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Development of an operational forecast verification system

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Verification provides the answer to the question "How good is my forecast?". Knowing the quality of a forecasting system provides a necessary baseline for improvement of that quality. It also contributes to forecast informed decision making, as verification provides a baseline estimate of residual uncertainties.

To monitor the quality of the forecasts produced by Deltares Global Flow Forecasting system, a prototype of an operational forecast verification system was developed. The verification system comprises various components including the Ensemble Verification System (EVS), the Deltares OpenArchive and the Delft-FEWS forecast production system. Relevant verification metrics are computed by the EVS, which are subsequently stored and displayed in the forecasting system. This will allow for robust, automated forecast verification, and the usage of this information during the real-time forecasting process.

Future work on the system will include a post-processing routine which will cast the verification information in a format suitable for publication to both existing and prospective GLOFFIS clients. Over the years, the system's outcomes are expected to provide a significant contribution to the quality of the GLOFFIS forecasts.

In parallel, the system is being applied to various other operational hydrological forecasting systems around the globe.

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