

Interactive comment on “Factors favouring large organic production in the northern Adriatic: towards the northern Adriatic empirical ecological model” by R. Kraus et al.

Anonymous Referee #3

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The manuscript is a valuable scientific contribution to the understanding of hydrological and biological conditions in the northern Adriatic. Based on long-term data of those relevant environmental parameters authors tried to predict fluctuations in phytoplankton components. The authors are aware of the fact that the described processes are extremely complex and the considered parameters extremely variable and that far more work should be done in order to more reliably predict circulation regime and consequently, phytoplankton abundance. However, authors approach to this problem is original and brings a new perspective to the ecological processes that occurs in so highly complex marine environment such as northern Adriatic. Given the above, it is my opinion that the manuscript is worth publishing after minor corrections.

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Comments:

The title "Factors favouring large organic production..." suggests that the manuscript deals with the living and non-living organic matter. As the authors focus more on the living (Phytoplankton) component, I suggest changing the title to better correspond to the presentation of the results.

So far I have not met with the presentation of the level of significance of 80%; a common way of presentation the level of significance is greater than 95%. If the authors decided to show these results there must be a reason, so it is necessary to explain why.

It is needed to specify the meaning of abbreviations C1, F1 and PA somewhere in the text. I suppose PA stands for phytoplankton abundance, so maybe just to put the abbreviation in the brackets few lines before. C1 and F1 is explained in the caption of figure 10, but still to be able to easily follow the text, I suggest to repeat the meaning.

Although the subject of this manuscript is not a prediction of anchovies abundance in the northern Adriatic, the authors refer to the fact that a "good understanding of the processes in the ecosystem can potentially be of great importance in maintaining sustainable fishery". In my opinion such predictions should be considered with much more caution, given the extremely complex relationships in the food web. The higher up the food web we go, the more parameters must be taken into account, and therefore the error is greater.

Technical corrections:

Page 1222, line 18. correct "show melting" to "snow". Table 1. Caption. Insert abbreviation PA after phytoplankton abundance.

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