



Improving the prediction of flash floods – New and user-oriented approaches under development at DWD

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The new seamless integrated forecasting system (SINFONY) of Deutscher Wetterdienst will provide seamless and probabilistic predictions for the convective scale from the time of observation out to a forecast range of up to 12 hours. During the initial development of SINFONY, focus is put on the prediction of severe summertime convective events with associated hazards such as heavy precipitation, hail and wind gusts.

In addition to the ongoing work on SINFONY, DWD has recently launched a complementary project for improving its forecast and warning process for the prediction of flash floods. Beside additional work on SINFONY, focus is put here on the interaction with users and the development of new forecast products and approaches to improve the prediction and warning process.

To this end, a new and continuous dialogue shall be established between developers and users to allow for an in-depth exchange about user requirements on the one, and opportunities and limitations in the generation and provision of forecasts and warnings on the other hand. This will help to better target the development of data and products for the prediction of flash floods, and support users in the implementation of those in their decision processes or models. In close collaboration with users from the hydrological community, new products will be developed that make use of the new probabilistic information provided by SINFONY, but are tailored to user needs for information and data. Furthermore, it will be explored how crowd-sourced weather information, gathered through an extended version of DWD's app, could make a beneficial contribution to the forecasting and warning process.

This poster will provide an overview on the ongoing and planned activities of the project, and shall serve as a basis for discussion and exchange about approaches and experiences.