

## ***Interactive comment on “Ideas and perspectives: why Holocene thermokarst sediments of the Yedoma region do not increase the northern peatland carbon pool” by G. Hugelius et al.***

### **Anonymous Referee #1**

Received and published: 3 December 2015

In this manuscript Hugelius et al. present a short review on permafrost carbon stock in the Beringian Yedoma region and in particular criticize a recent estimate of peat carbon stock in the paper by Walter Anthony et al. (2014). In general I think this is a clearly written and useful contribution to the subject.

I have only one major comment and some editorial suggestions.

Major comment: I think it is probably more suitable for a commentary paper like this to organize Methods and Results and Discussion sections differently. As now, it looks like a primary research paper, but I believe it is not. It is a bit awkward to have a separate Results section. I suggest that the manuscript is reorganized into three main sections

C8237

to discuss three main points as described in the abstract: the nature of deposits in questions (Section 2); distribution of peatlands (Section 3); and double accounting problem (Section 4), and the relevant Methods details can be moved to appropriate sections. It would make the manuscript more focused and easier to read. I will make specific suggestions below.

Specific comments: Title: If it is a question, then it should be in a question sentence structure, with question mark. Specify “permafrost” region in the title as well?

Page 18086, line 23-24: Change to “We suggest that THESE INACCURATE (OR INCORRECT) statements made by... resulted MAINLY from...”

P18087, l13: change to “...provide an in-depth discussion and...”

P18088: details in the Results section may be better moved to (inserted into) the following 3 sections. For example, the first paragraph can be moved to 3.3 (or new section 3) and third paragraph to a new Section 5. Move the last paragraph on Alas to Introduction. Delete Results Section.

P18089: Delete Section 3 Merge Subsections 3.1 and 3.2 and called it Section 2. “Conflicting definitions and terminologies of organic soils and mineral-rich sediments”

Current 1-paragraph Subsection 3.2 can be added to suggested new section 2 as the last paragraph.

Change Subsection 3.3 to Section 4, and Subsection 3.4 to Section 5.

P18090, l9-11: Repeat what is said 8 lines above, Change to “, similar to the Canadian Systems of Soil...”, without repeating 17% OC or 30%... again.

Figure 1. Add latitudes and longitude (even grid lines) and a scale bar on the ma

Interactive comment on Biogeosciences Discuss., 12, 18085, 2015.

C8238