

Dear Dr. Veldkamp, thank you for guiding our manuscript through a very useful and helpful review process, and for the opportunity to publish in *Biogeosciences*. We made the minor corrections suggested by Reviewer #2, as summarized below with our responses in bold text.

Sincerely,

James Stegen (on behalf of all co-authors)

Editor comments:

Dear Dr Stegen,

I am happy to accept your manuscript for publication in *Biogeosciences*. As you can see both reviewers were satisfied with your answers to their earlier concerns. Reviewer #2 made some final minor suggestions, and I want to give you the opportunity to make some final corrections, in case you think it will improve the manuscript. If you choose to, please include them in the final manuscript that you upload. Thank you for submitting this interesting study to *Biogeosciences*.

Edzo Veldkamp

Reviewer #2 comments:

I am glad to see that the authors spent lots of effort to improve this manuscript and it is much clearer now. I do not have major comments regarding to the structures and contents, but have two comments as below.

P8L20-21: I prefer to delete the latter sentence 'and there was a modest increase in the permafrost-associated domain CV from Summer (46%) to Fall (56%)' as this result has nothing to do with the following inference.

This text has been removed.

P10L25-30: The authors mentioned two possible mechanisms here for explaining the observed patterns; it may be more helpful if they can provide some relevant references to support their ideas. There are plenty of publications concerning the relationship between temperature/soil moisture and microbial/root respiration.

We have added a number of references to support all points made in this section.