

Interactive comment on “Regional water-balance modelling using flow-duration curves with observational uncertainties” by I. K. Westerberg et al.

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This paper represents the results of a very comprehensive study of data and modelling uncertainties in a relatively data scarce region and therefore makes a valuable contribution to hydrological modelling theory and (potentially) practice. In general terms the paper is also well written, but I found some of the explanations of the methods a bit confusing. However, I am not sure that they can be simplified and perhaps they would become clearer if the previous papers are consulted (something I admit that I did not do). I did, however, find that the discussion section seemed a bit long and somewhat repetitive. I would therefore encourage the authors to look at making the final section

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more concise trying not to repeat too much of what is already in other parts of the text.

A final comment relates to the high degree of uncertainty in the simulations (and some of the observed data). I would like to have seen some comments about this in terms of the practical use of water-balance results. Mention is made of robust predictions under different circumstances and the possible need for more regionalised information. What does this really mean in terms of the use of modelling results for '..effective management of these resources' and can such uncertain results be of any value for water resources management? I realise this is not the main topic of the paper, but I do think that some concluding (possibly even speculative) remarks could be made about this issue.

Other minor comments: The reference to 1000-2500mm lower estimates of precipitation (end of section 4.1) is very important but not perhaps emphasised enough as a major source of uncertainty.

Line 22 of section 4.5: The sentence 'Simulations with correlation in deviations across successive EPs then obtain a lower weight..' is not very clear to me and perhaps can be better explained.

Minor errors: Last line of section 5.3 'constraint' should be 'constraints' or 'provide an additional constraint'. Similarly line 4 at the top of the 2nd paragraph of section 6 (constraints).

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