Hydrol. Earth Syst. Sci. Discuss., 11, C1297–C1298, 2014 www.hydrol-earth-syst-sci-discuss.net/11/C1297/2014/

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11, C1297-C1298, 2014

Interactive Comment

## Interactive comment on "Large-scale regionalization of water table depth in peatlands optimized for greenhouse gas emission upscaling" by M. Bechtold et al.

## **Anonymous Referee #2**

Received and published: 8 May 2014

General Comments This manuscript contains some interesting new approaches to generate exhaustive spatial predictions in a data-scarce environment. The structure of the manuscript could be improved by starting with the methodology followed by the data and data requirements.

Specific comments The structure of the manuscript would benefit from starting chapter 2 with paragraph 2.3 first describing the general methodology followed by the data used. The current structure requires referring to paragraphs later on in the manuscript. On page 7 line 19 you state that boosted regression trees allow for data gaps, but I can't find an explanation on how predictions are made when predictors are missing.

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The weighting scheme discussed in paragraph 2.3.3. is presented as common practice yet there are no references in the entire paragraph. The mathematical formulation for Wi gives three different formulas (5,6,7) all using the same symbols, this indicates that there are in fact three different Wi-types, please make this clear from the mathematical notation or give only the formula used. Formulas 8 and 9 require a reference or some mathematical backup. Ad a formula number for the BIAS. Notation in formulas (3, 4, 4b) is not concise: i is used both as subscript and superscript, it should be subscript. Simulated or estimated values are commonly indicated with the hat-symbol, individual observed values can be denoted with the subscript i. In paragraph 2.3.2 the weights Wi are used, but the paragraph on weighting comes later on, start with paragraph 2.3.3. The reference (Gaast., 2009) is missing in the literature section

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 11, 3857, 2014.

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