

Interactive comment on “Classification of Karst Springs For Flash Flood-Prone Areas in Western Turkey” by M. Demiroglu

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Flash floods are among the most important issues that affect the civil infrastructures. Identification of flood -prone areas is highly beneficial to prevent monetary and life losses due to floods.

For two reasons; it is important to comment on the paper although a deep geological background is needed for the technical details presented in the paper. However, the paper can be commented for its general purpose rather than its technical details.

One point making the paper important comes from the effect of the geology on flash floods we face now more frequently than before due to natural but mainly to manmade changes we have in hydrological watersheds. Flash floods are becoming an issue of urban areas mostly due to manmade changes compared to the rural areas where

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we may expect natural changes. Because of its importance as summarized, flash floods have been the main topic for recent research studies (see Raynaud et al., 2015; Gazquez et al., 2015 among others).

The second point is the hydrology of the karst areas. Karst hydrology has been found interesting due to the fact that karst watersheds should be analyzed differently than the non-karst watersheds. In a karst watershed, surface hydrology is insufficient to understand the hydrological budget. Karst structure in and around the watershed should be taken into account as a component of the hydrological budget of the watershed. A very recent example related to the paper under discussion was performed by Eris and Wittenberg (2015) that is worth to be mentioned in the paper.

Based on these two points of a hydrological (but not geological) point of view, it is thought that the paper can give an insight into hydrology for further incorporation of geology through the karst analysis. Above mentioned citations can be properly made in the paper to emphasize the importance of karst hydrology.

References:

Eris E & Wittenberg H (2015) Estimation of baseflow and water transfer in karst catchments in Mediterranean Turkey by nonlinear recession analysis, *Journal of Hydrology*, 530, 500-507.

Gazquez et al (2015) Flash flood events recorded by air temperature changes in caves: A case study in Covadura Cave (SE Spain), *Journal of Hydrology*, in press, doi:10.1016/j.jhydrol.2015.10.059

Raynaud et al. (2015) Combining hydraulic model, hydrogeomorphological observations and chemical analyses of surface waters to improve knowledge on karst flash floods genesis, *Proc. IAHS*, 369, 55–60, 2015

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