**Hydrology and
Earth System
Sciences**

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Discussions

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 #2

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The manuscript is very interesting and focuses on a very important topic: WF reduction studied with the application of MCC for analysing the economic side of strategies improvement for water use reduction. The study is well balanced and clearly written, therefore I suggest accepting it after solving few comments.

Specific comments: In the introduction literature is lacking, more details should be given on MCC, on possible studies that tried to perform something similar, and better explaining the advantages and innovation of introducing such an assessment (e.g., pay more attention on lines 67-70). In addition, the references reported are written often together

(line 64: 4 references in the brackets) and explaining their single specific role as reference would be helpful.

Lines 208-213: what are the average yields for the crops? Maize is considered cultivated in Italy only, or also in Spain for example? What about the other crops? With this point in mind, are the Figures 4-5 referred to maize production in one single country or in more? Understanding the country would make possible to connect these results with the values reported in the Appendix.

Line 250-251: not considering energy for transport and pumping is a very important simplification and surely affects the results. Please motivate your choice.

Finally, a discussion paragraph is missing, which would be helpful for better discussing literature, the benefits of this new method applied to WF and the possible limits met by authors.

Technical comments: Line 21: write "are" instead of "is" in "different cases are considered.." Line 68: add "to" for "in relation to WF reduction" Line 304: write "... the soils are taken from..." deleting is used Figures 7-8: the text on the Y axis is put in the middle of the graph and cannot be read.

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