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MAP OF SITES AFFECTED BY LANDSLIDES AND FLOODS WITH HUMAN CONSEQUENCES IN ITALY

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We have compiled a database of landslides and floods that occurred in Italy between AD 1279 and 2002 and caused deaths, missing persons, injuries and homelessness. Analysis of the database indicates that more than 35,539 people died, went missing or were injured in 2,579 landslides and floods. In the database damage caused by debris flows is reported as landslide damage. We mapped the location of the sites where harmful landslides and floods have occurred at 1:100,000 or 1:25,000 scale and we prepared a map showing the location and geographical distribution of landslides and floods with human consequences in Italy for the period between 1279 and 2002. In the map the number of fatalities (deaths and missing persons) is shown in three classes, while the numbers of injured, and the number of evacuees and homeless are shown in two classes. Harmful events were inventoried in 26.3 per cent of the 8,103 Italian municipalities. Fatal events were most frequent in the Alpine regions of Northern Italy and were caused by both floods and landslides. In Southern Italy, landslides were the principal agent of fatalities and were most numerous in Campania Region. Casualties were most frequent in the autumn. Fast moving landslides caused the largest number of deaths. They included rock falls, rock slides, rock avalanches and debris flows. In order to assess the overall risk posed by these processes, we merged the historical catalogues and identified 2,281 Şhydrogeomorphological eventsŤ that triggered single or multiple landslides and floods. We estimated individual risk through the calculation of mortality rates for both landslides and floods and compared these rates to the death rates for other natural, medical, and human-induced hazards in Italy. We used the fre-

quency distribution of events with fatalities to ascertain the magnitude and frequency of the societal risks posed by landslides and floods. We quantified these risks in a Bayesian model that describes the probabilities of fatal flood and landslide events in Italy.