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Damage due to torrent events 1972-2004 in Austria

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Losses due to torrent events have been monetarily assessed for the period 1972-2004, using an ex-post approach. The extent of direct monetary damage of 4,894 torrent events in Austria has been calculated. The methodology of damage assessment was carried out on an object level and is based on average replacement costs for affected elements. Object-specific vulnerability factors determined the extent of damage with respect to the intensity of the event and the process types. The calculated monetary damage has been spatially and temporarily analysed, as well as the process properties and the related intensities. As a result, damage due to torrent processes can be better evaluated with respect to specific regions and specific periods of time in the Austrian Alps, which leads to an enhanced risk management within endangered areas. Furthermore, public expenditures for mitigation measures have been compared with the cumulative damage extent in order to assess the efficiency of technical protection measures.