Authors Response: Minor Revision, Emberson 2023 Dynamic Rainfall Erosivity Estimates Derived from GPM IMERG data

Author response in red.

Dear Dr Emberson
The referees have returned positive comments and I believe that the paper is almost ready for publication. Please consider and respond to the minor comments of Referee 2 and submit a final version.
Regards
Graham Jewitt

Dear Dr Jewitt,

Thank you for coordinating a follow-up round of reviews. I have responded to all of the comments from reviewer #2, making all of the suggested changes.

Best,
Robert Emberson

Comments from reviewer #2:

This is my second round of reviewing this manuscript. The author addressed most of the comments. I recommend it for acceptance after a minor revision.

Specific comments:

1.I suggest dividing Figure 5 into two subgraphs, with subgraph A being IMERG derived estimates and subgraph B being REDES, for easy reading and comparison.

Made the suggested change.

2.Lines 258-261: the significant underestimation of IMERG-Final for intense rainfall is the major reason for underestimating rainfall erosivity. The results of Chen et al. (2023) provided evidence: satellite precipitation can accurately capture intense rainfall due to having large probability of detection values (> 0.9), but significantly underestimates rainfall volumes of those captured high-intensity rainfall events. This also indicates that the intense rainfall missed by satellite rainfall products is not the major reason.

Chen, H., Wen, D., Du, Y., Xiong, L., and Wang, L., 2023. Errors of five satellite precipitation products for different rainfall intensities. Atmos. Res. 285, 106622.

Thank you for the reference and comment. I have included this and added the following sentence:
Recent research has shown that satellite rainfall datasets, including IMERG, may consistently underestimate the total amounts of heavy and storm rainfall [Marc et al. 2022, Chen et al. 2023]

3.Line 328: please add the specific reference for “Tian and Peters-Lidard, 2010” in the reference section.

Added citation.

4.Line 349: Bezak et al. (2022).

Added parentheses. Thank you for catching that.