Biogeosciences

Discussions

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Interactive comment on "Air-water CO$_2$ evasion from U.S. East Coast estuaries" *by* Nicolas Goossens et al.

Anonymous Referee #1

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After reviewing this manuscript, I do not know that weather I should believe the estimated results for the mean annual net ecosystem metabolism (NEM), FCO2, and CFilt or not, because it is a big issue for air-sea interaction. I am confusing that the authors tried to use a simple 1D model coupled with Global News model in current study. How did they do? Many assumptions should be made to compromise the estimated results for air-sea CO2 evasion. The authors should clarify many assumptions in their study. In the model, many parameters should be set up to simulate the state variables shown in Table 2. How did the authors select those parameters? The parameters and values should be listed clearly. In 2.6 Model-data comparison, the description of this subsection is very poor. The authors described the model validation for other estuaries in the Europe. How did the authors validate the model for the study areas (U.S. east coast estuaries)? I would like to see the model validation in the study areas to convince me

the model is capable and suitable to be used in U.S. east coast estuaries.

BGD

Interactive comment

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Discussion paper