

Interactive comment on “Biogeochemical response of the Mediterranean Sea to the transient SRES–A2 climate change scenario” by Camille Richon et al.

Camille Richon et al.

crichon@liverpool.ac.uk

Received and published: 28 September 2018

We thank the referee for their comments and questions.

They expressed concerns about initial conditions of the simulations and the lack of dissolved organic nutrients in the budgets presented in the article.

We tried to clarify the methods and results sections in order to clarify how the initial conditions are produced and the influence they may have on our results. In particular, we recognize that our model underestimates nutrient concentrations in comparison to available measurements. This discrepancy between model and measurements raised

C1

the question of the validity of our simulation results in representing the future state of the Mediterranean. We argue that the performances of a model in representing present conditions do not guarantee its accuracy to represent future evolutions. This is due in part to the fact that most climatic and biogeochemical processes are non linear and a consistent mis-estimation of nutrient concentrations in the present does not necessarily hamper the representation of nutrient concentrations trends in the future.

Detailed answers to all comments and questions are attached, along with a revised version of the manuscript and a track version allowing to visualise changes made since the initial submission.

Please also note the supplement to this comment:

<https://www.biogeosciences-discuss.net/bg-2018-208/bg-2018-208-AC3-supplement.zip>

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2018-208>, 2018.

C2