



## **Forecasting skills of deterministic and EPS hydro-meteorological forecasts in the European flood alert system**

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The development of the European Flood Alert System (EFAS) was initiated after the disastrous Oder (2001), Elbe and Danube (2002) flood events. The EFAS prototype is running pre-operationally for the whole Europe and is already providing 3-10 day hydrological EFAS forecasts for 13 hydrological national services (covering a good 25 % of the European area) that have signed a Memorandum of Understanding. EFAS features deterministic as well as probabilistic hydro-meteorological forecasts. Deterministic hydrological EFAS forecasts are based on DWD (7 day lead-time) and ECMWF (10 day lead-time) deterministic meteorological forecasts, while EFAS hydrological ensemble forecasts are based on the 51 meteorological member EPS forecasts (10 day lead-time) provided by ECMWF. The aim of EFAS is to provide early warnings with lead times of 3-10 days. With increasing lead-times, the forecast uncertainty increases as well. To reduce the false alarm rate of the EFAS medium-range forecasts, methods based on forecast persistency analysis are introduced. In this context the EFAS performance of 2005 is analyzed on a European scale and exemplified in a case study. A preliminary comparison of hydrological forecasting skills of the two different forecasting types (deterministic and EPS) is performed within the EFAS framework and their complementary aspects are highlighted.