



## **Results of the post flash-flood disaster investigation occurred in the Transylvanian Depression during the last decade (2001-2010)**

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Flash-flood disasters are very rare in the Transylvanian Depression. Therefore, none of the significant flash-floods that hit Romania during the second half of the 20th century is found in the study region.

During the last decade (i.e. 2001-2010 period), the occurrence of such events has increased throughout the country, as the flash-floods are listed first in the natural disaster category, in terms of life losses. The study area was also impacted by these events. The three most significant flash-floods occurring in the study area during the last decade had a significant impact on several localities situated at the Transylvanian Depression border, where the slope gradient of the micro-basins is higher. Flash-floods affecting localities which belong to Feernic, Ilişua or Ciunga basins, were possible even with the implementation of leading technologies that provide nowcasting warnings and the adoption of the National Strategy for Flood Risk Management.

Based on the post flash-flood investigation (analysis of rain gauge measurements and Doppler Radar images, cross-sectional survey for peak discharge estimates, the official damage reports, the operational flood management reports, the interviews and other data), this study intends to find out which were the causes that have led to disaster in a region, rarely affected by such kind of events. The results showed that, in addition to high stream power and unexpected character, common to flash-flood hazards, the inappropriate flood risk management measures, both pre-event and during its operation, increased the dimension of negative effects leading to tens of life losses and millions of dollars economical damages.