



Using Ensemble precipitation forecasts to force hydrological models: results with the ECMWF-EPS and PEARP data

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The ISBA-MODCOU hydrometeorological model is composed of the Soil-Vegetation-Atmosphere-Transfer model ISBA and the distributed hydrological model MODCOU, at the scale of France. The use of meteorological ensemble prediction forecasts allow to take into account the uncertainty associated with meteorological predictions.

In this study, two sources of meteorological forecasts were used. The first is the ECMWF-EPS, which is designed for medium range weather forecasts, and the Meteo-France short term EPS, called PEARP, based on the ARPEGE meteorological model. The ARPEGE model has a stretched grid with an enhanced resolution over western Europe. ARPEGE is designed for short term purposes and is run on an EPS mode over 60 hours. APRPEGE PEARP has 11 members, while the ECMWF EPS has 51 members. ISBA-MODCOU was run using the two forecasts. The discharge simulated for the first two days were compared over a 500 days period.