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10th International Congress on Environmental  
Modelling and Software - Brussels, Belgium -  
June 2020

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## Call For Water: A serious game on the role of forecast performance in decision-making

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Crochemore, Louise, "Call For Water: A serious game on the role of forecast performance in decision-making" (2020). *International Congress on Environmental Modelling and Software*. 12.  
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## Call For Water: A serious game on the role of forecast performance in decision-making

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**Abstract:** In a context that fosters hydroclimate services development, it is crucial to support users in making the best use of the communicated forecasts and of the quality information provided alongside these services. In hydrological forecasting, serious games can be efficient ways to allow participants to gain hands-on experience in forecast-based decision-making. Here, we present the Call For Water game which allows participants to manage a water supply reservoir throughout dry seasons, based on reservoir level forecasts. The aim of the game is twofold: (1) train participants to the concepts of confidence and reliability in forecasting, and (2) gather game answers to investigate the levels of forecast confidence and reliability needed to inform risky decisions. In a first round, participants are provided with forecasts of varying reliability and confidence. In a second round, they have the additional possibility to pay for improved forecasts. Results based on a set of more than 175 game answers showed that most participants improved their decision-making between the two rounds, by moving from a passive/safe decision-making to a safe/perfect decision-making. When asked for the minimum uncertainty and reliability levels they needed to make informed decisions, most participants asked for an equivalent level of reliability and confidence. Lastly, during the second round, most participants judged that improved forecasts were worth paying for.

**Keywords:** Serious game; Forecasting; Decision-making; Reservoir management