

## ***Interactive comment on “Modelling of sediment transport and morphological evolution under the combined action of waves and currents” by Guilherme Franz et al.***

### **Anonymous Referee #2**

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An annotated version of the manuscript is being attached, and those comments are not going to be repeated here.

The paper is well written, the title is clear and reflects the paper's content.

I missed references of some important publications in the field of nearshore dynamics such as I. A. Svendsen's book by world scientific "Introduction to Nearshore Hydrodynamics" wherein many papers on the subject can be found by the author and several associates (Putrevu, etc). They have even made available a model named SHORE-CIRC.

The acceleration factor of 365 for sediment transport used in the paper appears to me  
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to be too high. A little discussion on the effect of this factor on the simulation would be nice. I also wonder if such high factor wouldn't limit the application of the model in cases where the wave spectrum varies on a daily or weekly basis.

The coupling of Swam and MOHID is a huge task, but it was not clear to me whether or not it was necessary to iterate solutions between the 2 models so that wave affected currents and vice-versa.

The inclusion of the wave module into MOHID clearly made a huge difference, but it was unclear to me the effectiveness for the maximum bottoms slope criterion. Perhaps one run with that criterion relaxed and comparison with what was done would be interesting.

Please also note the supplement to this comment:

<http://www.ocean-sci-discuss.net/os-2017-8/os-2017-8-RC2-supplement.pdf>

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Interactive comment on Ocean Sci. Discuss., <https://doi.org/10.5194/os-2017-8>, 2017.