Hydrology and Earth System Sciences Discussions

Interactive
Comment

Interactive comment on "Flood trends and variability in the Mekong river" *by* J. M. Delgado et al.

J. M. Delgado et al.

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We thank the anonymous referee for her/his valuable comments and suggestions.

Reply to major comments:

1

We are revising the text taking into consideration your comment. More attention will be payed to the denominations "average trend", "trend in average" and "trend in the mean of the time series". We mention "average trend" in *lato sensu*, it is indeed trend in the location parameter, which is only equivalent to the trend in the mean of the time series if the scale parameter was constant. However, we found it easier to mention all the

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trends from OLS, MK and location parameter as "trend in average".

Figure 6 refers to the probability of exceeding the mean of the time series of the observed annual maximum discharge.

2

Thank you for your suggestion. This had been pointed out by the anonymous referee 1, as to make sure that the method does not generate false positives in the case of a stationary distribution. This is going to be addressed with regard to the nominal significance level as well.

3

We are going to present the results of a similar MC, this time with no trend in the location parameter. Please refer to the previous reply.

4

Thank you for your comment on this paragraph. We accept that it is not relevant for the current discussion, and will remove the paragraph. What is meant is that with a changing scale parameter, the probability of generating values higher than a threshold $K + \mu > \mu$ increases faster than the probability of generating values lower than another threshold $\mu - K < \mu$.

5

The denominations of the different monsoons and the definition of rainfall season, flood season etc. will be clarified in the revised paper.

6

The values used for Pakse, which is the baseline station used, are $\mu_0 = 36267$, $\mu_1 = -26$, $\sigma_0 = 3418$, $\sigma_1 = 45$ and $\xi = -0.185$ (shape)

These values will be included in the paper.

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7

The figure will be omitted.

Reply to minor comments

We thank you for the minor comments given. They will be very useful for improving the revised paper.

Page 6699, lines 25, 26. It is not clear what is meant by "mean rank plotting position". Could it be replaced by "plotting position"?

Yes, it could. The sentence will be rephrased.

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 6691, 2009.