Biogeosciences Discuss.,
doi:10.5194/bg-2015-657-RC1, 2016

Biogeosciences Discussions

Interactive comment on "Underestimation of boreal soil carbon stocks by mathematical soil carbon models linked to soil nutrient status" *by* B. Ťupek et al.

Dr Golubyatnikov (Referee)

golub@ifaran.ru

Received and published: 9 February 2016

Authors evaluated soil organic carbon stock for Swedish forest using models Yasso07, Q, CENTURY and compared the model results with the Swedish forest soil inventory data. They described the obtained results very accurate and comprehensively.

Remarks: 1. Is phrase "i.e. samples with SOC stock below 0.01 and 99.9 percentile" (line 103) correct? 2. It's not necessary to reintroduce the abbreviations (for example, line 102). 3. Units for turnover rate are necessary (lines 159-164). 4. Section 2.2 duplicates the information from lines 64-80.

Authors used linear functions for biomass of vegetation types. According to Tabl.C1

all(!!!) functions for aboveground biomass have R2<0.5 and only one function for belowground biomass has R2>0.5. Therefore, these functions do not reflect the realistic interdependences and increase the model mistakes.

It is not clear what authors wanted to show by this manuscript. From the presented results it follows that models of some processes do not accurately reflect these real processes. But it is evident and not new! Another conclusion of the article is also obvious: data for model essentially impact the model results.

I think this manuscript can not be published

Interactive comment on Biogeosciences Discuss., doi:10.5194/bg-2015-657, 2016.