

Reply to community comments

Community #1 Miyuru Gunathilake

Referee's comments are in black text

Authors's response are in blue text

1) General Comment: The manuscript by Thakur et al. 2024 is well written. The methodology is clear and robust. The authors used the mesoscale Hydrological Model (mHM) to simulate water balance components of 550+ catchments across Europe under diverse climatic conditions. The outputs offer valuable insights to the scientific community.

We would like to express our deep thank to Community #1 Miyuru Gunathilake for constructive feedback, which help in improving the quality of our manuscript. We sincerely appreciate the time and effort invested in providing such a thorough review.

2) Minor Comments: There are some minor comments which the authors could incorporate to further enhance the readability.

a) To carry out statistical tests (Mann-Kendall etc.) the data distribution should follow certain criteria(s). (For instance, normality etc.). Have you checked for this?

Yes, we agree with you that certain tests require a specific type of distribution. However, in this case, we estimate the magnitude of the slope using the Sen's slope method. Due to its non-parametric nature, it does not require normality.

b) The description under "2.3.2 mesoscale Hydrological Model (mHM)" could be moved to the Appendix.

We also received insightful feedback from the other three Referees on this section. We prefer to keep it in the main text, as it is an important part of our research.

c) In the Abstract it is mentioned that "The findings reveal that the Jensen-Haise method produces the highest trends for PET on both annual and seasonal scales (summer, spring, and autumn)".

What did you mean by “highest”? “Magnitude” wise or in terms of the “Significance” of the trend? Please be clear.

We acknowledge your comment. We intended to say "highest trend magnitude". We will revise this sentence for better clarity.

d) Please check the manuscript for spacing. In some instance you have double spaces after the full stop.

Thankyou very much for your comment. We will correct it in revised manuscript.