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Comparison of the wind speed forecast from global and limited area ensemble prediction systems

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The characteristics of ECWMF wind forecast ensembles have been identified at stations near the coasts of Finland and the methods for calibration of wind forecasts have been developed. In this study the evaluation has been expanded to a group of limited area EPS system and the characteristics will be compared to the forecasts of global systems (ECMWC EPS, UK GLOBAL MOGREPS).

The ensemble data for this comparison was provided by the PREVIEW-Windstorms project and the data consist of ensembles from Meteo-France PEACE, COSMO-LEPS, UK MOGREPS (Global and local), SRNWP PEPS, ECMWF EPS and met.no LAMEPS. The period of data is 1.10.2006 to 28.2.2007. The data is available for stations in Finland and the focus at the moment is on stations representing condition outside coasts of Baltic Sea. The stations (02967 and 02910) are not far from coast.

The preliminary results indicate that basic error characteristics differ very much from model to model. Probably one of the reasons for this is the different model resolution. Another general remark is that the ensemble spread seems to be too small indicating over confidence. This has been a typical feature for most ensemble prediction systems. However, one ensemble system seems to have too large wind speed ensemble spread.

The detailed results of the comparison will be presented.