

Interactive comment on “Investigating possible changes of extreme annual rainfall in Zimbabwe” by D. Mazvimavi

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I note that the author suggest that climate change effects may manifest in changes in other parts of the probability distribution of rainfall such as changes of extreme high and low rainfall, and not measures of central tendency.

Firstly it is not clear what other parts of the probability distribution he is referring to and secondly, shifts in the measures of central tendency has been used to detect trends and infer to possible climate change indicator. The author seems to be disregarding this fact.

The data used indicate that stations selected were representative of spatial variation

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of rainfall throughout Zimbabwe. However, the selection of stations for this kind of analysis should be purely on the basis of rainfall homogeneity and methods such as factor analysis could have been used to do this.

It is also not clear whether rainfall distribution analysis was undertaken in order to decide on which measure of central tendency would be more representative.

It is commendable that the rainfall record used for this analysis is quite long, 1892 to 2000, however most of the statistical tests used for trend analysis do not show any testing for significance; and this can lead to a misleading conclusion.

The use of percentiles can sometimes also be misleading because it is a function of the location amounts or mean rainfall representative for the region.

Finally some of the equations/symbols which I did point out as not properly written or symbols left out with brackets have not been revised as I suggested.

In conclusion, I recommend that some revision will be required before this paper can be published.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 5, 1765, 2008.

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