Second review of manuscript HESS 2016 – 546

Sandra Pool, Marc J. P. Vis, Rodney R. Knight and Jan Seibert

Streamflow characteristics from modelled runoff time series - importance of calibration studies

The second submitted version of this manuscript have improved compared to the first, and I can now recommend its publication in HESS.

The original review had three major and 12 minor comments. The two first major comments have mainly been met by explaining in more detail how the authors define and use 'streamflow characteristics' (SFCs) as opposed to traditional performance measures (PMs) or objective functions. The lack of precise definitions remains, but the changes made do make it easier for the reader to perceive what is meant.

The last major comment has been met by carrying out one additional analysis, with a more rigorous approach to statistical significance. This is a valuable extension and substantial improvement of the paper. Having said this, some subjectivity still in my view weakens the analysis and discussion, but not to the extent that the conclusions drawn are not justified.

The list of specific minor comments have been properly addressed, in most cases by making the suggested adjustments. A suggestion in comment #7 has not been followed, which is all OK. Likewise no change is made with respect to comment #11, but the corresponding passage in the discussion expresses more an opinion than a claimed result, and is also accepted.

Sjur Kolberg