University of Technology, Sydney

Professor Derek Eamus
School of Life Sciences
University of Technology, Sydney
PO Box 123
Broadway
NSW 2007

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Dear Editor,

Many thanks for the opportunity to respond to the new referee's reports. In the following I provide our responses to these new comments (in red).

Dear Authors,
I agree with both referees that the new revised manuscript has been substantially improved. I believe that it offers a valuable review of recent studies on groundwater-dependent ecosystems.

Many thanks for these supportive comments.

Please consider all the helpful suggestions from both referees and in particular the concerns on section numbering. I agree that numbering of subsections in section 3 (or perhaps the choice of subtitles) is a bit confusing. All subsections in section 3 refer to the use of remote sensing, so either renumbering (as suggested by the reviewers) or slightly modifying the subtitles will certainly help to improve readability. The manuscript will be ready for publication after these very minor revisions.
Patricia Saco

We have made changes to the numbering and occasionally to the wording of headings (see annotated revised Ms).

Suggestions for revision or reasons for rejection

Most of the suggestions done in the first-stage review were properly covered. Before its publication, I still think that sections 3.1, 3.2 and 3.3. should be integrated into one section as all methods pointed out there refer to “satellite-based approaches”. Because this integration was also suggested by the first reviewer, please afford it. Additionally, it seems that statements done in section 3.3.3 are valid for remote sensing applications in general, not only for 'GRACE' applications: please, reallocate this subsection properly.

We have renumbered sections in section 3 to make the topics more logical. In particular the heading for section 3 now states that this section 3 is about application of RS to GDEs. It is important to note here (and see response to the second referee) that the GRACE section, although satellite-based, is not used to estimate rates of water-use. There is a new sentence added to highlight this fact. Thus, the GRACE section is within section 3 (which is all about satellite applications) but is not contained within the section on RS and water use (3.2). The section on RS limitations is also given a higher level heading (3.4) as it does indeed relate to limitations of RS generally and not just GRACE and we thank the referee for highlighting this to us.

I think the manuscript will be ready after these minor changes.

We thank the referee for this supportive comment.

Suggestions for revision or reasons for rejection

This second version of the review looks much better than before. The new structure makes the reading easier. The context of the review is also better explained.

We thank the referee for these supportive comments.

However, I would suggest the Authors to consider the following minor points:

- The subsections in section 3 do not seem numbered correctly. Sec. 3.2.1 is not followed by 3.2.2.

Indeed there isn't a 3.2.2 so we aren't really sure why it is expected that there should be one.

Sec. 3.3 is on GRACE, so it should be part of Sec. 3.2. Sec. 3.3.3 is on remote sensing, so it should not only be part of Sec. 3.3, but also 3.2. Anyway, I think something went wrong with the section numbering here.

GRACE (as now explained with the additional sentence we added) is not a technique that can be used to quantify water-use by GDEs. Thus, it can't be moved into 3.2 because this discusses the use of RS to estimate rates of water-use. This is why the section 3.3 heading explicitly states what GRACE does detect, namely changes in total terrestrial water storage.

- I still find the section on the case studies not well integrated with the rest of the paper. Perhaps, a phrase between Sec. 4 and Sec. 4.1 to explain what section 4 is about might help readers to follow the text a bit better.

We thank the referee for this suggestion and have added a few words to explain what the case studies are about.

- I still find Figs. 3 and 4 unnecessary.

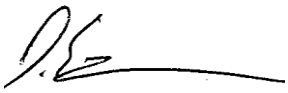
We disagree.

- I still believe that there should not be a fitting curve in Fig. 8. Using a function with 4 parameters to effectively fit two horizontal lines seems a bit an overkill.

There is a long history of fitting what are essentially sigmoidal curves, or other curves, to demonstrate break points in a data set. I have a text book here from 1979 (Low Temperature Stress in Crop Plants, Lyons, Graham and Raison, Academic Press) which has three short chapters (out of 40 chapters) dedicated to how to analyse/present breaks in data such as we show in Fig. 8. As we have indicated, the line is presented primarily as a visual aid to the reader.

I hope the Ms is now acceptable for publication. I think the new numbering system significantly improves the logic and flow of the Ms.

Yours sincerely



Derek Eamus
(Professor of Environmental Sciences)