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Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Wave run-up prediction and observation in a micro-tidal beach" *by* Diana Di Luccio et al.

Anonymous Referee #1

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General comments.

This article describes the operational forecasting of wave runup on an Italian beach in the Mediterranean Sea. Offshore wind and wave conditions are forecast using available regional wind and wave models. The local runup on the beach is forecast using 7 equations from 3 different authors and evaluated for several notable storm events. The runup forecasts are compared with video-based runup measurements. Statistical correlation between forecast and measured runup are presented. The authors briefly comment on the best match to observations.

However, the manuscript has numerous grammatical errors, poor figure readability and a lack of relevant discussion and conclusions. No comparison is made to other operational forecasting tools or models (c.f. USGS). The manuscript contributes little

knowledge to runup forecasting discipline. Coastal hazards are part of the introduction, but no discussion applies the results to the study of hazards, or any new hazard knowledge.

Specific comments.

The article could be published with major revisions. As a start, the following specific comments should be addressed in order to improve the manuscript for potential resubmission. -The language needs thorough review and improvement. This is the most important review issue – the manuscript content is difficult to understand, and the results confusing in its present form. -The discussion and conclusions need expansion. The article could draw on many observations to tell a compelling story, and instruct other forecasters as to which models are best for operational runup forecasts, why each model performs better or worse, or how the article changes understanding of coastal hazard forecasting. Comparison to other runup forecasting tools and results would also be useful -All figures need to be improved for readability (small text, no legend, obscured lines) -The abstract has no description of how well the forecasting agreed with the observations, no description of accuracy of results, and it also provides no instruction as to the whether the trialled method is worth pursuing any further. – Why would a reader continue reading the paper? -All in-text references should be checked for extra parenthesis.

Technical corrections.

P1 L5. Add word "a" to ". . .performed by a WaveWatch III model. . ." P1 L8. Replace "done with" with "performed using" P1 L8-L10. Merge sentences describing observational systems. P1 L15. replace "dynamically" with "dynamic" P1 L16. Delete extra parenthesis P1 L17. Replace "damages" with "damage" , and replace "are" with "is" P1 L18. "Infrastructure" not "infrastructures", delete "also" P2 L2. Replace "source have" with "sources has", add word "by" to "demonstrated by the capability" P2 L7-L8. Sentence unclear : please re-word. P2 L10. Please include a reference for "later re-

search". Refer to EurOtop for explanation of the runup exceedance statistics. Please also re-word the description of runup exceedences for English language. P2 L14. – Please explain why these aspects of the Mase and Stockdon et al. formulations are noted? P2 L16. "compute" P2 L16. Revise. Do you mean previously published formulations, or the Mase and Stockdon et al formulations. P2 L17. Delete 'actual' P2 L22-25 Sentence unclear. Please revise. ... There are too many language errors. I cannot correct them all. Please critically review the text and improve the language.

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