K€/year)	
Salary (including travel cost):	25
Meeting organisation:	10
Total:	35

SRNWP-EPS resources

- The participating Members should provide in-kind contributions by attending meetings and by technical work (e.g. by providing the information needed to compile the reviews)
- Main expected actors:
 - Expert Team on Predictability and EPS + other EPS experts
 - Collaboration by the Expert Teams on system aspects, data assimilation, link with applications will be also required
 - Links with management where appropriate
- More needed?

the more NMs are involved the less budget contribution is needed

Project “facilitators”

- LAM-EPS meeting
- TIGGE-LAM archive
- LAM-EPS BC experiment

TIGGE LAM data base LAM-EPS contribution to the TIGGE archives

- **Sub-set of HP parameters defined for verification/research/end users (i.e. hydrological applications)**
- **GRIB2 coding should be adopted following TIGGE directives (GRIB2 specifics defined)**
- **Same policy adopted by TIGGE for data access, 48 hours delay**
- **Archiving of European Systems is starting at ECMWF thanks to the GEOWOW Project; TIGGE LAM archiving is a Task of GEOWOW**



3 years Projects: September
2011-August 2014

Coordinated by ESA

- **GEOWOW (GEOSS interoperability for Weather, Ocean and Water) is an EU-funded FP7 project that will begin in September 2011.**
- **GEOWOW will propose and validate a multi-disciplinary, distributed architectural model federating Earth Observation and other Earth Science data holdings and put this model forward as the European contribution to the Global Earth Observation System of Systems (GEOSS) Common**

GEOWOW

- **The GEO Capacity Building Strategy focuses on three elements: human, institutional and infrastructure.**
- **The Weather component of the GEOWOW project will address all three by improving the access to THORPEX Interactive Grand Global Ensemble (TIGGE) data and developing and demonstrating products using this data in collaboration with users in developing countries, including providing education and training.**
- **GEOWOW will significantly enhance the accessibility of the TIGGE archive at ECMWF for the wider user community, in particular the ability to efficiently access long time series of forecast data at user-specified locations.**

For Weather:

ECMWF

Met Office

Meteo France

Karlsruhe Institute of
Technology

TIGGE LAM archiving LAM-EPS contribution to the TIGGE archives

- After the agreement with the LAM-EPS providers, products will be archived on their original grid (full resolution)
- ECMWF will provide a full integration of these products in the TIGGE archive; all the SW necessary to manage and retrieve products will be also developed.
- The person responsible for the implementation of the archive, Richard Mladeck, is already working at ECMWF
- Tetsuo Nakasawa, head of WWRP, from WMO already contacted the different countries/data providers with a letter (sent to the PR) signed by M. Jarraud – WMO Secretary General

LAM-EPS BC

- Experiments carried on at ECMWF: EPS run at higher resolution
- BC archived on a sub-domain for nesting
- two 2-week test periods, to be agreed between the countries involved (coordinated through ET-EPS)

Concluding remarks

- evaluation of bidding proposals has been completed
- the STAC/PFAC has recommend to the Assembly that the project proceeds
- actual project start is subject to Members committing to participate
- decision at the November Assembly

ensure (human and financial) resources to the project