

Interactive comment on “Accounting for El Niño-Southern Oscillation influence becomes urgent for predicting future East African ecosystem responses” by Istem Fer et al.

Anonymous Referee #1

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General Comments:

This study aims to quantify the ENSO contribution to the East African rainfall variability and examine vegetation response to future rainfall variability as influenced by projected intensified ENSO. The topic is quite interesting and the manuscript is generally well-organized. It seems that authors deemed that ENSO will be intensified under the RCP8.5, high emissions scenario. So by contrast, the ENSO should be relatively weakened under the low emissions scenarios, such as RCP 2.6. In this case, comparing simulated results driven by two scenarios climate outputs should also provide useful information about vegetation response to intensified ENSO. I understand this would result in much more workload for model simulation, however, the authors are ex-

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pected to explain why they only used climate outputs under the RCP8.5 scenario. Also, more quantitative results are expected in abstract, especially about projected vegetation response to ENSO. LPJ-GUESS is a dynamic vegetation model, but authors did not show any results about changes in vegetation distribution. I would be curious if vegetation distribution would change a lot under the RCP8.5 in this region. Other specific comments are below:

Specific comments: 1. Abstract, P2, L33, please specify what this study simulated, carbon and water fluxes or vegetation distribution? 2. P58-61 and P105-109, Authors kind of repeat research objectives in two places; please reorganize them accordingly. 3. Results section: need a separate sub-section to present future results. 4. Besides spatial patterns, results of temporal variations in carbon and water fluxes as influenced by ENSO are expected in results section. 5. Please have a paragraph or sub-section to identify uncertainties involved in this study.

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