



Examination of dam induced sedimentation of small reservoir near Brennbergbánya

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The dams' affects on the stream system also involve accelerated sedimentation of reservoirs, change of water and sediment regime. In consequence of sedimentation the lifetime and the recreational potential of reservoirs decrease and management practices have to be applied. The area of our study is a small forested catchment, where the erosion of forested land and the sedimentation of Brennberg Reservoir were investigated in relationship with each other.

The Brennberg Reservoir has been built in 1981. It has been silting up forcefully since that time. It has to be dredged with hydraulic earth-moving to preserve its landscape-aesthetical function for the future. We have surveyed the surface to establish the rate of sedimentation. The results of this measurement were processed with a GIS software (named Digiterra Map). There were several uncertainties during our surveying in the field. Therefore three other methods were applied based on GIS and a simply mathematical calculation. The amount of deposited sediment was determined with these methods. Then we compared the results to each other. The annual specific soil loss was estimated according to results of our measurement.

Keywords: dam impact, reservoir sedimentation, GIS