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October 31, 2022

Response to editor comments for:

"Global monthly sectoral water use for 2010-2100 at 0.5° resolution across alternative futures" (Manuscript ID: SDATA-22-00583), submitted to Nature Scientific Data

Reviewer Comments Received: 01 August 2022

Dear Chief Editor Guy Jones,

We would like to thank you and the reviewers for your invaluable feedback and comments. Please find a list of all editor comments we received followed by an explanation of where and how each comment has been addressed in the revised manuscript. We think that with the suggested changes the paper has become much stronger.

Thank you for the guidance,

Sincerely,

Zarrar Khan

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List of All Editor Comments

The following is a list of all editor comments received on **31 May 2022**. Each comment has been addressed in the text as described in the corresponding section.

- E1 Comment 1: Please ensure that your references conform fully to the Nature style. See the examples at the link below: http://www.nature.com/sdata/publish/submission-guidelines
- E1 Comment 2: Note that "meta-repository" is not a widely understood term at this journal. If I understand correctly, this provides wider explanations of the methods used and external links to other deposited resources (e.g. Tethys v1.3.1 at Zenodo). Please note that:
 - All experimental methods relating to this work should be available in the manuscript itself. I
 understand that a lot of this content may be duplicated in the paper, but if not, I would
 encourage you to share any additional workflow, validations, Basin examples, etc within the
 paper. A single supplementary document can be used if there are large amounts to add.
 Data visualizations are fine to share soley on this site as long as the underlying data has been
 been formally deposited
 - All external resources should be cited in the manuscript use the reference list for any citable objects with formal metadata (i.e. DOIs, author names, etc) and simply embed the ULRs in the text in ()s for websites without these. From quick inspection it looked like all the links were in the former category (i.e DOI'd objects that can be formally cited). Again, it looks like a number of these are already included in the paper (e.g. the Code Availability statement), but please check and confirm there is nothing exclusively shared at the met repository.
- E1 Comment 3: Please change the Custom licence terms for the Dataverse dataset to a recognizable open licence (CCO and CC-BY are usually required for this journal).
- E1 Comment 4: Please add a data citation for the Dataverse dataset to the reference list using these instructions (https://www.nature.com/sdata/publish/submission-guidelines#data_citations note that a DOI URL should be used). Please add the reference number to wherever the dataset is mentioned in the text the main position should be the first part of the Data Record in a sentence describing where the data has been deposited.
- E1 Comment 5: Please also formally cite the items listed in the table in the Code Availability sections in the reference list. Please also note that all tables need a table label and a legend.

E1 Comment 1

E1 Comment 1: Please ensure that your references conform fully to the Nature style. See the examples at the link below: http://www.nature.com/sdata/publish/submission-guidelines

Response:

 We have checked the references and bibliography to ensure we are complying with the "Nature" citation style as detailed in the link provided: http://www.nature.com/sdata/publish/submission-guidelines

E1 Comment 2

E1 Comment 2: Note that "meta-repository" is not a widely understood term at this journal. If I understand correctly, this provides wider explanations of the methods used and external links to other deposited resources (e.g. Tethys v1.3.1 at Zenodo). Please note that:

- All experimental methods relating to this work should be available in the manuscript itself. I understand that a lot of this content may be duplicated in the paper, but if not, I would encourage you to share any additional workflow, validations, Basin examples, etc within the paper. A single supplementary document can be used if there are large amounts to add. Data visualizations are fine to share soley on this site as long as the underlying data has been been formally deposited
- All external resources should be cited in the manuscript use the reference list for any citable objects with formal metadata (i.e. DOIs, author names, etc) and simply embed the ULRs in the text in ()s for websites without these. From quick inspection it looked like all the links were in the former category (i.e DOI'd objects that can be formally cited). Again, it looks like a number of these are already included in the paper (e.g. the Code Availability statement), but please check and confirm there is nothing exclusively shared at the met repository.

Response:

 As suggested all relevant models and data products are now referenced in the paper itself in the Code Availability section. In addition, all equations describing the methodology are also repeated in the paper. The meta-repository is only provided as an additional reference to visualize the full dataset without the need to download it.

E1 Comment 3

E1 Comment 3: Please change the Custom licence terms for the Dataverse dataset to a recognizable open licence (CCO and CC-BY are usually required for this journal).

Response:

- We have updated the terms to CC-BY in the custom dataset terms.

Edits Made:

Dataverse terms updated to CC-BY.
 https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/VIQEAB -> Terms.

E1 Comment 4

E1 Comment 4: Please add a data citation for the Dataverse dataset to the reference list using these instructions (https://www.nature.com/sdata/publish/submission-guidelines#data_citations - note that a DOI URL should be used). Please add the reference number to wherever the dataset is mentioned in the text - the main position should be the first part of the Data Record in a sentence describing where the data has been deposited.

Response:

- We have added citations for all the data and software products with DOIs and cited throughout the document and in the final table.

Edits Made:

- Citations added for all products with DOIs

E1 Comment 5

E1 Comment 5: Please also formally cite the items listed in the table in the Code Availability sections in the reference list. Please also note that all tables need a table label and a legend.

Response:

We have added citations for all the data and software products with DOIs and cited throughout the document and in the final table.

Edits Made:

- Citations added for all data and software products
- Table label and legends added to all tables