EMS Annual Meeting Abstracts
Vol. 12, EMS2015-274, 2015
15th EMS / 12th ECAM

Seasonal forecasting at the Bulgarian weather service: quantifying and communicating uncertainty

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Seasonal forecasting for wide public use was first introduced at the Bulgarian weather service in 2005 in experimental mode. It has since become an operational product issued monthly on a regular basis. There are a couple of statistical methods used for the production of the national seasonal forecast. Nevertheless it remains essentially a subjective evaluation of the long-term forecast map products of some of the global production centers within the framework of centers under the umbrella of the WMO. Long-term forecasting is probabilistic by nature. Quantifying and communicating the uncertainty associated with seasonal forecasting is vital. The Bulgarian national seasonal forecast is quantified by means of a national index for both mean seasonal temperature and seasonal amount of precipitation raging from -2 (very cold/dry everywhere) to +2 (very warm/wet everywhere). The use of a national index is justified by means of analysis of long-term data for temperature and precipitation as well as other conceptual arguments of predictability. The skill of the forecast is measured by means of departure of the realized national index from the forecast which gives scores raging from 0 (misleading) to 4 (excellent). The evolution of the scores of the national seasonal forecast shows variable skill depending partially on the performance of the global models. The assessment is based on an 8-year long record of the subjective evaluation of the map products of some of the global production centers.