



Upper flow regime bedforms on Mediterranean prodeltas

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Most Mediterranean prodeltas show undulated sediment features on the foresets of their Holocene wedges. Using acoustic, geotechnical and hydrographic data as well as hydrodynamic time series we show that the sediment undulations are upper flow regime bedforms rather than sediment deformation. Various processes in the benthic boundary layer can be invoked to explain the variety of features observed across Mediterranean prodeltas displaying such bedforms. The most common mechanism for the genesis of these bedforms are likely sediment resuspension by internal waves and hyperpycnal flows. Evidence suggests that bedforms generated by these two processes probably differ in L/H ratio, with bedforms generated by hyperpycnal flows showing lower values. Additional mechanisms that may induce formation of sedimentary bedforms in Mediterranean prodeltas include waves and derived longshore currents in the shallowest bedform fields, or strong bottom currents in the deepest water bedform fields.