

## **Reviewer's Commentary (Round 2)**

**The EWS presented is a solid piece of work and the paper has improved since the previous time. Looking at the other, reviewer's comments I still think the work needs to be better presented to make an interesting paper, so I propose a final round of minor revisions. More specifically, I would like the authors to address the following issues:**

**Remove all information that is not relevant to make the paper shorter and tighter. The paper still feels like a technical report where the authors mention several irrelevant details. For example Table 1 could be omitted or move to an Appendix;**

Response: Technical aspects that are not the focus of this work have been removed or moved to the Appendix. Specifically, previously named Table 1 and Table 2 have been moved to the Appendix A. (renamed to Table A1 and Table A2, respectively). Section 3.2 has been shortened by removing unnecessary technical details regarding wind, sea level and wave validation, particularly during low energetic events. Section 3.3 is shortened without emphasizing the characteristics of the surge events and the comparison of the run-up predictors, while relevant text has been removed from the Discussion section (Lines 954 – 1011 of the previously submitted manuscript). Moreover, the text describing the performance of the EWS during the events had been removed before the forecast figures (Figures 8 and 9) to enhance the manuscript's structure. Appendix D (of previous manuscript) discussing unnecessary forcing parameters (wind, sea level, waves) and the EWS forecasts has additionally been removed. Finally, minor grammatical edits and correction of Figure and Table numbering have been applied thorough the manuscript.

**two Figures (4 and 5) are too much for variables that are intermediate (wind speeds);**

Response: Figure 4 is now moved to Appendix B. We kept Figure 5 (renamed to Fig. 4 in the newly submitted manuscript) as it shows the residual distribution of the filtered 69 increased energy wind events that fall: i) within the directional range to which the beach is exposed; and ii) follow the storm criteria of Sanchez-Arcilla et al., (2008).

**Table 4 could be replaced by a figure with subplots for the wave spectral parameters (I would exclude the wind);**

Response: Table 4 has been excluded from the manuscript, while the wave spectral parameters are reported in Appendix D. (Figure D1, D2 and Figure D3) of the revised manuscript. Furthermore, technical information of the wind-wave climate which is not the main focus of this work has been removed from Section 3.3 – Assessment of NEPTUNE-EWS's Performance, which has been additionally renamed to provide distinction with the newly added Section 3.4, discussing the performance of the EWS system during Cyclone Harry. The reader is now referred to the Appendix B and C for in-depth investigations of the wind-wave climate.

**the comparison of the run-up formulas is of limited interest, more important is the quality of the forecast.**

Response: Extensive discussion of the performance of the run-up formulas has been removed from the text from the Discussion section (Lines 954 – 1011 of the previously submitted manuscript), while Table 2 presenting the different tested wave run-up predictors has been moved to Appendix A (renamed to Table A1). Instead, a brief mentioning of the outperformance of Stockdon et al. (2006) against the rest of the tested empirical formulas is provided in discussion (Lines 779-782) and conclusion sections (Lines 881 – 882).

**As also commented by the other reviewer, the 'overtopping' events discussed were not really extreme, just the most intense observed during the validation period. Since the study area recently experienced a really severe event, I suggest that the authors add some paragraphs and a figure summarizing the performance of the EWS for that case.**

Response: A dedicated section (Section 3.4) has been inserted into the manuscript discussing i) the wave and sea level conditions forecasted by CMEMS at the closest to the beach available points, as shown in Figure 1; and ii) the performance of the EWS, during the passage of Cyclone Harry from Poetto beach between 19-21/01/2026. For this purpose, two figures have been inserted (Figures 10 and 11). Furthermore, a sentence is added at Line 160 of the revised manuscript, pointing to the situational report conducted by CMEMS for Cyclone Harry for more information. The latter is also included in the updated reference list. Finally, the Trogu et al. 2025 reference has been updated to Trogu et al. 2026 (zenodo repository that contains the available frames retrieved during the event).

**Minor comment: The profiles in Figure 3 look unrealistic, for example there are areas with almost flat bathymetry for 30-40 m.**

Response: We agree that the profiles at position P2 surveyed on 2023/06/09 and 2024/06/20 (denoted by black and red lines in Figure 3b) appear unrealistic for natural beach morphologies. However, this morphology is the result of anthropogenic modification. Specifically, bulldozing operations are regularly carried out in early summer in this sector of the beach to flatten the surface for recreational purposes, such as the presence of a volleyball court. We have included additional explanatory text in the manuscript to clarify this aspect (Lines 311 – 314 of the revised manuscript), while the topographic profiles retrieved during 2025 and 2026 (three days prior to the occurrence of Cyclone Harry) have been included in the revised Figure 3 and Table 3 (renamed to Table 2 in the updated manuscript). Furthermore, the paragraph linked with the topographic records has been revised accordingly to discuss the newly added data (Lines 301 – 311, revised manuscript).