

# ***Interactive comment on “Biogenic sediments from coastal ecosystems to Beach-Dune Systems: implications for the adaptation of mixed and carbonate beaches to future sea level rise” by Giovanni De Falco et al.***

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- 1) To avoid confusion, we will use in the abstract the same units.
- 2) For which concern the geomorphological terminology, it is not simple to use a 'conventional' terminology because different terms have been used in the scientific literature to identify the different beach segments from the geomorphological or morphodynamical point of view. We referred the handbook edited by A. Short (1999), where the beach and the dunes were well distinguished and the beach-dune system is the overall littoral unit. The beach arises from the dune toe and the seaward limit of the

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submerged beach. We will change the term beachface (which is typically used in morphodynamics) in 'subaerial beach', which include the backshore and the foreshore. In summary the geomorphological terminology will include the beach-dune system, composed by the dunes, the subaerial beach and the coastal wedge. All those terms are normally used to describe the littoral systems.

3) For which concern the sedimentological terminology, we are agree that some inconsistency is present in along the manuscript. Basically we analyzed biogenic sediments (produced in coastal ecosystem) which were transported to the beach-dune system (thus becoming bioclastic sediments). Bioclastic sediments were mixed to other sediments of various origin and composition. So we will avoid to use the terms 'terrigenous' or 'marine' to describe the nature of other sediments which are not included in the bioclastic type. We will change the term 'terrigenous' with 'non bioclastic'.

4) Our data will not allow us to make an evaluation of the beach-dune system variability related to minor sea level oscillations or to storm events. The aim of the study was to analyze the long term sedimentary budget to elucidate the role of carbonate- producer ecosystems (particularly seagrass meadow) in the beach sediment budget.

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