



Verification Analysis of World Climate Service Forecasts

The World Climate Service has published verification statistics for its seasonal anomaly forecasts for North America and Europe showing overall skill for North America and Europe for the period September 2008 to December 2009. More than 68 per cent of the forecasts for temperature were correct in North America and 62 percent correct in Europe.

The economic value of the forecasts is demonstrated by computing the returns that would have been achieved over the verification period by trading a hypothetical weather derivative under idealized market conditions. The return on investment would have been about 20 percent for all WCS forecasts, with a return for temperature forecasts of 36 percent in North America and 24 percent in Europe, as shown in the accompanying table.

Virtual Return for WCS Forecasts (percent)

	North America	Europe
Temperature Forecasts	36	24
Precipitation Forecasts	8	4
All Forecasts	24	16

The anomaly forecasts produced during the same period by the seasonal forecast models of the European Centre for Medium-Range Weather Forecasts (ECMWF) and the Climate Forecast System (CFS) of the U.S. National Weather Service demonstrate less overall skill by this measure.

Anomaly correlations between these seasonal model predictions and subsequent observations show that meaningful information is obtained over the oceans, especially in the tropics. The overall skill for extra-tropical land masses is small, but the study shows the models are somewhat more skillful in predicting significant seasonal anomalies. The WCS forecasts, combining independent statistical information and expert experience and judgment with the model forecasts, are even more skillful for these significant events.

The World Climate Service is a joint venture of Prescient Weather Ltd and MeteoGroup. More information is available at <http://www.worldclimateservice.com>

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