

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

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Dear Natascha Töpfer;

Two important issues are highlighted in the paper entitled “Classification of Karst Springs For Flash Flood-Prone Areas in Western Turkey” 1. Heavy rains based on global climate changes cause recharge increasing in karst areas. 2. This heavy recharge in shallow circulated with low storage karst aquifers is one of the reason for flash floods and try to classify karstic springs which effective in flash floods using by seasonal hydrochemical measurements differences. This classification is essential to provide important insight for karst flash flood and useful from natural hazard man-

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agement perspective in Turkey. So it is suitable for publication but some additions must be made taking into account the following comments. Numerous studies have been conducted to determine aquifer characteristics of the discharging springs using the physico-chemical parameters of karst springs, since the different reservoirs will have a characteristic chemical signature (Aquilina et al. 2005). Studies and uses of in situ groundwater hydrochemical measurements, which are often neglected, are important for investigations. They give results that can be used directly to identify the origin of groundwaters and their flow regimes, especially in karstic regions, as compared with most other groundwater testing. In karstic aquifers, temporal variations in the chemistry of the springs are often related to the physical characteristics and permeability of the carbonates, and this has led to the use of these characteristics to different types of hydrodynamic behaviour of the karstic system drained (Chicanoa et al., 2001). However, this results should be supported by hydrogeology and isotopes, other physical characteristics. Author should mention that the classification offered here is an initial step to determine the storage and flow conditions of karst aquifers. Furthermore, the author should also mention that the additional detailed studies to support this classification should be done. Other technicals corrections and details marked on the paper.

Aquilina, L., Ladouche, B., Doerfliger, N., 2005. Recharge processes in karstic systems investigated through the correlation of chemical and isotopic composition of rain and spring-waters. *Applied Geochemistry*, 20, 2189-2206. Chicanoa M. L, Bouamama, M., Vallejosb A., Boschb A P.2001, Factors which determine the hydrogeochemical behaviour of karstic springs. A case study from the Betic Cordilleras, Spain. *Applied Geochemistry*, 16, 1179-1192.

Sincerely yours,

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Please also note the supplement to this comment:

<http://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2016-6/nhess-2016-6-RC1->

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supplement.pdf

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