

## ***Interactive comment on “Quantification of Ecohydrological Sensitivities and Their Influencing Factors at the Seasonal Scale” by Yiping Hou et al.***

### **Anonymous Referee #1**

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The authors proposed an index called ecohydrological sensitivity, and used many factors to see the impact of catchment characteristics on ecohydrological sensitivity. Honestly, I am not fully convinced to accept such a new term, and its scientific contribution to ecohydrology community.

The method is too superficial, without any new convincing method. Data set is too small, only with 17 basins, it is hard to get solid conclusions. I suggest to involve large number of basins.

The conclusions are either too obvious or too farfetched. For example, the first key finding in dry basins.  $S_f = \Delta Q / (Q \cdot \Delta LAI)$ . since  $Q$  is small in dry basins. Even

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with the same change of  $\Delta Q$ , the  $S_f$  is large anyway. The third one said “3) the dry season ecohydrological sensitivity was mostly determined by topography, soil and vegetation, while the wet season ecohydrological sensitivity was mainly controlled by soil, landscape and vegetation.” the only difference between dry and wet season is topography (matters in dry seasons) and landscape (matters in wet seasons). it is hard to accept this conclusion. Does topography or landscape significantly change in dry and wet seasons? With a statistic model, any input data will generate certain relations. But whether the relation has physical meanings or not, which needs more evidences.

In summary, I do not think this work has enough contribution to improve our understanding on ecohydrology, and achieved any significant conclusions which has wide implications.

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