



Cyclicality in sediment signals from combined aeolian and fluvial systems

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Limited research has been carried out on the interaction between aeolian and fluvial systems - mainly focusing on the landforms and characteristic landscapes left by their interaction. How these two geomorphic systems interact dynamically is largely unknown - and difficult to assess from field evidence due to the long time scales these systems may operate over.

This paper describes a numerical modelling study combining a fluvial geomorphic model (CAESAR-Lisflood) and an aeolian dune slab model (DECAL). When both processes are combined it leads to a cyclicality in sediment output from both fluvial and aeolian systems. Cycles in sediment delivery coincide with episodes of river avulsion and landscape re-adjustment around dune fields. This research may have important implications for our understanding of the timing of changes in these systems as well as the build up of sedimentary architectures in aeolian/fluvial systems.