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Reply on RC1

Hasrul Hazman Hasan et al.

Author comment on "Hydrological Drought across Peninsular Malaysia: Implication of Drought Index" by Hasrul Hazman Hasan et al., Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2021-249-AC3, 2021

We are grateful to the reviewer for their time and suggestions in helping to improve the manuscript.

For the next correction, the authors will test the performance of different probability distributions (assuming that each month fits different probability distributions) to calculate the streamflow drought index (SDI). It is well known that in hydrological studies based on frequency analysis, there are often uncertainties in sampling due to the limited data length and discontinuity of the observed streamflow series compared to meteorological data. The required procedure for estimating the parameters for the PDF implies that the calculation of the SDI from specific samples depends significantly on the characteristics of the sample and the size of the observed streamflow series.

This has enabled the authors of this paper to propose an accurate procedure to obtain a hydrological drought index useful for spatial and temporal comparisons over a wide range of flow regimes and flow characteristics.