

Interactive comment on “Development of a revised IHA method for the cumulative impacts of cascade reservoirs on flow regime” by Xingyu Zhou et al.

Anonymous Referee #2

Received and published: 11 March 2020

In this paper, by utilizing the projection pursuit (PP) and real-coded accelerated genetic algorithm (RAGA), the author proposed a revised IHA method to evaluate the cumulative impacts of cascading reservoirs on the flow regime. The research has positive significance for ecological reservoir operation and sustainable water resource management under future scenarios. Major Issues: In Results and discussion section, the paper presents the results for the Jinsha River Basin but the results of this study were not properly discussed based on the previous literature. Moreover, the content written in Section 4.5 only introduces the existing ecological regulation, which is not relevant to the research results and lacks sufficient discussion. It is suggested that the relevant content in Section 4 be polished, in order to make the expression of this part more reasonable and clear. Minor Issues: 1. In Method section, there is no application de-

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scription of the real-coded accelerated genetic algorithm (RAGA) method using in this study, which is suggested to be supplemented. 2. In Section 4.1, the author stated that the Mann–Kendall test method was used to analyze the trend in the annual precipitation, but there is no relevant description of the method used in the study. It is recommended to add them in Method section. 3. Line 146: “The 33 IHAs are categorized into five groups addressing the magnitude, timing, frequency, duration, and rate of change (Shiau and Wu., 2010) and each group has a different ecological significance(Table 2)”. Please check the original expression, it is recommended to replace Table 2 with Table 3. 4. The first row and column in Table 1 are all bold, but not in other tables. Please be consistent in the format of all tables. 5. It is recommended to add the name of related station in the titles of Figure 6, Figure 7, Table 7, and Table 8, so that when the readers read the figures and tables individually, they can also clearly understand the meaning of the authors.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2019-694>, 2020.

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