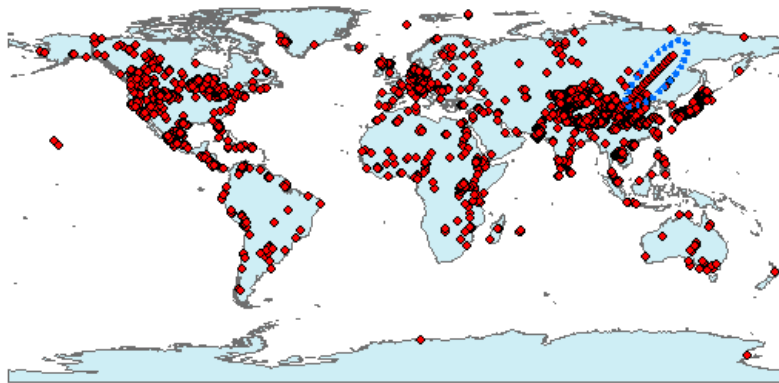


Li et al. have collected the isotopic dataset of surface water around the world via website, field observation, and reference data, which is important for understanding the hydrological processes, water resource management. Although this study analyzed these data from different aspects such as spatial and temporal scales, the relationships across different climatic zones, some analyses are too tedious and redundant. The detailed comments are listed as follows:

1. Line 18-19, analysis, this sentence of “global surface water isotopes' spatial and temporal distribution could.....” is hard to understand. Please reshape it.
2. Line 29, research→researches.
3. Line 41-42, “due to restrictions imposed by their conditions in various regions of the world,...” this part of sentence is very vague. Should listed in details on the conditions referring to ?
4. Figure 2, the chart figure is too ambiguous for data processing. For example, data filtering, how you do it? From your published data, some wrong data are listed. How can explain the dashed circle data like a line. Hence, these published data should be thoroughly checked it and it is true from reference data.



5. Line 49, the word of “slowly” is improper in describing the status of network.
6. Line 243, the subtitle 3.4 is too long. I can not well catch your description on this section. It seems like a literature review and many contents are irrelevant and vague. Hence, this section should be reshaped and make it more concise.
7. Line 81 composition of the dataset → compositions of dataset.
8. Line 126, I can not well understand the LIMA method. How do you use this method to test raw data and ensure the data accuracy. Hence, the study should be explained it more detailed.
9. Line 113-121, I CAN NOT well catch the author’s expressions. This part is the laboratory measurements for samplers. why you state this in the manuscript.
10. Figure 2, the manuscript should be listed in detail to how do the data filtering and the reasons. For example, what motivate the data filtering for the GNIR and references data.
11. Line 133, the section of methods. This study focus on the global surface water data. Why the authors have analyzed the impact of various factors on the isotopes from Random forest model. Moreover, the motivation of this question is not well explained in the Introduction section.
12. Line 155, what means for the word “onwards”.

13. Line 164. This sentence gives the seasonal variations of isotopic data. However, I DON not know this relevant information on this seasonal data including the number, location, and so on. Hence, this manuscript should include this statistical seasonal data from your website, references, and measured data. Are the current data belonged to seasonal data?
14. Line 24-256, the sentence can be removed from the manuscript. It makes the manuscript like a review manuscript. I suggest that the manuscript can be cut the similar expressions like references overlay.