

The relationship between sediment yield and drainage basin area

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Abstract

Hydrological data for small and intermediate sized rivers in the plains and mountains of the temperate belts of Eurasia were analysed. Total suspended sediment yield increases downstream faster than the basin area for rivers with undisturbed or slightly disturbed basins. Rivers with intensively cultivated basins are also characterized by an increase in total suspended sediment yield downstream, but this increase is slower than the increase in basin area and the specific suspended sediment yield therefore decreases downstream. Deposition very often prevails over erosion in the lower reaches of these rivers. Both relationships are not distinctly expressed for river basins with intermediate proportions of cultivated area and for large rivers.

Keywords

Agricultural activity, Basin area, Downstream trend, Human activity river, Suspended sediment yield