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Interactive comment on “Impacts of storm chronology on the morphological changes of the Formby beach and dune system, UK” by P. Dissanayake et al.

P. Dissanayake et al.

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Received and published: 19 May 2015

1. Yes, we agree, we now add the reference: Gómez-Pina et al., 2002, at the end of this sentence.
2. We add the following sentence to compare the ridge-runnel flattening with the published literature, Similar flattening of beach morphology was found in the La Salie area, France (Pedreros et al., 1996).
3. We included the reference: Pedreros et al., 1996 with Voudoukas et al., 2012a, to indicate storm induced erosion on the ridge-runnel system.

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4. Figure 5 clearly shows profile change is marginal and Figure 7 clearly shows averaged bed level change is also marginal between storm clusters. These facts, we aim to specify in these two figures while Figure 8 clearly indicates volume change along the profile in each storm event and the cumulative volume change within the storm clusters. Therefore, we believe, the present figure arrangement provides sufficient insight on beach profile change due to the impact of storm clusters with storm chronology.

5. We changed the sentence as follows, This is mainly due to decrease of the system resilience with the initial weak events before approaching the most severe event.

6. Following missing references were included,

Pedreros, R., Howa, H.L., Michel, D., 1996. Application of grain size trend analysis for the determination of sediment transport pathways in intertidal areas, *Marine Geology* 135, 35-49.

Gómez-Pina, G., Muñoz-Pérez, J.J. Ramírez, J.L., Ley, C., 2002. Sand dune management problems and techniques, Spain, *Journal of Coastal Research*, SI 36, 325-332.

Tătui, F., Vespremeanu-Stroe, A., Preoteasa, L., 2014. Alongshore variations in beach-dune system response to major storm events on the Danube Delta coast, *Journal of Coastal Research*, SI 70, 693-699.

Please also note the supplement to this comment:

<http://www.nat-hazards-earth-syst-sci-discuss.net/3/C718/2015/nhessd-3-C718-2015-supplement.pdf>

Interactive comment on *Nat. Hazards Earth Syst. Sci. Discuss.*, 3, 2565, 2015.

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