

Response to Reviewer #2

We greatly appreciate your constructive comments. Your comments will be individually addressed in the revision of the manuscript. Below we provide a point-to-point response to your comments and clarify the important points of your main concerns.

Response to the general Comments:

Our paper provides a comprehensive assessment of the impact of China's international trade on its water resources and uses (as stated in the title of the paper). The results of our study demonstrate that China's international trade has a significant impact on water resources and uses in different provinces. We are fully aware of the impact of intra-national trade on regional water uses and balances. However, we did not provide an assessment of a region-to-region intra-national trade because it is beyond the scope of this study. Such an assessment can be done with the data we have collected but it would need a separate paper to accomplish. We will add a short note on this point in the revision of the paper

Specific comments:

Detailed comments	Responses
<i>1. In Abstract (Page 3544, line 14-16): The final suggestion given in the abstract though sounds reasonable, it is premature in this paper. The author only briefly mentioned this at the end of Sec 4.3, using the evidences not drawn from the analysis done in this paper. It is an implication rather than a conclusion. I suggest the author change this conclusion into others based on the analysis that is done in this paper.</i>	The suggestion is taken. Considering water quality is not the main concern of this study, the text relevant to "pollution" in the Abstract is deleted.
<i>2. In Sec 2.2.4 (Page 3551, line 16-20): The usage of beta is unclear, and the beta never shows up in the later text. The author needs to make it explicit how beta is linked with m.</i>	The suggestion is taken. This part is rewritten.
<i>3. In Sec 2.1 (Page 3547, line 14-28): line 25 said "Mixing blue and green water in the analysis could derive misleading conclusions in assessing the efficiency in water resources utilization across regions and among different sectors". This statement is lack of evidence to support. Add more literature to support your statement!</i>	Green water is only directly relevant to the agriculture sector. (and to a much lesser extent, relevant to a few downstream sectors). It generally cannot substitute blue water use in other sectors considered in this study. This point is self-evident. In fact, it would be difficult to provide counter-evidence, for example, metal industry can use soil water in the production process. The treatment of green water in this study follows Zhao et al. (2010).
<i>4. In Sec 4.4, the whole section talks about the</i>	The suggestion is taken. The conclusion

limitation of the approach, and it is not a conclusion at all. I suggest the author to change this section as “limitation of the method”, and write another “Conclusion” part. The “Conclusion” should summarize the major findings of the paper, not as the one in the last paragraph in Sec 4.4.

part is rewritten.

Technical comments:

Detailed comments	Responses
1. Page 3547, line 20: What “which” refers to is unclear. The author needs to modify this sentence.	The sentence is rewritten.
2. Page 3548, line 8: “are” -> “is”	The error is corrected.
3. Page 3550, line 2-3: suggest to add brackets for w_j and X_j , to distinguish with j before.	The suggestion is taken.
4. Page 3553, line 3: at the end of the paragraph, add “(Table 1)” to tell readers what you are talking about.	The suggestion is taken.
5. Page 3554, line 6-20: Suggest to combine these two paragraphs together, and add “For individual sectors, ” before line 10.	The suggestion is taken.
6. Page 3555, line 1: this sentence expresses the same meaning as the first sentence in the last paragraph, thus it is repetitive. Delete one of them!	The suggestion is taken. The latter sentence is deleted to avoid repetition.
7. Page 3555, line 2: unclear about “ratio” (I think it refers to Fig. 3). Make it explicit!	The suggestion is taken. The ratio is specified.
8. Page 3555, line 7: The first sentence should be changed into “Water resources endowments vary across provinces in China”.	The suggestion is taken.
9. Page 3555, line 17: remove the comma behind the brackets	The suggestion is taken.
10. Page 3556, line 14: remove “(Table 3)” to the end of the sentence in line 9 on the same page.	The suggestion is taken.
11. Page 3557, line 27: delete “rather”	The suggestion is taken.
12. Page 3558, line 1: delete “rather”	The suggestion is taken.
13. Page 3559, line 1: “stemmed” -> “stems”	The suggestion is taken.
14. Page 3559, line 5: unclear what “IO” refers to, do not use acronym without defining in the first place	The suggestion is taken.
15. Page 3559, line 20-25: The last paragraph in Sec 4.4 definitely is not appropriate as a conclusion. Expansion is needed. Please refer to the last suggestion in “Specific comments”.	The suggestion is taken. The conclusion part is rewritten.
16. All the tables and figures should be added the	The suggestion is taken.

<i>data source and the time domain, e.g. “based on: ::statistics data :: from 2002”.</i>	
<i>17. Table 3: unclear what “WR” and “NVWE” refers to. Make them explicit in the Table caption.</i>	The suggestion is taken.
<i>18. Figure 3. Bigger x-axis caption</i>	The suggestion is taken.