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Biogeosciences Discussions

Interactive comment on "A cost-efficient method to assess carbon stocks in tropical peat soil" *by* M. W. Warren et al.

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Authors' response to Louis Verchot: We acknowledge the suggestions for alternative statistical analysis. The average C content of peat samples collected for this study was about 51% (results section page 10 line 216), and only 1% of the samples classified as "peat" in the field contained <40% C. The average peat C content for values collated from the literature was lower (48%) because data were included for organic soils and shallow peats with higher bulk densities and lower C content (Kauffman et al. 2010; Murdiyarso et al. 2009). It is true the relationship between Bd and Cd quickly falls apart once there is a small quantity of inorganic matter, since C content can vary substantially according to soil texture (the relative amounts of sand, silt and clay in the sample) for a given bulk density. We do not attempt to extend the relationship to clayey

or silty peats with C content likely <40%, to remain conservative and maintain the high predictive power of the general equation. Literature values for C content of Southeast Asian peatlands are very frequently >40% (Shimada 2001, Brady 1997, Page et al. 2004, Melling 2005, Anshari et al. 2010), indicating the broad applicability of the linear equations presented in this study for well-developed ombrotrophic peatlands. However, we will carefully reconsider the statistical analysis and presentation of the data for the final version of the paper.

Specific comments: Some editorial comments have been addressed and were incorporated into the current version of the discussion paper.

Figures: We agree with suggestions to improve the figures, and will include revised figures in the final version of the manuscript.

Interactive comment on Biogeosciences Discuss., 9, 7049, 2012.