EMS Annual Meeting Abstracts
Vol. 10, EMS2013-148, 2013
13th EMS / 11th ECAM

Intercomparison of spatial forecast verification methods: a review and new project launch

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Convection-permitting and near-convection-resolving numerical weather prediction (NWP) models provide much improved short-range forecasts of potential high-impact weather. Unfortunately increased small-scale variability often means that the detail seen in these forecasts is not always accurate in terms of timing or location, and traditional verification methods penalise this behaviour. The verification community responded by developing many new spatial verification methods to provide a more realistic assessment of these forecasts. By 2007 a bewildering number of these methods had been published. An intercomparison project was launched to compare the characteristics of these new verification methods in an attempt to categorise them, and provide potential users with a clearer understanding of what each method was capable of, and what information it provides. To assist the assessment both fake and real cases were included. The real cases focused on convection over the central United States at the 4 km grid resolution. The results from the intercomparison project were documented in a special issue of Weather and Forecasting, which consisted of 16 papers. Since then at least another 20 papers have been added to, or draw on the publications from the ICP.

There was always the desire to have a follow-on intercomparison project focusing on other data sets from other parts of the world, particularly considering more complex terrain, and parameters other than precipitation. Ensemble forecasts have been the NWP response to improving the predictability at the km-scale, so that any follow-on would naturally also have to include ensembles. This presentation aims to review what was achieved in the first project and launch the follow-on project, outlining the aims, data sets, and timelines, with an invitation for interested parties to participate.