

Interactive comment on “The Influence of Dune Aspect Ratio, Beach Width and Storm Characteristics on Dune Erosion for Managed and Unmanaged Beaches” by Michael Itzkin et al.

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Dear Authors,

Thank you for your patience awaiting the reviews of your manuscript. The third referee suffered an arm injury and was unable to write up a full review report but did send me via direct email a number of general comments and suggestions.

The first two review reports both identify some major limitations of the work presented here. Of key concern are the lack of novelty of the findings and inconsistencies between the objectives, simulation scenarios, and conclusions. These concerns are

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shared by the third referee, whose comments I can paraphrase here as: /- Conclusions are stretched, and the impact of beach width on dune erosion is already well-known. It is also obvious that dune erosion is less when an artificial dune is placed in front; the % reductions found are purely a consequence of the arbitrary geometry of the artificial dune. /- Systematic exploration of dune erosion is a good idea, but the set of scenarios is not optimal and there is little interrogation of the details of the erosion process itself. /- There is thus more to be found in analysis of the simulations, perhaps also regarding the parametrisations in Xbeach. Figure 7 shows some interesting features that are not fully discussed. /- The ‘managed dune’ set-up is rather limited, it should include modifications of the dune toe such as marram planting, sand ramps, and sand fencing, interventions that aim to widen an existing/eroded dune again.

Based on the views of the three referees I believe the work requires a major revision before it can be considered again. Such a revision will likely involve further/new simulation work and re-analysis (referee #2 in particular provides a number of suggestions). A new manuscript presenting this work will be sent out for review again.

Andreas Baas, Handling Associate Editor

Interactive comment on Earth Surf. Dynam. Discuss., <https://doi.org/10.5194/esurf-2020-79>, 2020.

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