

Interactive comment on “Dominant climatic factor driving annual runoff change at catchments scale over China” by Z. Huang and H. Yang

Anonymous Referee #3

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This study investigated the dominant climatic factors driving annual runoff change in basins of mainland China. The story is interesting and the overall organization is clear. Three main concerns need to be addressed though before the paper reaches publishable standard. 1. The authors used the climate elasticity method to identify the influence of climate factors on runoff at basin level. The climate elasticity method, essentially is a statistical method, which gives results based on data analysis. The method itself is not novel and I didn't see any revision or improvement. So the scientific contribution of this paper is little from the methodological perspective. 2. Elasticity maps showing the impacts of climate parameters on runoff were presented but not analyzed in depth. For example, why net radiation is the dominant player in the lower reach of Yangtze River Basin and why wind speed is important in part of the northeast

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China? Implications and reasons behind the maps would be much more meaningful than simply showing the map. 3. Grammar and spelling errors affect reading experience. The authors should do a thorough check to improve the writing. Therefore, I would suggest a major revision based on the concerns.

Specific comments: Page 12912, 2nd paragraph: the authors didn't explain why chose the climate elasticity method over others Page 12915, line 2: "abvious" should be obvious Page 12917, line 12-17: it is not clear how the authors processed the data. Is the first step interpolating station data to grid level? How was that performed?

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