

Reply to Referee #1

We appreciate the reviewer for dedicating their time and providing valuable, detailed feedback. We have diligently addressed all of the comments and discussed them as follows.

Review comments

Thank you, HESS, for inviting me to review this paper. I like the paper as it covers the global scale analysis of various reliable precipitation datasets using a global hydrological model. Selecting the best-performing global dataset for precipitation is meaningful for areas where observation data is scarce.

Authors' response:

- Thank you for recognizing our efforts and providing feedback to improve the quality of the paper.

Comments

1. There are no keywords provided in this manuscript.

Authors' response:

- Thank you for the suggestion. However, we believe it may not be advised in HESS. We will discuss this matter with the editorial team, and if deemed appropriate, we will add keywords to the manuscript.
2. What are the values of the x and y-axis of the inset histograms? Mention them in the caption at least.

Authors' response:

- Thank you for bringing this to our attention. We appreciate the clarification. The inset histograms illustrate the frequency distribution of the CC and KGE values for each station in each simulation based on different precipitation datasets. To enhance clarity, we will include additional information in the text and figure legend, specifying that the y-axis represents frequency, while the x-axis represents CC and KGE values.
3. Long sentences in lines 60-66, 87-92, 97-101, 123-127, 196-201, 220-222

Authors' response:

- Thank you for suggestion. Based on your recommendation we have modified the text for clarity.
4. Line 203, write table 1 as Table 1

Authors' response:

- Thank you. table 1 is not modified as Table 1.
5. Line 208, remove or take this “Cohen et al. (2022) report $R^2=0.99$ in 30-year average prediction against USGS gauge data and a global river dataset.” sentence in the discussion section

Authors' response:

- Thank you! This sentences is now removed.
6. In Figures 3 and 10, you have provided the best-performing precipitation dataset based on annual CC and KGE. However, I can't see the values associated with CC and KGE in the figure; it shows the global distribution of the dataset.

Authors' response:

- The figures illustrate the global distribution of various precipitation datasets based on their highest values of CC and KGE. For clarity on the specific values associated with CC and KGE, please refer to Figure 1 (for annual CC), Figure 2 (for annual KGE), Figure 7 (for daily CC), and Figure 8 (for daily KGE). These figures provide detailed information on the corresponding CC and KGE values for a comprehensive understanding of the dataset performance.
7. In Figures 2 and 5, the authors said KGE values lower than -1 are highlighted in yellow. But as I can see the x-axis it seems different.

Authors' response:

- Thank you for pointing out this. We have revised the colour scheme to enhance clarity. The vertical yellow line represents the median values, while values lower than -1 were highlighted with a yellow bar. We have now changed the colour of the bar to red to provide a more accurate and transparent representation the KGE values lower than -1.
8. For Figures 6 and 9, please make a superscript of the units for discharge and area inside the figures and other parts of the manuscript.

Authors' response:

- Thank you for your feedback. We have revised the figures and other parts of the manuscript to include superscripts for the units of discharge and area in Figures 6 and 9.