

The section addresses a relevant and very pertinent topic: the study of marine heatwaves in the Baltic Sea is extremely necessary. The authors have improved the manuscript in relation to its first submitted version, but it still requires MINOR REVISIONS to be accepted. There are a few comments below which can guide the authors to improve the overall manuscript.

General comment:

Sometimes the authors refer the reanalysis results purely as “model data/results”. “Model” is very general. My suggestion is to always use "reanalysis" and standardize along the text.

Specific comments:

(line 61) What is the reason to cite BACC Author Team (2008) and Gröger et al. (2022)? What did they study?

(line 81) replace “Of” with “Regarding”.

(line 84) replace “... Baltic Proper. The SST observations...” with “... Baltic Proper where the SST observations...”

(line 88) You can also specify Baltic Sea physics reanalysis product with an acronym.

(lines 102-104) Cite the corresponding MHW reference which defines the MHW categories.

(line 106) “MYP” is very general. My suggestion is to refer to the Baltic Sea physics reanalysis here (and along the manuscript) using a proper acronym for the Baltic Sea reanalysis as it was recommended in line 88. Multi-year product (MYP) is a specific nomenclature used mostly by Copernicus Marine Service to define different products such as an ocean reanalysis.

(line 106-107) Move “the following statistical metrics” to the end of the sentence as follows: “MHWs are computed at every third surface grid point of the MYP, resulting in a resolution of approximately 5.4 km for the following statistical metrics: ...”

(lines 119-120) Move the following sentence to the section 2.3: “The MYP data has already been extensively validated in the corresponding Quality Information Document (QuID; Panteleit et al., 2023)”.

(lines 121-124) Again, my suggestion is to move these results to an appropriate section in “Results”.

(lines 220-222) “This also coincides with the onset of significantly higher temperatures at the surface compared to the climatological mean, though these were initially not high enough to result in a MHW (Fig. 5e)”. Figure 5e shows two MHW events at 0.5 m, right? Rewrite or clarify.

(lines 222-226) Specify these lines describe the results at 0.5 m (Figure 5e).

(lines 208-238) the following subsection “3.2.2 Analysis of vertical MHW distribution at Northern Baltic” still requires writing improvements.

(line 278) Appendix A1 is not well connected with the text. Clearly explain why the analysis and results in Appendix A1 are important.

(line 279) “hydrodynamic model”. Reanalysis?

(line 496) replace “model data” with “reanalysis data”. See the above general comment.