

Erosion in basin geosystems of the Middle Volga (from a landscape analysis perspective)

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Abstract

Human-induced erosion and accumulation processes on agricultural hillslopes have a number of principal differences from natural erosion. Together with substantially higher rates of the processes, anthropogenic erosion creates a new and higher-level spatial organization of hillslope fluvial geosystems. From the focus-areal type of spatial pattern those transform into belts comprising anisotropic groups of vectorial-organized structures acquiring emergent properties. As a consequence, quantitative evaluation of this kind erosion should be conducted separately from its natural analogue.

Keywords

Basin erosion, Landscape, Middle Volga, Neural networks, Regionalization, Regressive model