

Spatial structure of the basin erosion in the Humid Plains (based on the example of the Russian Plain)
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Introduction Geomorphological conditions and agricultural activity define the surface runoff flow and erosion on the slope of the river basins. Special spatial structure of basin's erosion is forming under Humid Plains of the Earth temperate zone in case there is 50% of the tillage square in the river basins. This structure presents in the form of erosion belts.

Methods Investigations of spatial and territorial regularities of erosion were conducted in the Middle Volga basin of Russian Plain. Erosion structure studies have been conducted in more than 300 basins with the methods of remote sensing и field research.

Results Within the regions of the basin erosion development there may be distinguished different belts or areas according to the intensity of erosion processes: 1. the absence of erosion; 2. raindrop destructing; 3. sheet erosion; 4. rill linear erosion; 5. gully erosion; 6. dominated accumulation.

The width and the area of the belts are the function of the slope declivity and length and permeable of the rocks and soils the volume and intensity of the runoff, the type of the wild and cultivated vegetation.

Discussion and conclusion The density of drainage network leads to decreasing of long flow lines. This essentially reflects the mechanism of erosion process: in the basins of the 1-2-d order two kinds are predominant erosion - sheet and rill. The basin's order increase to the 3-d in the structure of basin erosion for the first time spatially clearly shows us difference of all the kinds of the slope erosion.