

Interactive comment on “Reviews and syntheses: Greenhouse gas exchange data from drained organic forest soils – a review of current approaches and recommendations for future research” by Jyrki Jauhiainen et al.

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AR: We thank the reviewer for the constructive comments on our manuscript. Here we give our response to these comments, and provide a modified manuscript.

RC: I would like to echo the comments made by reviewer 1: this is a useful, detailed review on the current state of GHG flux estimates from drained organic forest soils. The authors discuss the limitations of several methods, knowledge gaps, and the data required to make GHG flux estimates suitable for extrapolation and data-synthesis ef-

C1

forts. My main concern is that parts of the manuscript are quite difficult to read. That is, the text is fairly dense, many sentences and some paragraphs are overly long. Starting at paragraph 5.4, the readability of the manuscript drastically improves. I encourage the authors to adopt a similar writing style for the rest of the manuscript; it will probably reach a wider audience that way. AR: Following this comment, we have gone through the text and tried to make it a bit easier for the reader. These actions included dividing very long sentences into shorter ones, deleting repetitive phrases, and introducing new paragraph breaks. All changes in the text that are not linked to a specific comment represent this revision. We kept it relatively modest, however, so as not to change the actual contents of the paper. We hope that it has been at least somewhat sufficient to make the text more reader-friendly, also bearing in mind that the reviewers' task is much harder than that of the "regular reader".

Some minor editorial suggestions: RC: L58: insert a comma after "Below the WT" AR: Done as suggested.

RC: L157: This title is not very clear. "Applicable" to what? To my mind, this section of the manuscript also doesn't really present a framework, as is suggested in the title. The first paragraph of the section is about challenges in CO₂ flux measurements, the second paragraph is a comparison of different methods to estimate CO₂ fluxes, the third paragraph is about the role of vegetation in determining CH₄ and N₂O fluxes etc. etc. AR: Fair Observation. Title is revised to outlined so that it mirrors the text content correctly (L 216).

RC: L261: I wonder if this is a typo. What is "temperate region a"? AR: Typo. Corrected (L277).

RC: L284: "Modelling" would be a good place to start a new paragraph. AR: Done as suggested.

RC: L308: "combine typically" = "typically combine" AR: Done as suggested.

C2

RC: L333: Start a new sentence after "the estimates" AR: Long sentence is split into two (L359).

RC: L341: You could start a new paragraph after "In Tier 1.." AR: Done as suggested.

RC: L349: "...N2O emissions from ditches at...." AR: Missing preposition added.

RC: L365: "carbon" = "C" AR: Done as suggested.

RC: L452: I assume you wrote "at least" because this statement might not be true for N2O and CH4, but this is not entirely clear. AR: More specific expression applied (L483).

Please also note the supplement to this comment:

<https://www.biogeosciences-discuss.net/bg-2019-261/bg-2019-261-AC2-supplement.pdf>

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2019-261>, 2019.