

Interactive comment on “Field-warmed soil carbon changes imply high 21st century modeled uncertainty” by Katherine Todd-Brown et al.

Katherine Todd-Brown et al.

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Thank you for your contributions in this and previous reviews. We hope that the below will address the concerns raised in this review.

Regarding the Q10 lower boundary of 0.1: While we agree that this is an unusual choice we had two reasons for choosing this boundary. First given that we do not disentangle moisture effects, it was conceivable that an increase in soil temperature could result in a decrease in respiration visa-vi a drier soils imposing stronger moisture limitations. Secondly from a numerical prospective choosing a boundary slightly outside the expected numerical range can demonstrate a robust convergence. We will add these justifications to the methods section and hope they satisfy your concerns.

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Regarding specifying soil vs air temperature: You are entirely correct and we apologize for letting this slip past us from your previous reviews. We will add 'soil' to each mention of temperature in the manuscript.

Regarding the coarse woody debris pool: We will remove cCwd from the carbon pools and updated the manuscript. There were no significant changes to the results.

Regarding HadGEM2 temperature function: Thank you! We will update the table.

Regarding the allocation matrix: We agree. We will update the discussion and include comments on how a shift in allocation could affect the analysis.

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2018-72>, 2018.

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