

SPECIAL PROJECT INTERIM REPORT

Interim Reports should be 2 to 10 pages in length, depending on importance of the project. All the following mandatory information needs to be provided.

Reporting year 2006

Project Title: Local Multimodel Prediction System (LaMPS)

Computer Project Account: SPITLOMS

Principal Investigator(s): Piero A. Chessa

Affiliation: Servizio Agro-Meteorologico per la Sardegna (SAR)

Name of ECMWF scientist(s) collaborating to the project
(if applicable)

Start date of the project: March 2006

Expected end date: 2008

Computer resources allocated/used for the current year and the previous one
(if applicable)

Please answer for all project resources

		Previous year		Current year	
		Allocated	Used	Allocated	Used
High Performance Computing Facility	(units)	None		100.000	None
Data storage capacity	(Gbytes)	None		250 GByte	A few tenth of Megabyte

Summary of project objectives

The main task of the project is to provide a calibrated probabilistic forecasts at high and very high spatial resolutions. In the initial phase the LaMPS project will draw from the experience gained by some of the participants with the MuSE activity which is an internal SAR and CRS4 project aimed at implementing operationally a multimodel/multianalysis limited area ensemble (MuSE). MuSE is presently per-operational and it is based on three Limited Area Models (BoLAM of the ISAC/CNR - Italy, MM5 of the Pennsylvania State University and RAMS of the Colorado State University) and three different IC/BC provider by ECMWF and NCEP GCMs.

In this special project MuSE will be enlarged allowing for more regional models (HRM run by the Italian Metoffice) and BC/ICs (UGM 3D-var analysis). The models will be implemented and run at ECMWF and different model configurations will be explored in order to test different ensemble setups. The main effort will be devoted to calibrate the probabilistic forecasts and compare them to those obtained by similar systems already in place.

Summary of problems encountered (if any)

Since the project has started little more than two months ago the investigator are still facing problems related to the installation of the different meteorological models into the ECWMF computer facilities.

Summary of results of the current year (from July of previous year to June of current year)

Not Applicable due to the late start of the project

List of publications/reports from the project with complete references

Not Applicable due to the late start of the project

Summary of plans for the continuation of the project

As soon as the models RAMS, MM5 and BOLAM are set up for the ECMWF environment they will be run (together with HRM) for a five year period (2002 to 2006) using two of ECMWF multimodel analysis and forecasts (EC and Washington). The first four years will be used to train the ensemble while the last year will serve a a test period to evaluate the ensemble calibration. Although the geographical area where the system will be trained and tested is Italy the integration area will encompass most of Europe. The daily runs will have a 72h forecast range with a time step of 6 or 3 hours. It is hoped that the calibration techniques going to applied will benefit from a long training period (4 years) especially for variable like precipitation