Nat. Hazards Earth Syst. Sci. Discuss., 3, C2083–C2086, 2015
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Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "The 9 September 2010 torrential rain and flash flood in the Dragone catchment, Atrani, Amalfi Coast (Southern Italy)" *by* C. Violante et al.

Anonymous Referee #2

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The article deals with analysis of a flash flood in southern Italy. The topic is of sure interest to NHESS, and the article quite well structured, but it needs some reworking, for which I suggest a minor revision. The main points are listed as follows. Several terms are probably translated not correctly from Italian (bridles, entombment, fulminations, etc.). I tried to correct them whenever I could, but I suggest a thorough revision by an English-native speaker

Human actions

Something more could be said about the (negative) role played by man in managing

this type of situations. For instance, Calcaterra et al. (2003) describe other effects related to mismanagement and lack of maintenance of old channels built to allow flow of water and mud in the Sarno-Quindici area. Given the similarity in the processes, you could also mention the famous 1998 event.

Calcaterra D., Parise M. & Palma B., 2003, Combining historical and geological data for the assessment of the landslide hazard: a case study from Campania, Italy. Natural Hazards and Earth System Sciences, vol. 3 (1/2), p. 3-16.

Historical documentation

I think it is worth at the beginning of this section to briefly introduce the importance of historical analysis for landslides and floods, especially in a region as Campania (but more in general in Italy), with a long history and huge documentations. This to highlight to readers from other countries the need to make an effort about this type of research, which is very often neglected by many scholars.

Suggested references:

Calcaterra D. & Parise M., 2001, The contribution of historical information in the assessment of the landslide hazard. In: Glade T., Albini P. & Frances F. (Eds.), "The Use of Historical Data in Natural Hazard Assessments", Advances in Natural and Technological Hazards Research, vol. 17, Kluwer Academic Publishers, 201-217.

Glade T., Albini P. & Frances F. (Eds.), The Use of Historical Data in Natural Hazard Assessments. Advances in Natural and Technological Hazards Research, vol. 17, Kluwer Academic Publishers.

Gringeri Pantano F., Nicoletti P.G., & Parise M., 2002, Historical and geological evidence for the seismic origin of newly recognised landslides in south-eastern Sicily, and its significance in terms of hazard. Environmental Management, vol. 29, n. 1, 116-131.

Marchi L. and Tecca P.R., 2006, Some observations on the use of data from historical documents in debris flow studies, Nat. Hazards 38, 301–320.

Tropeano D. and Turconi L., 2004, Using historical documents for landslide, debris flow and stream flood prevention, Applications in Northern Italy, Nat. Hazards31, 663–679.

Karst (?)

The study area consists of limestones, that is a rock mass prone to karst processes. I would appreciate to have discussed briefly in the article the possible role of karst on the observed effects of flash flood. Is there any hint at Amalfi to think that the presence of karst networks might have played a role in increasing the amount of water, or concentrating it into strong pulses? I believe the article should be more complete, if some about this is going to be included. At this regard, I suggest the following suggestions, and particularly the Gutierrez et al. (2014) where there is a wide bibliography, even about floods in karst environments.

Parise M., 2003, Flood history in the karst environment of Castellana-Grotte (Apulia, southern Italy). Natural Hazards and Earth System Sciences, vol. 3, no. 6, p. 593-604.

Gutierrez F., Parise M., De Waele J. & Jourde H., 2014, A review on natural and human-induced geohazards and impacts in karst. Earth Science Reviews, vol. 138, p. 61-88, doi: 10.1016/j.earscirev.2014.08.002

Jourde, H., Roesch, A., Guinot, V., Bailly-Comte, V., 2007. Dynamics and contribution of karst groundwater to surface flow during Mediterranean flood. Environ. Geol. 51 (5), 725–730.

Figures

North is missing in figures 1 and 2 I am afraid that the small writings in figure 4 and 7 are not readable, please enlarge them

Please also note the supplement to this comment:
http://www.nat-hazards-earth-syst-sci-discuss.net/3/C2083/2015/nhessd-3-C2083-2015-supplement.pdf

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 3, 4715, 2015.