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Science to Practice: Embedding new hydrology approaches for flood management decision-making.

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Hydrology is a cornerstone for non-real-time flood management decision-making in England, underpinning £6bn of investment by the UK Government. Originally published in 1999, the current prevailing methods used operationally are well-known and resource-efficient but were not designed to address contemporary issues relating to climate and land use changes. It is widely considered that alternative approaches would provide us additional evidence for these issues, but innovation is not cascading into operational practice.

To improve the rate of translation of alternative approaches from science into practice, this project, part of the Environment Agency's (England) Flood Hydrology Improvements Programme (FHIP), will take an existing approach and embed it within operational flood management processes. The journey from science to practice will be documented to better understand the barriers that are faced and how they were overcome, looking wider than simply method development to consider 'quality-of-life' factors (e.g. user interfaces) and training.

This presentation will showcase the discovery phase of the project. This includes research into: what the user needs and requirements are; the blockages to methods making the leap from science to practice; what can we learn from international practice; what are the best ways to communicate uncertainty; and what information about climate change impacts do we need to capture for decision-makers. Future plans will be outlined for the project, including the development of new and novel open-source software to encourage reporting of decision-points and uncertainty in the modelling process.