

Interactive comment on “Assessment of a physical-biogeochemical coupled model system for operational service in the Baltic Sea” by Z. Wan et al.

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Thank you very much for your comments on March 15 and May 11. Both two comments addressed to one issue: why does the model fail to recapture the basic/well-known feature in the bottom layer at the Gotland deep. I appologize for not sufficiently reply when you first addressed this issue on March 15. After revisiting the whole results, we found the reasons and mistakes.

The fundamental problem comes from the improperly allocated vertical grids. Meanwhile, there are a few technical bugs in post-processing codes and the scripts to plot figures. The technical errors include: (1) not including hydrogen sulphade as negative

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oxygen in observed dissolved oxygen (DO), only in plots; (2) not including ammonia in observed dissolved inorganic nitrogen (DIN), only in plots; (3) the display was limited to 0-200 m, not the entire water column; (4) inaccurate vertical interpolation to generate the model results at bottom layer.

All the found mistakes and bugs are corrected and figures 3, 5, 7, 9, 12, 13 are replotted. The section 4.2.2 is rewritten, addressing the bottom layer vulnerability in deep water areas. Please see the appendix revision.

Fig. 15 has to be replotted as well and will come up soon. The model-satellite-observations intercomparison for surface chlorophyll has not yet added and will come up soon. I am sorry to submit the incomplete reply, for the sake of speeding up the interactive discussion.

Please also note the supplement to this comment:

<http://www.ocean-sci-discuss.net/9/C385/2012/osd-9-C385-2012-supplement.pdf>

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