

Review of GMD-2015-260 entitled “FABM-PCLake – linking aquatic ecology with hydrodynamics“

Thank you very much for the revised version of the MS. I like the case study simulation that you added to your manuscript and think that the current manuscript fulfills the requirements for being published in GMD. I have only one small question remaining and would be happy if you could comment on that in the text:

You are stating that it is possible to combine the application of PCLake within FABM with selected submodules from other models available under FABM, for example:

P6L24-26: ...such as running the phytoplankton module from the AED model together with the zooplankton module from the PCLake model to simulate the ecosystem for a particular case study

A comparable statement is given at P8L22-24. I would like to know a bit more how exactly this would take place.

You correctly mentioned that running PCLake under FABM allows to let the model run with different physical drivers (eg GLM, GOTM, GETM) without requiring changes on the source code. Does this statement also holds true if I combine different submodules from different ecological models? To give an example: If I want to combine the phytoplankton module from PCLake with the zooplankton from AED, how do the state variables from different models exchange the information without changing the source code? In other words, how can an AED-zooplankter “know” how much PCLake-phytoplankton is available for grazing? And if grazing is taking place, how does PCLake getting to “know” the quantum of algae taken away by the AED-zooplankter?

I do not expect a full technical guideline but ask for some additional information that illustrates the reader how this will be realised.