

## ***Interactive comment on “Virtual water trade and development in Africa” by M. Konar and K. Caylor***

**Anonymous Referee #1**

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### General comments

The dp by Konar and Caylor is an ambitious and very interesting attempt to provide new knowledge to African trade, agriculture and water resources management. It certainly deserves publication given its novel approach. However, the paper lacks a coherent structure. It is almost self-explanatory due to the several mega-topics the author seek to address. Although I disagree with a number of claims or find them at least questionable, the general message is very important to be published. The authors should be made aware this paper is only a primer for future research. It by no means addresses the many different fields in a satisfactory manner. However, this is not surprising due to the high ambitions of the authors.

Specific comments:

C3399

Page 7293 Lines 15-18

The claim of 'open economies' needs further justification. Is there any agricultural sector in the world that is an 'open economy'. The authors need to at least acknowledge that agriculture is subject to government subsidies and mention their importance. There is a major difference between agricultural trade and let's say mobile phone trade. The latter market is fairly open, the former is not. References: Wesley Peterson (2009) A billion dollars a day; Paarlberg (2010) Food politics

Page 7297 Lines 1-2

This explanation on Hanasaki is too thin. I would at least like to know more than "state-of-the-art hydrological model". It requires more explanation.

Page 7297 Lines 7-12

The crop choice is not justified. Why not sorghum? Why wheat, which gives Southern Africa an advantage. How would the numbers look like if sheep trade was taken into consideration. In north-east Africa, sheep is a major source of revenue in livestock trade, in particular with the Gulf. It is also important to stress that the Sahel zone and North Africa have different cultural traditions where pork is rarely consumed or traded. Any analysis that excludes sheep would not reflect trade in the Islamic part of Africa.

Page 7300 Lines 15-20

Southern Africa has received more FDI in agriculture than other parts of the continent. It should at least be mentioned. There is also a higher farming expertise for large-scale production. See Fred Pearce on the Guardian website.

Page 7300 Lines 21-22

I dislike the term "they" when referring to a continent. Consider revising it. It also never becomes clear to what extent the authors distinguish between NA and SSA. Each region is quite different. At least, acknowledge the vastness of Africa as a continent.

C3400

Page 7306 Lines 4-5

I would like to know how the authors have calculated Egypt only receives 21% from external sources. Isn't Egypt the most downstream riparian of the Nile. Or do the authors assume the Aswan dam has enough storage that Egypt is in fact less dependent on Nile inflows than the Egyptian government has claimed after Ethiopia announced its plans to construct the Renaissance Dam. This sentence needs clarification. A lot of clarification.

Page 7310 somewhere at the end

Please acknowledge this topic needs further research. The crop choice placed a bias on Southern African countries, who are better equipped for trade than other regions. The North African countries trade different goods. Sorghum is the traditional crop of Sudan; sheep the meat of choice in the Islamic part of Africa. Overall the message is very important but it needs to either clarified that NA wasn't subject of this study or the crop and livestock choice favoured SA. The terminology 'Africa' is very ambivalent as outlined above. It's a very complex topic.

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 10, 7291, 2013.

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