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In Serbia, the relief is predominantly hilly and mountainous, intersected with numerous rivers. The greatest number of watercourses are small torrents; however the proportionally large rivers also have a distinctive torrential character. The highest parts of the catchments are at the altitudes above 1500 m, while their confluences are at the altitudes of 200 - 300 m. The catchment and channel slopes are extremely steep. So, as the initial natural preconditions are satisfied, torrential floods are the consequence.
Although the Južna Morava catchments were regulated by erosion control works, during the last decades there were numerous torrential floods. Some of the floods had disastrous proportions, not recorded in Serbia or in Europe.
The flood of river Vlasina in 1988 was presented to the professional public several times. This flood was not an isolated case. Many large-scale torrential floods occurred in Serbia from 1994 to 2007. As there were floods also in 2007, the causes of the recorded floods had to be analysed.
The analysis pointed out a series of scenarios which were the causes of disastrous torrential floods, and also the disadvantages of the actual system of torrent and erosion control. Special attention was focused on the floods which resulted from sudden snow melting.
This paper will present the results of the analyses of the extreme torrential floods of the rivers Nišava and Vlasina.

Key words: Flood, torrents, torrent control, erosion control