

Interactive comment on “Food consumption patterns and their effect on water requirement in China” by J. Liu and H. H. G. Savenije

Anonymous Referee #5

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Interesting piece of work and very relevant for the scope of the journal.

My only concern about the paper is that there are currently high uncertainties in future water demand projections as well as on the degree of modernization. Whereas the uncertainties in future modernization is well represented in the different modernization scenarios the uncertainties attached to future water demand due to uncertain future water demand projections is less. This might be possible and is suggested to the author, if not feasible, it should be explicitly mentioned in the conclusions that this is a first attempt and the assumptions might not hold and would have to be rectified in the future.

Some discussion could be done on the accuracy of the official data used and if there

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is any literature which questions or confirms the data used in this study.

Estimates for the water demand of wheat are derived from another paper using the GEPIC model, even though the authors refer to this paper it might still good to summaries some of the main findings in this paper so that a reader who has not read the paper still can understand the basic findings and their uncertainties attached to them.

It is not entirely clear to me which parts of the results section are based on other studies and which parts are coming from this study, it might be necessary to restructure the paper in a certain way or make it more clear to the reader what has been additionally done in this study, only work done in this study should be presented in the results section if feasible.

Table 1 should have an extra column indicating the references from where the estimates are derived from, this will give a nice overview.

Some of the historical developments presented in the results and discussion section could also be restructured.

What does not seem clear to me is the technological innovation part, it says that technological innovation will decrease VWC by 28% (page 39) is this constant? Is it then realistic to leave this constant as with increasing modernization the country will be able to afford modern and more efficient water management/irrigation. E.g. see trickle irrigation in Israel – this could also be discussed in the conclusions.

To my opinion the low modernization scenario in China seems unlikely as current trends point towards a high to medium modernization scenario.

In the conclusion the discussion on fish seems weak as 1) purely vegetable based diets exists delivering sufficient protein 2) current over-fishing problem all over the world, - having fish farms would also mean to feed the fish with some organic material.

Some terms need to be better elaborated and grammatical errors rectified e.g. encouragement of the CNS diet.

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 5, 27, 2008.

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