

Interactive comment on “Climate impacts on human livelihoods: where uncertainty matters in projections of water availability” by T. K. Lissner et al.

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Received and published: 4 July 2014

Reply to Reviewer

We wish to thank the reviewer for this thorough revision of the manuscript and the many helpful and constructive suggestions and corrections, which will help to improve the article substantially. We appreciate the positive evaluation of the manuscript and the recognition of the novelty and usefulness of the approach. The following paragraphs respond to the general comments. Responses to all detailed and technical comments are listed in the table of changes (Supplement).

1. *Actually, the presentation of the AHEAD index and a more detailed analysis of C269*

results for the present situation could be an interesting article on its own, even without the consideration of future projections and the role of uncertainties from modelling, which could be dealt with in a follow-up article. The consideration of these additional aspects in one article is ambitious given the limited space.

In this paper we only briefly present the AHEAD approach, to clarify the basis for the consequent quantification, which focusses on the projections of climate change and associated uncertainties. In addition, we are currently in the revision process of another paper on the background of the AHEAD approach, which should be available soon.

2. *Even though the overall presentation is well structured and the language is fluent, the documentation of results and their calculation partially lacks clearness and precision, which makes it difficult for the reader to truly understand the modelled results and associated uncertainties (e.g., see specific comments 16, 20, 24, 25, 33).*

We apologize for not having presented the methods and results in enough detail and much appreciate the specific comments in this regard. We have revised the manuscript along the comments of both reviewers (see table of changes).

3. *Furthermore, the authors present their results - which derive from a range of models and climate scenarios and refer to several periods - in an aggregated way without revealing country-specific fuzzy values of the AHEAD index and underlying indicators. A documentation of these values, e.g. in the supplementary material, would allow a more transparent documentation of results.*

We suggest to publish all data as follows:

- (1) We will upload a supplementary file containing country-specific fuzzy values for (a) AHEAD elements (b) subindices (c) results of the ensemble mean, where modelled data is involved (water availability, Subsistence, AHEAD).
- (2) Additionally, the results of all individual model runs will be made accessible through figshare (<http://figshare.com/>), where it will be linked and accessible with a doi.

Please see the attached table of changes for all other comments.

Please also note the supplement to this comment:

<http://www.earth-syst-dynam-discuss.net/5/C269/2014/esdd-5-C269-2014-supplement.pdf>

Interactive comment on Earth Syst. Dynam. Discuss., 5, 403, 2014.

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