

The authors have done a good job of improving the text to address the reviewers' comments, and I agree about keeping this paper focused on the historical evaluation. Below, I have a number of corrections that should be made and suggestions that should be considered, but I consider them minor in scope.

Minor comments

- This is silly, but: I really like the color of your tracked changes!
- Thanks for defining ISIMIP in the abstract, but Project should also be capitalized.
- L40–3:
 - Consider adding the "10k-20k more efficient" number you mentioned in your reply to Reviewer 2—that's huge!
 - L41: Comma should be a semicolon
- L73–9:
 - L74: Comma needed after "crops"
 - Please add text explaining that pasture PFTs are not grazed or otherwise managed
- L81: Consider reverting "C3G" and "C4G" to "C3 grasses" and "C4 grasses" for legibility. These abbreviations aren't used elsewhere in the manuscript. (I agree with your revision to include the abbreviations next to the initial PFT definitions, as this will likely help future users of your outputs.)
- L87: Comma should be a semicolon.
- L99:
 - "carbon assimilation" should be "net primary productivity", no? "Carbon assimilation" refers to GPP.
 - What is "nutrient support"?
- L113–9:
 - For readability, please replace "C3Cr and C4Cr PFTs" with "cropland" and "C3Pa and C4Pa" with "pasture".
 - Please briefly summarize how crop and pasture burning differ from natural grasslands.
- L137: "Convective occurs" needs a noun in between—probably "rainfall".
- L171–2:
 - "transiting" should be "transition"
 - "historical" should be "the historical period"
- Table 1 is missing sea-level air pressure. Is this because it's the only one JULES doesn't use? If so, indicate that only used variables are included.
- L195: Comma should be a semicolon.
- L197: Delete Rose, as it's a technical term not previously defined.
- L198: Capitalize Github.
- L208: Sentence should start with "The"; line should end with a comma.
- L209: Missing word? An "ancillary" what?
- L224: Missing word after "smaller".

- L228–9: Are "river channel evaporation and transmission losses" anthropogenic? If so, please add a brief explanation; otherwise, please rework this text.
- L291:
 - "to low" should be "too-low"
 - Replace "Australia in" with "Australia, which is"
 - "model" should be "models"
- L296: Hyphen needed in "too low".
- L297: Replace "like" with "as in".
- L298: "to high" should be "too-high".
- L317: Start sentence with "Without fire," to contextualize "already".
- L357: Comma needed before "or". Also: Consider replacing "or" and following with "and vice versa".
- L358:
 - "North" shouldn't be capitalized.
 - "The observed Sahel"? Delete "observed"?
- L360: ", for example" should be "; for example,"
- L361: Comma needed after "trees".
- L363: ", however" should be "; however,"
- L386: "including lack of larch forest" isn't really complete; please rework. E.g., "for example by simulating too little larch forest". This would also make the sentence easier to read if it were in parentheses rather than being offset with commas.
- L560–1: I'm confused by this sentence, I think because of ", however,".
- Fig. 3:
 - Legend text is much too small. Text in figures should not be much smaller than caption text.
 - Albedo units should be "unitless", not "unknown".
 - Left-most color scheme is improved, but there's still both red and green. Please improve colorblind-friendliness, perhaps by using the same color scheme as the right-most column. [ColorBrewer](#) is a good resource, as is the [Color Blindness Simulator](#).
 - Observed albedo color bar: It looks like everything from 0.5 to >0.8 is the same color. You can thus set the "over" triangle to start at 0.5. (Similar issue with observed ET color bar.)
- Fig. 4: Legend text is much too small. Maps are also really small; consider splitting into two figures (perhaps with one in Supplement.)
- Fig. 6:
 - Legend text and axis tick labels are slightly too small.
 - Figure labels are hard to read; please move them off the plots and into the surrounding whitespace.
- Code availability: Please explain that accessing the JULES-ES source code requires registration and that this can be requested at https://jules-lsm.github.io/access_req/JULES_access.html. (This is linked in the Wiltshire et al. paper you referenced, but it's important enough that it should also be here.)

- Fig. S2: Consider converting m/m² to mm (multiply by 1000), as this is a unit more readers will be familiar with.
- Fig. S3: Caption needs a period at the end.
- Figs. S4 and S5: Legends are still too small to read, as are lat/lon labels. Row/column labels are better but still a bit small.
- In your response to Reviewer 2's comment about Fig. S1, you say "See comment above." What comment, exactly?