



Costs and deaths of landslides in Europe

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Landslides cause human and large economic losses worldwide and also in Europe. However, the quantification of associated costs and deaths is highly underestimated and still incomplete, thus the estimation of landslide costs and risk is still rather ambitious. Hence, in this study a spatio-temporal analysis of fatal landslides is presented for 27 European countries from 1995-2014. These landslides are mainly concentrated in mountainous areas. A total of 1370 fatalities are reported resulting from 476 landslides. The highest fatalities with 335 are observed in Turkey. In general, an increasing trend of fatal landslides is recognized starting in 2008. The latter is almost certainly triggered by an increase in natural extreme events such as storms (i.e. heavy rainfall) and floods. The highest annual economic loss is observed in Italy with 3.9 billion Euro per year. In contrast, in Germany the annual total loss is only about 0.3 billion Euro. The results of this study serves as an initial baseline information for further risk studies integrating landslide locations, local land use data, cost data, and will therefore certainly support the studied countries to better protect their citizens and assets.

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