How does the 6-hour lead time flood forecast issued by the M5 model tree for the Krka River really look like?

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The Krka River is one the main tributaries of the Sava River with a drainage area of approximately 2250 km2. Population areas in the Krka River basin are highly endangered by the possibility of extreme flooding, so knowledge about the river flow's behaviour at the time of extreme events like floods is of the highest importance. By using the M5 machine learning method for generation of regression and model tree models 1-, 2-, 3-, 4-, 5- and 6-hour lead time forecasting models (models which include and forecasting models which don't include up to 6 hours ahead precipitation forecasts) were developed for Podbocje gauging station which is located near the Krka River basin outlet. The data used in the process of model development was hourly flow data for the Podbocje gauging station and hourly rainfall data for two weather stations in the Krka River basin. The data included the period from 1999 to 2004. In the field of hydroinformatics the results of the hydrological modelling with the machine learning methods are usually presented separately (individually) for the models with different forecasting lead times (i.e. separately for 1-hour lead time forecasting model, separately for 3-hour lead time forecasting model, etc.), which is usually pretty inconvenient for the end users of the flood forecasting models. So the aim of our research was to evaluate flood forecasts in the form of 6-hour ahead flood forecast curves produced by the combined application of the 6 model tree models with 1-, 2-, 3-, 4-, 5- and 6-hour lead times at the same time. Analysis included both visual and numerical evaluation of the results obtained by the application of the forecasting models with and without the inclusion of the precipitation forecasts in the models' structure.