

## ***Interactive comment on “Water savings potentials of irrigation systems: dynamic global simulation” by J. Jägermeyr et al.***

### **Anonymous Referee #1**

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I found the paper to be well written and the research to be of such high quality and presentation that I recommended this paper be highlighted in HESS. The dataset provided in this manuscript is of critical importance to understanding water availability and use at the global scale and I would expect this paper to have immediate impact in the global modeling community. I also commend the authors on providing an evaluation of their simulation results in the context of past values reported in the literature (Section 3.4) and in providing a discussion of the modeling issues that were encountered (Section 4.2).

I have no substantial comments but I do have a few minor comments on the manuscript that I have provided below.

C1323

p. 3597, line 8: Change “referred to” to “referenced”

p. 3597, line 9: Change “but” to “yet still”

p. 3597, line 16: Add a reference to LPJmL. The “(see below)” phrase had be look for a section later in the paper titled LPJmL but it was not clear where the discussion of the model can be found later. A reference here would rectify that. Also, add a reference after PCR-GLOBWB. Consider adding a sentence at the end of the statements about these two models to explain why LPJmL was then selected for these simulations.

p. 3598 line 23 to p. 3599 line 2. This sentence should go in Section 2.2 and not in Section 2.1.

Sections 2.2 and 2.3 titles: Add to the end of the section title “. . .in LPJmL”. Then it is clear to the reader where the discussion of the LPJmL model is located in the paper.

p. 3604, lines 20-27: Please give another 1-2 sentences about crops C4 and C3. Add a reference to the classification. I had to look this up to understand what the differences are and where this designation originates.

p. 3608, line 6: Instead of “new irrigation scheme” be specific about the scheme used so it is immediately clear to the reader.

p. 3608, line 7: Use a semi-colon instead of a comma after “2009”

p. 3608, line 15: Should read “However, on a global average”

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