



Verification of worded areal forecast of temperature extremes using a high resolution mesoscale analysis field

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The present work tackles the messy problem of verifying worded forecasts issued over an area. The difficulties lie in unambiguously and consistently translating forecasts in quantitative and verifiable statements, and in choosing the non-obvious observational "truth" to verify against. Main justification of this effort is the numerous user community of worded forecasts, often the most consulted and less verified forecast product of many weather services.

Temperature has been chosen as first parameter to verify mainly because an analysis method was available with known error, but also because it is the easiest to quantify and its spatial distribution tends to be regular even in complex terrain.

Through discussions with forecasting staff carried out before and during first data analysis, unambiguous and objective criteria to translate forecasts have been formulated; these are necessary for verification but have been found to be useful also for expressing homogeneous and objective analysis and forecasts.

The quantified forecasts have been verified against the areal temperature distribution obtained from the analysis field, which in turn has been checked against the distribution of pointwise observation in the same area. Forecasts have good skill over persistence in estimating the mean of the spatial temperature distribution, but lower skill on the spread.

The verification and discussion of results prompted the development of new objective analysis tools in support of forecasting activity.