

Interactive comment on “A revised northern soil Hg pool, based on western Siberia permafrost peat Hg and carbon observations” by Artem G. Lim et al.

Artem G. Lim et al.

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Lim and co-authors present a new set of peat observations from Siberia to improve estimates of mercury (Hg) storage in Arctic soils and permafrost. Their work fills important data gaps and will make a substantial contribution to the field. The manuscript is clear, well organized, and is supported by good figures. I recommend this paper for publication with minor revisions. - Response: We appreciate positive evaluation of our work.

Specific comments:

C1

Line 31: "Ocean" should be lower case. - Changed as suggested

Line 35: "arctic" should be capitalized. - Changed as suggested

Line 37: "Western" should be lower case. - Changed as suggested

Line 48: I'd replace "must be performed" with "are needed". - Changed as suggested

Line 78: Why is export most pronounced in the discontinuous permafrost zone? - This is where enhanced thawing exposes fresh soil organic matter (OM) to relatively important summer temperature increases, and naturally important run-off. Furthermore, the active layer depth is high in this region and this helps to excavates large amount of OM from deeper soil horizons. We added a comment to the phrase, clarifying this: "...due to thawing of fresh soil organic matter and maximal active layer depth..."

Line 86: Spell out "North" in "N-America". - Changed as suggested

Line 116: You could omit "of the Supplementary Information". It's already implied by the "S" in Table S1. - Changed as suggested

Line 126: The abbreviation "MAAT" isn't helpful. Do you need it? - We use the abbreviation MAAT in Lines 400 and 401, and therefore prefer to keep it

Line 374: "Ocean" should be lower case. - Changed as suggested

We thank the reviewer for his/her very useful comments.

Interactive comment on Biogeosciences Discuss., https://doi.org/10.5194/bg-2019-483, 2020.

C2