Dear Reviewer:

Thank you very much for your valuable comments on our paper entitled "Revealing virtual water transfers and imbalanced economic benefits hidden in China's interprovincial trade". The comments are all valuable and very helpful for revising and improving our paper. We have studied comments carefully and made corrections which we hope meet with approval. The revised portions are marked in the paper, and our response to your comments is as follows:

Point 1: Abstract: Lines 30-32: "It is suggested that provinces adopt differentiated water-use systems and provide subsidies to the nodes on key virtual water supply chain paths." State WHY, and to what WHAT HOPED FOR EFFECT.

Response 1: Thank you for your valuable suggestion. We have modified the sentence in the abstract to state why, and to what hoped for effect. We revised the sentence as follows:

"It is suggested that provinces adopt differentiated water-use systems to reduce virtual water transfer imbalances and provide subsidies to the nodes to compensate the economic benefits on key virtual water supply chain paths."

Point 2: Introduction: To alleviate shortages and imbalanced distribution of water resources in China, the government has initiated more than 20 water conservancy projects, such as the South-to-North Water Transfer Project IS THIS REALLY A WATER CONSERVANCY PROJECT - OR RATHER A PHYSICAL WATER TRANSFER PROJECT?, and has implemented three stringent controlling red lines concerning water use (Liu et al., 2013).

Response 2: Thank you for your valuable suggestion. We have modified the part of the introduction to distinguish water conservancy project and physical water transfer

project. We revised the sentence as follows:

"To alleviate shortages and imbalanced distribution of water resources in China, the government has initiated multiple physical water transfer projects, such as the South-to-North Water Transfer Project, and has implemented three stringent controlling redlines concerning water use (Liu et al., 2013). Although physical water transfer projects have a positive influence in alleviating water resource shortages in some regions, they also have a potentially negative impact on the ecosystem (Berkoff, 2003)."

Point 3: Methodology: clear and transparent

Response 3: Thank you very much for your comment.

Point 4: Results and Discussion: clear and detailed

Response 3: Thank you very much for your comment.

Point 5: Conclusion and Policy Implications: clear and appropriate

Response 3: Thank you very much for your comment.

Point 6: References:

[1] Allan, J. A., 1997. 'Virtual water': a long-term solution for water short Middle Eastern economies? School of Oriental and Asian Studies, University of London, pp. 24–29.

[9] Helpman, E., Krugman, P., 1987. Market structure and foreign trade: Increasing returns, imperfect competition, and the international economy. MIT Press: Cambridge, MA.

[13] Leontief, W., 1986. Input-output economics. 2nd ed. Oxford University Press: Oxford.

Response 6: Thank you very much for your valuable suggestion. We have modified the text of the references in the revised manuscript. Thank you again!

We truly appreciate your valuable comments and we hope that the manuscript has been well improved. Once again, thank you very much for your comments and suggestions.

Yours sincerely,

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