



Main flood peaks in the medieval Carpathian Basin (1000-1500): Annual and decadal overview

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The analysis of over 140 reported floods is mainly based on contemporary legal evidence (charters), partly on other types of contemporary documentary evidence. Majority of sources contains data on individual flood events (i.e. occurrence, seasonality, magnitude). Concerning main flood peaks, evidence on annual and multi-annual (decadal, multi-decadal) level is also available. Despite data increase in the 13th century, only in the 14th-15th centuries documentation is representative enough to draw further conclusions. Apart from secondary flood peaks (probably in the mid-13th century and the turn of the 13th-14th centuries), three main periods with high flood frequencies are detected: 1330s-1350s, 1390s-1430s, and the late 1480s-1490s (continuing in the early 16th century). The first major flood peak was primarily reported in the eastern Carpathian Basin (the Tisa catchment), and can be characterised by a number of high-intensity flood events (with 1342-1343 in centre). During the second major, prolonged flood peak of 1390s-1430s, and that of the third, late 15th century one the importance of floods occurred on the Danube and in the Danube catchment area has to be as well highlighted. Moreover, in the first half of the 15th century long-term hydrological problems (prolonged high water-level and high flood frequency problems) can be identified. In some cases high flood-frequency periods were accompanied by documented hydromorphological impacts and some impacts on society can be also detected. Results show good agreement with the decadal precipitation reconstruction based on speleothem investigations carried out in North-Hungary.