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Analysis of Water regime of the Mura River by homogenized discharge data

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The Mura river is a transboundary river, flowing from Austria to Slovenia, and then along the border between Hungary and Croatia to the Drava river. The Mura river is the largest tributary of the Drava river. More than half of the watershed belongs to Austria, while the lower part lies in Slovenia, Hungary and Croatia. The Mura river watershed has 13 800 km2 in size. Watershed is merged by four countries with very well developed hydrological services. Data from 24 water stations and 99 raingauge stations were collected and analysed for the uniform period from 1961 to 2005. GIS data of DMR and stream network were collected and watershed contour lines were constructed.

Statistical analyses of discharge data were made. Flood frequency analyses were made and low flows were analyzed. Discharge data homogenized in undimenzional form. There were significant differences in water regime between upstream Alpine part of the watershed and downstream sub watersheds on Pannonia plane. There were also significant impacts of water use on hydrological regime along the river stream.