

Interactive comment on “The Hydrologic Ensemble Prediction EXperiment (HEPEX)” by J. Schaake et al.

Anonymous Referee #1

Received and published: 18 December 2006

General Comments

This paper serves as an announcement of, and call for participation in, an important international effort and its links with other international initiatives. Announcements have already appeared in EOS and the GEWEX Newsletter but not yet in a European-based publication.

It is not a scientific paper as such, and thus does not fit well to the requirements for publication in HESS. However it does form a valuable complement to the forthcoming Special Issue “Hydrological Prediction Uncertainty”. Following the HESS precedent set by the Special Issue HYREX in 2000, this paper could appear at the end of the

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volume as an “Appendix”, separating it from the science papers of the issue. This is my recommendation, or something similar at the discretion of the editors of the Special Issue. Publication after only minor revision, to consider the detailed comments below, is recommended.

The authors might also like to consider a form of publication in the EGU Newsletter (the eggs), serving as an announcement and call for participation.

Specific Comments

The paper sets out sensible and well-directed science questions.

The development of CHPS (Community Hydrologic Prediction System) as an open architecture framework for testing and as a pathway to operational integration needs to recognise the place of existing and evolving systems of this kind.

The eight test-bed projects identified to date need to be discussed in terms of structure, with six being geographically-based whilst two are thematic. There is no clear mapping of Science Questions on Test-Bed Projects. Whilst the 7th Test-Bed Project is identified as “Statistical Downscaling” in Table 1 it is “mapped” as “Pre-processing & Downscaling” in Figure 2. Some comment on the balance of focus between seasonal forecasting at the one extreme and flash-flood forecasting on the other could be made (only the Brazil and Italy test-beds seem to address the latter). In relation to Table 1: (i) Project 7 Item 3 identifies sample size for different thresholds as an issue, but it is not made clear whether these thresholds are set in relation to return period; (ii) the Project 8 description could explicitly refer to initial conditions (although model states are mentioned).

The usefulness of ensembles judged in terms of the correlation of the ensemble mean with observations misses the key point. It is not only the central forecast that is important but how well the ensemble spread serves to help predict uncertainty and how knowledge of uncertainty in decision-making can bring cost benefits. The correlation

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coefficient scale in Figure 3 uses the symbol R , whilst r is normal. Also, “Correlation coefficients for January” should be removed from the top of the figure and the period for calculation stated in the title.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 3, 3321, 2006.

HESSD

3, S1691–S1693, 2006

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