

Interactive comment on “Marginal cost curves for water footprint reduction in irrigated agriculture: guiding a cost-effective reduction of crop water consumption to a benchmark or permit level” by Abebe D. Chukalla et al.

Anonymous Referee #3

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The authors discuss an important topic about a modeling approach rather than expert-based approach to deriving marginal cost curves for irrigated agriculture. Their paper has a lot of data and detailed analysis and the method they offer seems to be relevant and to work. It involves a lot of data and assumptions and would seem to be laborious in any actual application, although one could envision a software package that would make the computations easier, assuming the data could be obtained.

The authors published a paper on the same general topic (footprint of irrigated agriculture) in this journal, and this work would seem to be an extension of it. I have no

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detailed comments on the methodology, which seems to be straightforward and mainly to use a software package to simulate a lot of scenarios and then plot the resulting cost curves. I judge the work to be of publication quality.

I think the article merits publication. My suggestion is to add some text to explain how this work can be used. Who will use it and for which decisions? Is it simply a model exercise meant for the research literature or can the work be translated into action programs?

Two small points: Line 168 there is an error, “covered” needs a “d” on the end; line 226 “installation” would be better than the misspelled “instalment.”

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2017-63, 2017.

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