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Interactive comment on "Large-scale vegetation responses to terrestrial moisture storage changes" *by* Robert L. Andrew et al.

Anonymous Referee #2

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Major Comments

- GRACE data do not have a sensitivity to a spatial resolution of 1-degree. The authors even divided Tasmania into three different land use types. I highly doubt there is any meaningful information from GRACE at the spatial scale down to 100 km.

- This manuscript is difficult to assess partly because it does not provide a detail explanation of their approach. I do not understand Section 3. Temporal variations of vegetation cover (NDVI) and total water storage (GRACE) are dominantly at a seasonal frequency. The authors removed such largest variability in the data and examine only the residual data after removing climatology based on monthly data over many years. I do not understand the rationale of analyzing only the secondary signals (the residuals) to study vegetation response to terrestrial water storage.

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Discussion paper

- I am surprised that I do not see any time-series plot in their analyses. Also, I do understand what various time-scales indicated in Section 3.1 imply.

- Technical advance seems to be moderate (but, again, its validity is difficult to judge due to lack of sufficient explanation in Section 3)

- Science quality is low to moderate. I am not convinced that this manuscript contains sufficient science advance or discovery that warrants publication in the journal HESS. Discussion in the last paragraph of Section 4 and Section 5 seem to be trivial and just descriptive without any quantification.

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