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THE IMPACT OF RESERVOIRS ON RIVERS MORPHOMETRY, PRUT RIVER CASE STUDY

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One of the most important hydraulic mega structures in Romania, classified as the third largest in Europe, is the Stâncă Costești dam, on the Prut River.

Hydrological parameters of the Prut river (for example liquid and solid debit) were severely modified after the building of the Stâncă Costești dam.

This study quantifies some of the geomorphic effects on the river active channels and alluvial plan, in the context of the overall changes occurring during the last century (i.e., 1915-2015). The analysis was based on the different editions of the available topographic maps and aerial photos, which have recorded historical configurations of the Prut River channel. For each time period, several morphometric indices, such as minor riverbed width, major riverbed width, sinuosity index and meander curvature, were measured using GIS and they were further interpreted.

Results indicate that after the Stâncă Costești dam was constructed, the morphometric indices evolved differently upstream and downstream to Stâncă Costești reservoir.

