



Welcome detailed data, but with a grain of salt: accuracy, precision, uncertainty in flood inundation modeling

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New survey techniques are providing a huge amount of high-detailed and accurate data which can be extremely valuable for flood inundation modeling. Such data availability raises the issue of how to exploit their information content to provide reliable flood risk mapping and predictions. We think that these data should form the basis of hydraulic modelling anytime they are available. However, high expectations regarding these datasets should be tempered as some important issues should be considered. These include: the large number of uncertainty sources in model structure and available data; the difficult evaluation of model results, due to the scarcity of observed data; the computational efficiency; the false confidence that can be given by high-resolution results, as accuracy of results is not necessarily increased by higher precision. We briefly discuss these issues and existing approaches which can be used to manage high detailed data. In our opinion, methods based on sub-grid and roughness upscaling treatments would be in many instances an appropriate solution to maintain consistence with the uncertainty related to model structure and data available for model building and evaluation.