

Interactive comment on “Trade-offs between crop-related (physical and virtual) water flows and the associated economic benefits and values: a case study of the Yellow River Basin” by Pute Wu et al.

Anonymous Referee #1

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In recent years, trade has become more and more important in international and interregional exchanges, along with the circulation of goods, forming a virtual water flow with commodities as the figurative. This manuscript presents an interesting topic of integrated water flow and economic benefits in crop trade-offs, and gives the readers a new viewpoint of virtual water. In addition, this manuscript proposes a novel algorithm for estimation of the economic net benefits of green and blue water use for crop production based on the water footprint (WF) accounting. The results and advices are useful for the policy making and contribute to management practices. Before publica-

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tion article should be carefully edited and some parts of the article should be improved according to presented remarks. The remarks are presented below.

1).Page 9, Line 20-21, “the selected year (2003, 2004 and 2006, which were dry, average, and wet year)” is not consistent with the Line 22-23 “Compared to the wet year of 2003,”. 2).Figure 3 in Page 24, there must be a mistake, dry year is 2006, not 2005. 3)Page 11, Line 20, “We considered only the increased irrigation network efficiencies in responses in the responses in the amount of annual”, is it a mistake that “in responses in the responses in”? 4). The significance of studying the income benefit of green water footprint is not clear, and the Yellow River basin is so large, space-time precipitation is extremely uneven, so it is possible to discuss the income benefit of green water footprint in different in province scale so that the analysis of the problem is more targeted and applicable. 5). The advices in Page 14, “So that modifying cropping pattern could be one of the suggested measures, while being of long-term effects, to maximum the economic benefits of physical and VW flows” is too rough, it is better to propose how to change the crop pattern is different provinces such as the statement in report “WATER FOOTPRINT OF COTTON, WHEAT AND RICE PRODUCTION IN CENTRAL ASIA” (Aldaya et al., 2010).

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