

# ***Interactive comment on “Analysis of the characteristics of global virtual water trade network using degree and eigenvector centrality, with a focus on food and feed crops” by S.-H. Lee et al.***

## **Anonymous Referee #1**

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This paper presents an interesting study of using network system analysis with the concept of centrality to evaluate the influential and vulnerable countries in global virtual water trade system. The manuscript is on topic is of interest to the journal, but the writing is confusing at parts.

Specific comments:

1. P3, L24: Years 2006~2010 are not really recent. Maybe add an explanation about the selection of the study period.
2. P4, L1: Maybe delete “Subsection (as Heading 2)”.

3. P4, L13~15: I assume a node represents a country here, so maybe use “country”, instead of “node” to explain the equation to avoid confusion. Also, please delete the comma at the end of equation 3.
4. P5, L9~11: I would think the fact that blue water consumption for crop export is smaller than green water consumption is part of the reason that green water export has a stronger correlation with crop export.
5. P6, Figure 1: Typos, change “crpos” to “crops”.
6. P6, L5: Typo, change “paly” to “play”.
7. P6, L1~20: For this part of the discussion on specific countries’ high and low connectivity in the virtual water trade system, the authors may need to add some reference to support their statements.
8. P7, L15~23: In this part, the authors suggested that virtual water imports have saved water resources in several countries and the vulnerable structure of VWT could cause water shortage problems in importing countries. Please add references to support these statements.
9. Table 4 and 5: The numbers in the “GVWT for feed crops” part of the two tables are identical. Could the authors explain the reason for this?
10. P8, L19~22: The words “However” and “but” in this part make the logic hard to follow. Please revise.

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