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Improving ECMWF's monthly precipitation forecasts in France with an analog method

Marie Berthelot (1), Laurent Dubus (1), and Joël Gailhard (2)

(1) EDF R&D – MFEE, Applied Meteorology and Atmospheric Environnement, Chatou Cedex, France (marie.berthelot@edf.fr / +33-1-30-87-71-08), (2) EDF DTG, Grenoble, France

Forecasting water flows into the French hydro-power system reservoirs over periods ranging from a few hours to several months ahead is essential for operational planning purposes. For time scales between 1 and 10 days, EDF currently uses hydrological models forced by precipitation and temperature forecasts, the first ones being obtained from large scale geopotential forecasts used in an analog method. In 2004, the European Centre for Medium-Range Weather Forecasts has launched operational monthly forecasts, updated every Thursday for the following 32 days. If temperature forecasts show interesting skills up to week 3, the forecast quality for precipitation is unsatisfactory beyond week 1. EDF's analog method was therefore adapted to ECMWF's monthly forecasts. We present here the skills of this method in forecasting local precipitation over a selected number of watersheds in France, and compare the results of this indirect method with those obtained both with a climatological forecast and direct precipitation forecasts from ECMWF's model.