

Editor Decision: Publish subject to minor revisions (review by editor) (16 Aug 2018) by Florian Pappenberger

We are thankful for the additional review by Florian Pappenberger and his useful comments. We have involved our replies in the manuscript.

Comments to the Author:

Comment 1) use of daily and hourly metrics:

Indeed, focusing on seasonal extreme values (Extr-Su and Extr-Wi) analysed at an hourly time step seems to be a more reasonable approach than analysing only summarized runoff statistics based on daily data. I am still surprised that not much differences are seen but this may require a more detailed analysis exceeding the scope of this paper.

We are thankful for this comment and we have also expected more differences between the different rainfall products. A more detailed analysis is indeed required, but as the editor mentions, this would go beyond the scope of the actual study. We are working on this topic in a new research project. However, we think a communication of the actual results, which are surprising, is useful for the community.

Comment 2) “neutral parameter sets”

I am still not convinced about introducing this term for an arithmetic mean of defined parameter ranges at regional scale. Despite its shortcomings which were not discussed in the manuscript neither in the authors’ reply, in my opinion, use of a common definition “default parameter set” would be more appropriate, particularly because that is what authors mean by their ‘neutral’ parameter set. The authors also state in their response that they do not intended to propose this method for parameter estimation: “We do not attempt to introduce this pragmatic approach as a common approach to estimate parameters...”. This is why they should stick to common terms already used in hydrology instead of introducing new (potentially misleading) terms which after publication may be used by other researchers. An alternative choice to a default parameter set would be an independent parameter set.

We agree with the editor that the introduction of the term ,neutral parameter set’ could lead to confusion in the community, hence we changed it as suggested to ,default parameter set’. Regarding the shortcomings of this approach, we implemented the following sentence: „The application of a default parameter set includes some shortcomings, e.g. regarding the physical interpretability, but it enables a comparison of the rainfall products.”. (p26 l17-18)

Comment 3) units in days/hours.

The answer is ok, however the major confusion arrives from the fact that the parameters are defined in days whereas the model is run at hourly time step. A single sentence below the table clarifying this issue would solve the problem

We are thankful for the idea of the editor and added the following information to the table caption for clarification: „(please note that although for some parameters the values are given in days, all models are run at hourly time step.)“