



How to pose the question matters: Behavioural Economics concepts in decision making on the basis of ensemble forecasts

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Part of recent research in ensemble and probabilistic hydro-meteorological forecasting analyses which probabilistic information is required by decision makers and how it can be most effectively visualised. This work, in addition, analyses if decision making in flood early warning is also influenced by the way the decision question is posed. For this purpose, the decision-making game “Do probabilistic forecasts lead to better decisions?”, which Ramos et al (2012) conducted at the EGU General Assembly 2012 in the city of Vienna, has been repeated with a small group and expanded. In that game decision makers had to decide whether or not to open a flood release gate, on the basis of flood forecasts, with and without uncertainty information. A conclusion of that game was that, in the absence of uncertainty information, decision makers are compelled towards a more risk-averse attitude. In order to explore to what extent the answers were driven by the way the questions were framed, in addition to the original experiment, a second variant was introduced where participants were asked to choose between a sure value (for either loosing or winning with a giving probability) and a gamble. This set-up is based on Kahneman and Tversky (1979). Results indicate that the way how the questions are posed may play an important role in decision making and that Prospect Theory provides promising concepts to further understand how this works.