



Preliminary study on the origin of river sediment export in Europe : taking into account hillslopes characteristics and spatial variability

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Sediment fluxes within continental areas play a major role in the global biogeochemical cycles and are often at the source of soil surface degradation as well as water and ecosystems pollution. In a context where a high proportion of land surface is experiencing significant land use and climate change, it appears important to be able to carry out local and regional distributed sediment (and associated particles) budgets to assess potential future impacts induced by such changes.

Several research efforts have already investigated either global budgets at the river basin or continental scale or local detailed budget at the plot to the field scale. However, very few studies have tried to analyse the connectivity between fluxes and storages and to draw links between the different scales.

In this broad context, the objective of this study is to investigate what is the fraction of hillslope production which reaches the oceans. This paper will present preliminary results on a comparison between recent Pan-European hillslope soil erosion assessments and data on river sediment exports for a selected set of river basins.

These will allow to discuss on issues related to spatial and temporal scales for erosion, transport and storage through the channel network and the exports to the oceans.