



Decision-relevant early-warning thresholds for ensemble flood forecasting systems

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Over and under warning of potential future floods is problematic for decision-making, and could ultimately lead to trust being lost in the forecasts. The use of ensemble flood forecasting systems for early warning therefore requires a consideration of how to determine and implement decision-relevant thresholds for flood magnitude and probability.

This study uses a year's worth of hindcasts from the Global Flood Awareness System (GloFAS) to explore the sensitivity of the warning system to the choice of threshold. We use a number of different methods for choosing these thresholds, building on current approaches that use model climatologies to determine the critical flow magnitudes, to those that can provide 'first guesses' of potential impacts (through integration with global-scale inundation mapping), as well as methods that could incorporate resource limitations.