



Towards an operational integrated flood forecasting system for the Isere River basin in Grenoble: implementation of the hydrological model and assessment of the hydraulics operations impact

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The operational flood forecasting service of French Northern Alps (called Service de Prévision des Crues – Alpes du Nord) needs to develop and implement an integrated flood forecasting system for the alpine Isere River basin in Grenoble (5720 km²). Within this framework, the semi-distributed Routing System II model (Dubois et al., 2007) has been implemented on the basin. The first issue that will be addressed concerns the sensitivity of model simulations (and in particular of the snow pack dynamics) to the accuracy of the input precipitation and the choice of the number of snow elevation bands that are used for segmentating each sub-basin. Then, the sensitivity of model predictions to the existing hydropower production infrastructures and the associated hydraulics operations will be presented.