

Interactive comment on “Three representative UK moorland soils show differences in decadal release of dissolved organic carbon in response to environmental change” by M. I. Stutter et al.

Anonymous Referee #1

Received and published: 29 September 2011

This paper reports on results from three long term monitoring sites in the UK. Naturally there is a lot of data, and the task of the authors is to summarize them and analyze them. I find the paper sometimes hard to understand, but I think this is probably to a large extent an unavoidable consequence of the data being reported. I think the paper is an important contribution to the debate on what factors are important for the amount of dissolved organic carbon (DOC). The papers main conclusion seems to be that soil type is important for the solubility of carbon, and iron compounds in freely drained podzols are important. The authors conclude, among other things that catchment to global models should take soil type into account (p7842, l 12-16). I would have like a further discussion of that. First, most model do take soil type into account although only

C3317

some aspects of it. Sometimes soil type is only used to predict hydrology, sometimes clay content is taken into account to predict organic matter stabilization. If the authors can say something more specific on how soil type should be taken into account to account for DOC solubility and loss, it would be more helpful for modellers. If not, it would also be useful to point at what research would be needed to do so. Minor comment Introduction, 1st line: carbon should be written out first time it is used. Ions should be written with charge (e.g. NO₃⁻, not just NO₃). Also what is H in table 3? Is that meant to be H⁺, i.e. similar to pH? Please make clearer.

Interactive comment on Biogeosciences Discuss., 8, 7823, 2011.

C3318