

Interactive comment on “Determining regional limits and sectoral constraints for water use under climate change” by T. K. Lissner et al.

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1 Reply to Reviewer # 1

We wish to thank the reviewer for this positive review and the important comments to improve the paper.

1. Page 4699: A schematic of the approach would be useful.

Thank you for the suggestion, we have added such a schematic overview.

2. Page 4700 lines 9 to 11. This is awkward phrasing – the word ‘account’ is used in two different senses in the sentence. See also line 26. 3. Page 4701 line 2. ‘Detailed

C2924

analyses’ of what?

Thank you, we have rephrased both paragraphs:

- ‘accounts’ has been replaced by estimations where applicable

- The most detailed analyses *of generic, sectoral water requirements*[...].

4. Page 4702 line 8. I suggest referencing: Michelle T. H. van Vliet et al. Vulnerability of US and European electricity supply to climate change, Nature Climate Change, 2, 676–681 (2012)

Thank you for the suggestion, we have added the reference.

5. Page 4707 section 2.3.2. I would like to see some more detail and context on the climate change and population scenarios used – for example how does the rainfall change in the two regions?

We have added a paragraph, briefly discussing the magnitude and direction of projected changes in each variable. We have also prepared additional Supplementary Material, providing tables of the region-specific values of all analysis steps.

6. Page 4714 lines 13 and on. How good is the data from other regions – is there a recommendation on collecting better information?

We have extended this paragraph in the discussion, clarifying that we rely comparable data for both regions. A more detailed, local analysis would certainly be important in a future analysis, potentially collecting data specific to the analysis.

7. Page 4714 lines 21 and following. How would we verify these results – are they realistic?

It is not completely clear to us how this corresponds to the indicated section, as the paragraph summarizes findings from other studies to support our results. The paragraph mentioned in the previous comment also implicitly addresses the topic of verifi-

C2925

cation in the revised manuscript. Specifically, the paragraph discusses the importance of including more locally-specific information to refine the approach in order provide more detailed results to inform water management.

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