

# Response to Reviewer 1—Report #2

Please see our detailed replies to each comment in blue. Text in bold is text that is copied from the new manuscript. Text in bold and highlighted in yellow is new text added as a result of the review.

The authors have responded to my comments thoroughly and successfully. Their effort to test the model on other basins is much appreciated.

I would only suggest that for Figure III they use two different scales (left and right of the figure) for their estimates and for the satellite-derived NDVI, to facilitate comparison of the inter-annual variations. They could also calculate time correlations between the modeled and satellite derived variables.

Thank you for this suggestion, we improved Figures III according to it, we also added the correlations.

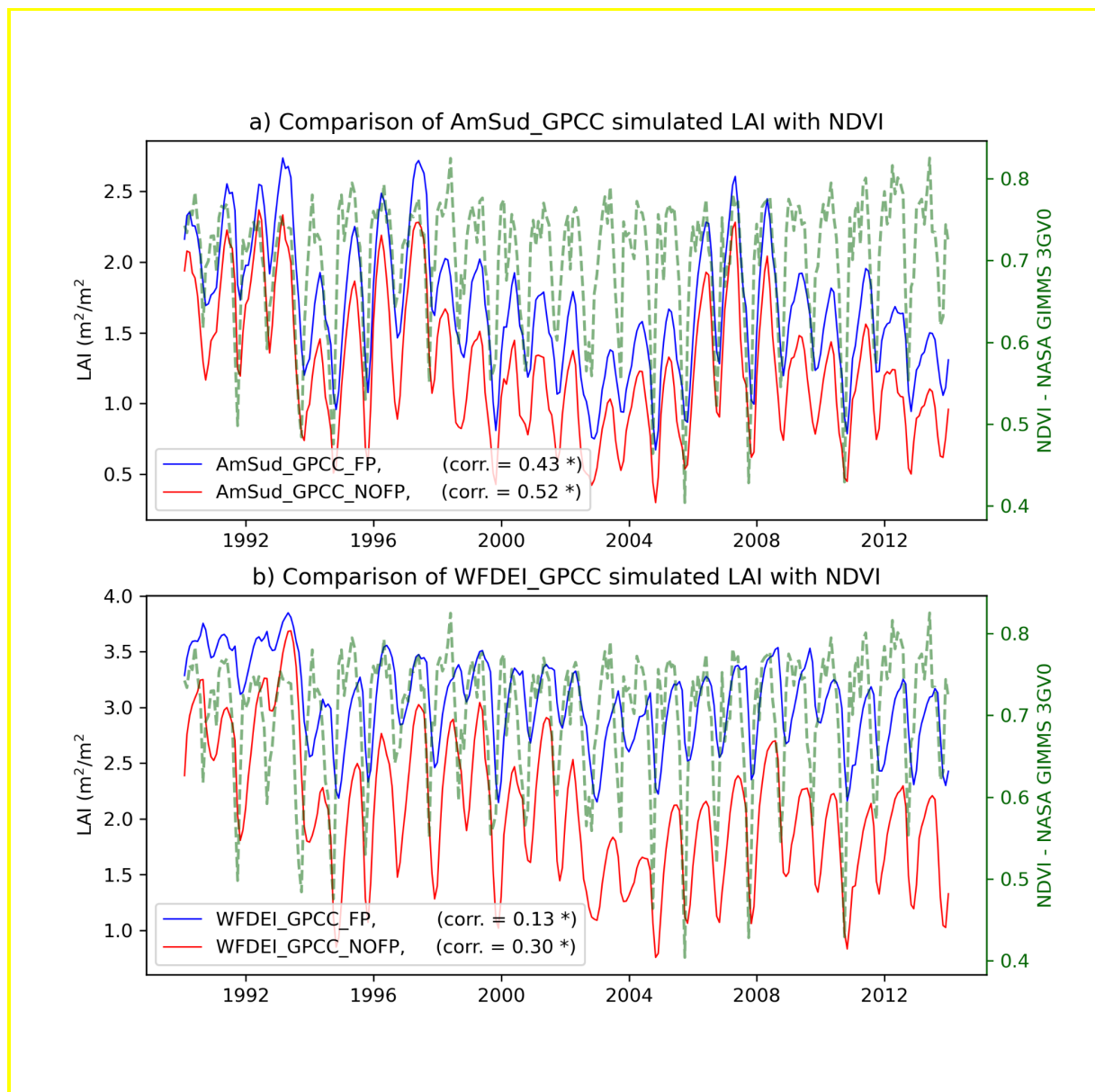


Figure III: Comparison of the NDVI time series from the GIMMS dataset and generated from NOAA's AVHRR with (a) AmSud\_GPCC\_FP and AmSud\_GPCC\_NOFP and also with (b) WFDEI\_GPCC\_FP and WFDEI\_GPCC\_NOFP over the Pantanal region. Correlations between the simulated LAI and the NDVI are shown in legend, if the significance level is higher than 95%, there is a star symbol after the correlation.

We decided to include the figure with the correlations in the Supplementary material and mentioned it in the paper as the following:

As a qualitative assessment, the average simulated LAI over the Pantanal is compared to the Global Inventory Modeling and Mapping Studies-3rd Generation V1.2 (GIMMS-3G+) data for the Normalized Difference Vegetation Index (NDVI) (Pinzon et al. 2023) in Figure III. The LAI time series have significant correlations with the NDVI time series but the NOFP simulation have a higher correlation compared to FP simulations. This seems to be caused by the delayed peak of LAI in the FP simulations.

It is also advisable to proofread the full article carefully, as a few typos can still be noticed.

Thank you for noticing this. We also performed a review of the text to correct remaining typos.

## References

Pinzon, J.E., E.W. Pak, C.J. Tucker, U.S. Bhatt, G.V. Frost, and M.J. Macander. 2023. Global Vegetation Greenness (NDVI) from AVHRR GIMMS-3G+, 1981-2022. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/2187>