

## Chapter 52

# Sedimentary Mélanges and Fossil Mass-Transport Complexes: A Key for Better Understanding Submarine Mass Movements?

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**Abstract** Mélanges originated from sedimentary processes (sedimentary mélanges) and olistostromes are frequently present in mountain chains worldwide. They are excellent fossil examples of mass-transport complexes (MTC), often cropping out in well-preserved and laterally continuous exposures. In this article we will show the results of the integrated study of fossil MTCs, including sedimentary mélanges/olistostromes, with a focus on the Apennines of Italy. Fossil MTCs, especially the basin-wide ones, are composite and multi-event units involving the entire spectra of mass-transport processes. The down-slope motion of these bodies is enabled by the relative movement of discrete masses, with progressive stratal disruption of rocks/sediment involved and flow transformation. Three kinds of MTC are here

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