

Interactive comment on “Global scenarios of irrigation water use for bioenergy production: a systematic review” by Fabian Stenzel et al.

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We thank the referee for his/her time and the detailed comments, which we will consider for the revised manuscript.

Regarding the more general comments:

The issue of increased water stress through additional irrigation for biomass plantations in the future is essentially a terrestrial one. While there are some studies on producing large amounts of biomass also in marine environments, they do not provide amounts of blue water consumed, which is why they were not selected. Similarly also the issue of water pollution (grey water) is not in the scope of our analysis (global irrigation water demands for biomass production). We only mention this as it was additionally

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considered by the study Fajardy et al. 2018.

We do not think that a geographical overview of research groups would be helpful (especially since we only consider global-scale studies) but we will work on making more transparent the further selection criteria that you mentioned, and use results from those studies in the Discussion as far as they are appropriate in our context.

In section 3.2, we decided to not present every variable as “12 out of 16 studies use numerical models”. For detailed information the readers are referred to the supplementary table (which contains all extracted information).

In the conclusion, we mention that “there is no clear relationship between water requirements and total bioenergy production”. We mean that it is not simply a linear relationship à la “growing twice the biomass requires twice the irrigation water”. The variance however is largely determined by the various methodologies and parameters of the underlying studies.

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