Ocean Science
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Discussions

Interactive comment on "Ocean modelling for aquaculture and fisheries in Irish waters" *by* T. Dabrowski et al.

Anonymous Referee #1

General comments

This work, as the title clearly states, delineates a working program that has ocean modelling at its core, and provides relevant and valuable support to the aquaculture and fish activities in Irish waters.

This paper addresses relevant scientific issues within the general scope of OS, and meets the specific aims of the Special Issue thematic, under with it was submitted. However, the authors miss the opportunity to state this and, has such, should include a reference to the relevance of their work in this Special Issue.

The work presented here merges several tools that together make an unparalleled product for the management and study Irish waters. In this context, it presents an orig-

inal tool and concept. The authors adequately present this outcome has a conclusion to their work.

The abstract has too much information. It can be reduced. Details on the model can be left out and authors should focus on the processes addressed and products that can be achieved with the model.

The introduction clearly frames the work. However, because the paper is rather descriptive of current 'products', the reader can wander about the reasons for this work to be published. Authors should address this in the induction, stating that this paper is part of a Special Issue (and briefly state the aims of the SI). I believe this will give the full credit and relevance to this paper.

Generally the paper is well structured and clear. Since I am not a native English speaker (unlike the authors), I refrain from making too much specific comments and grammatical corrections. However, I believe that the authors can and should revise the manuscript and improve its readability. Some statements are quite confusing and difficult to read. The message could benefit from some simplification.

Specific comments P1188, L19: This should be the inaugural statement of the abstract ('This paper demonstrates...')

P1189, L10-13: ('These models...') Please re-arrange this sentence. It's not easy to read. Also, authors should add more references to works on the use of mathematical model in aquaculture.

P1189, L21-23: Developments tailor the model. 'Developments... have been tailored..' sounds confusing. Is there another way to present this information? The paragraph should not start with 'The Marine Institute...'

P1191, L16: How is the carrying capacity actually calculated?

P1191, L17: 'which is based' - Please be more specific by naming the major similarities/differences (state variables, processes, etc.)

P1192, L20-22: This is poorly explained. How the model does this? More details are needed.

P1193, L1: 'dependent on light, temperature and salinity' - using which algorithm?

P1194, L11-12: 'that is they do not have any behaviour attached to them..' consider removing this sentence.

P1194, L25- : This paragraph is too big, making the reading rather difficult

P1196, L6: ' The model-derived products are not used in isolation, instead they are used as..' This is awkward phrasing. Why not : 'are integrated and used...'

P1196, L27: provide references to some examples.

P1201, L17-: This is actually a good way to finish this paper. As such I suggest making this paragraph the last one.

P1201, L22-: I suggest making this paragraph more objective and make it paragraph #1 of this section.