



## **Quantifying how user-interaction can modify the perception of the value of climate information: a Bayesian approach**

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The appropriate use of skilful seasonal forecasts and climate projections has the potential to improve decision-making across a range of sectors (e.g. food, energy, water, transport), and promote a proactive approach to climate adaptation, thereby providing significant societal benefits. In addition, while there is an almost unanimous consensus that user relevance is a key ingredient in the delivery of usable services, there is relatively little quantitative evidence of their impact on the perceived value of the service.

Using a simple Bayesian decision theoretic framework, we have analysed how the value of a seasonal climate service changes as a function of the trust the user is prepared to put in. Based on this, we conclude, that, at least for the generic users adopted for our analysis, a period of 30 years or more may be needed to ascertain the real user value of a predictive service. However, we argue that engagement activities can play a significant role in modifying the perceived accuracy and value of the service, as subjectively judged by the user, bringing it closer in line with the objective evaluation. This emphasises the importance of clearly and honestly demonstrating the accuracy of the climate information within the context of user requirements. Doing so has the potential to shorten the time taken to adopt the service, thereby enabling users and markets to make best use of the available climate information. We will also highlight the potential application of this work to food security.