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Mapping and spatial analysis of suspended sediment yields from the Russian Plain

KIRILL MALTSEV, OLEG YERMOLAEV & VADIM MOZZHERIN

Department of Landscape Ecology, Institute of Geography and Ecology of Kazan Federal University, 18 Kremlyovskaya, 420008 Kazan, Russia

mlcvkirill@rambler.ru

Abstract The aim of this paper is to demonstrate the potential use of a GIS and associated database to map and analyse global patterns of sediment yield. Attention focuses on the suspended sediment yield (SSY) data available for the European territories of the Russian Federation and the variation of SSY across part of the Russian Plain. A GIS and database have been developed for the Volga River basin. The GIS system permits the drainage basins for which SSY data are available to be delineated and the database conflates information on sediment yield and the hydrological and physiographic characteristics of the individual drainage basins. A map of the variation of annual sediment yield within the Volga basin is presented.

Key words erosion; suspended sediments yield; GIS; thematic maps; hydrological stations