



## **Modeling of pluvial flash floods in pre-Alpine regions - comparing different two-dimensional hydrodynamic modeling packages**

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Pluvial flash floods have received increasing attention from the media, general public and administrative authorities in different parts of Europe following events in recent years. These events are characterized by flooding from surface water runoff in response to short duration, high intensity precipitation events. In order to identify areas, that are potentially endangered by pluvial flash floods in case of heavy rainfall, increasingly coupled hydrologic and two-dimensional hydrodynamic models are employed. In this study we apply different two-dimensional hydrodynamic models (HYDRO\_AS-2D, TELEMAC-2D, FloodArea, HEC-RAS 2D) to re-analyse observed pluvial flash flood events, that occurred in the pre-Alpine region of Upper Austria in 2016. We compare model performance with regard to different criteria and discuss the potential and current limitations of the different modeling approaches with respect to practical applications.