

Reply on RC3

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Dear Reviewer,

We would like to thank you for your constructive comments. In the following, we will address them point by point.

1 Answers

1. How was the value of z_n estimated (refer equation 13) for computing the Quantile Skill Index (QSI)? Did the authors perform any sensitivity analysis to evaluate the effect of plotting position used on QSI?

Answer: The value of z_n is not estimated, but is directly taken from the data z . A modeled quantile is evaluated using all annual maxima z_n by the quantile score. Since we do not use empirical quantiles for verification, we did not perform a sensitivity analysis for the plotting position.

2. The cross validation setting used needs a more clear explanation. How was the block for cross validation chosen?

Answer: Thank you for pointing out, that this part is unclear. For each station, the available years of data are divided into non-overlapping blocks of three consecutive years. Then, for each cross-validation step, one block of years is chosen as testing set and all the other blocks are used as training data set. For the remaining cross-validation steps this procedure is repeated with another block chosen as testing set in each step until all blocks have been used as testing sets exactly once.

We will add this explanation in chapter 2.5.

3. Section 2.6 on boot strapping and coverage is confusing and needs a more clear description.

Answer: Thank you for this remark. We will improve that chapter.