

## ***Interactive comment on “Towards an improved organic carbon budget for the Barents Sea shelf, marginal Arctic Ocean” by I. Pathirana et al.***

**H. Renssen (Editor)**

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Received and published: 3 December 2013

Dear authors,

The open discussion phase for your manuscript “Towards an improved organic carbon budget for the Barents Sea shelf, marginal Arctic Ocean” is now closed. Two reviewers have commented on your manuscript. Both agree that your work is important and valuable, but they have quite strong criticism. In particular, Reviewer 1 questions the calibration of your model with data from 6 sediment cores, and provides suggestions for additional data that may be used. This referee also proposes to discuss in more detail the uncertainties in the  $^{14}\text{C}$  and  $^{210}\text{Pb}$  dating techniques. Reviewer 2 is rather critical of the modeled primary production presented in Figure 8 and proposes to discuss this result against data and other modeling studies.

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I kindly invite you to respond to all comments of the reviewers. If you foresee that you are able to satisfactorily address all comments, I recommend to also prepare a revised version of the manuscript to be considered for publication in Climate of the Past.

Kind regards Hans Renssen

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Interactive comment on Clim. Past Discuss., 9, 4939, 2013.