

Interactive comment on “Multidisciplinary Approach to Rainfall-Triggered Rockfalls: the Case Study of the Disaster of the Ancient Hydrothermal Sclafani Spa (Madonie Mts., Northern-Central Sicily, Italy) in 1851” by Antonio Contino et al.

Anonymous Referee #2

Received and published: 24 February 2017

The authors should be acknowledged for their efforts in reconstructing the rockfall event. However, in my opinion, their work lacks of a significant scientific contribution and novelty.

The manuscript presents a summary of the historical documents describing the event. Contrary to the stated by the authors, the approach presented is not multidisciplinary as the results of the aerial photointerpretation and satellite images are not included. Both the geological and geomorphological contexts, including maps and figures, are

C1

described at a scale too small for a proper appraisal of the predisposing factors in the slope and the development of the event.

No attempt is made to estimate the volume of the detached rock mass, the trajectories and extent of the deposits. The description of both predisposing and triggering factors is vague and not based on directly observed features in the rockfall source and other evidences. In fact, nothing is known about key features such as the rock mass strength, the joint pattern or the failure mechanism (p9, lines 280-283).

The conclusions do not reflect the content of the paper as the dynamics of the event has not been addressed and it is unlikely that the details provided could contribute to the quantification of the susceptibility of the slope to failure. The current stability conditions of the slope are not analyzed. Finally, I strongly disagree with the statement (p11, lines 370-371) on that the location, scale and frequency of rockfalls are unpredictable.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., doi:10.5194/nhess-2016-397, 2017.

C2