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Low-flow forecasting in France: update on the latest developments of the PREMHYCE operational forecast platform

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Low-flow forecasting can help to improve water management at places where a number of uses can be affected by diminishing water supply from rivers. Several French institutes (INRAE, BRGM, EDF, Lorraine University and Météo-France) have been collaborating to set up an operational platform, called PREMHYCE, for low-flow forecasting at the national scale, in cooperation with operational services. PREMHYCE includes five hydrological models and low-flow forecasts can be issued up to 90 days ahead for more than 800 basins. Several input scenarios are considered: ECMWF 14-days ensemble forecasts, ensemble streamflow prediction (ESP) using historical climatic data, and a no precipitation scenario. Outputs from the different hydrological models are combined into a multi-model approach to improve robustness of the forecasts. The tool provides text files and graphical representation of forecasted low-flows, as well as key low-flow indicators, such as the probabilities of being under low-flow thresholds provided by operational services. The presentation will show the main characteristics of this operational forecast platform, its latest developments and the results on the recent low-flow periods.