

Interactive comment on “Cyanobacteria Blooms in the Baltic Sea: A Review of Models and Facts” by Britta Munkes et al.

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To my mind, this manuscript provides a very interesting and thorough coverage of important topic. Although I cannot quite agree with some of the author's statements related to modelling approach, the following notes of mine are by no means a formal review of the manuscript, but merely a correction of some confusion and/or misunderstanding.

1) In BALTSEM model, all the variables and biogeochemical fluxes are expressed in the weight, not molar units. As indicated in Table B2 (Savchuk, 2002), the phosphate half-saturation constants for the cyanobacteria growth and nitrogen fixation rates are 1.5 and 9.0 mg P m⁻³, that is about 0.05 and 0.3 mmol P m⁻³, respectively. Please, correct

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correspondingly in your Table 03; at p. 11, lines 5-7; and elsewhere if necessary.

2) In BALTSEM model, both the mortality rates and sinking velocities of phytoplankton groups depend not only on the water temperature but are also inversely related to the Liebig minimum function as a measure of unfavorable environmental conditions; for cyanobacteria, accounting also for contribution of nitrogen fixation into their total primary production determined by both DIN uptake and nitrogen fixation. In result, neither mortality rate nor sinking velocity have a fixed value, contrary to what is now stated at p. 15, lines 4-6.

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