



Landslides caused by the recent heavy snow and rainfall (December 2008) on the Island of Majorca (Spain). confirmation of previous forecast

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Between 14th and 16 th of December 2008, the island of Majorca (Balearic Islands, Spain) experienced the heaviest snow rainfall for the last 50 years. In the central area of the Tramuntana Range, a mountainous chain located in the northern part of the island, the highest values of maximum rainfall in 24 hours ever recorded have been registered (data available since 1944). On 15th December 2008, maximum rainfall of 276 mm and 159 mm were recorded in Lluc and Valldemossa respectively, both of which located in the heart of the range. This event marks the end of one of the wettest and coldest autumns in living memory.

Numerous landslides have been triggered by this heavy rainfall - earth slides, rockfalls and even rock avalanches. Ten relevant movements have been registered, some of which affected the road network. The location of the slope movements as well as the intense rainfall which triggered them, confirm a predictive model developed by the authors (Mateos et al., 2007). This model predicted a rainfall threshold of 130 mm in 24 hours to trigger movements, being the central part of the Tramuntana Range the greatest hazard degree area for this kind of natural processes.