

## ***Interactive comment on “Forecasters priorities for improving probabilistic flood forecasts” by F. Wetterhall et al.***

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Hydrological ensemble prediction systems are of great importance and usefulness, and in this respect an opinion paper about improving them is most welcome. The abstract of the paper by Wetterhall et al. (2013) looks promising in this respect.

However, some of the stuff contained in the paper may not be interesting to the hydrological audience as it does not belong to hydrological science and technology. Too much attention is given to procedural issues (related to group meetings, questionnaires, voting, popular TV series) and too little is said about the scientific content of the outcomes of these procedures. I think the procedural issues have an interest from a social point of view but it would be more pertinent to report (and review) them in a

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more social-sciences oriented journal. Even in the latter, some more scientific analyses would be needed as to explain the choices made in those procedures, the behaviours in the groups, the interpretation of the outcomes, etc. Also, in accord to what the commenter Lepez (2013) says, I too believe that some rigour in this part of the analysis (definition of terms, description of procedures followed in forecast utilization, etc.) would be necessary.

Since the scope of HESS is hydrological, I believe that substantial restructuring of the paper is needed before it can be published in HESS. I believe that most material of the current sections 3 and 4 should be moved to an Appendix to be published as supplementary material. These sections could then be replaced with in depth scientific discussion of the results of the survey.

For example, with reference to the five most popular priorities shown in Table 3, what is the meaning, feasibility, implied research directions and science questions, and required effort for the voted priorities? By the way, I believe voting is irrelevant in scientific affairs. Is it a matter of voting for, say, a priority to “Increase the average skill of the medium range forecast (> 3 days)” in order to materialize it? What are the scientific obstacles that have not allowed a good skill for medium range forecasts and how feasible it is to overcome them? What does it mean, in scientific terms, to “Improve physical model representations” and how does this relate to the end-user perception?

The uncertainty, as an essential and inevitable characteristic intrinsic to the notion of forecast is not covered in full. For this issue, the authors may wish to refer to Montanari and Koutsoyiannis (2012) and the references therein, as well as Ntelekos et al. (2006) and Villarini et al. (2010). Discussion of the last two works would also offer the opportunity to make some comparisons with the American Flash Flood Guidance System.

Another possible direction for expanding the analysis and making it more explanatory would be to include some case studies or examples. Directions to this end have been

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offered by reviewer Wagener (2013), e.g.: “Could you include some examples where existing forecasts fail? Are there examples of the kind of decision-making tools that you would use?”

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