

Author's response (AR) to reviewer #1:

We would like to thank the reviewer for his/her insightful comments.

*RC: Relationship between the propensity index for surface runoff and effective infiltration coefficient (runoff coefficient) should be better explained or at least more detailed discussed. The consultation of the paper "Monthly and annual effective infiltration coefficients in Dinaric karst: example of the Gradole karst spring catchment" published in Hydrological Sciences Journal 46:2, 287-299, DOI: 10.1080/02626660109492822 will be useful for this.*

AR: Mean altitude of the recharge area of the spring is app. 1700 m asl and soils are shallow and sparsely vegetated. In some parts losses due to evapotranspiration (ET) may play a role for the general soil moisture status in summer (e.g. areas with high local groundwater levels, water-logged areas). These properties are incorporated into the mapping and are classified to a relative high surface runoff propensity. It can be that, after long dry periods, these areas are drier than the assumption for the index (mean soil moisture status). We will address this point and include the suggested paper into the discussion, but long-term spring water balance aspects are not an issue in the paper.

*Role of vegetation in different seasons should be better explained.*

AR: Since mapping concentrates on the summer months and heavy rainfall events, this plays a minor role for surface runoff generation. Influence of ET losses in some areas see AR above. This is an interesting point though, and we will make a comment to this effect in the revised paper.

*RC: In karst terrains very important role plays groundwater level. This fact has to be stressed.*

AR: While the karst groundwater level is very relevant for spring discharges it is not really relevant in this area for runoff generation. The karst massif reaches altitudes of more than 2200 m asl and karstification is very deep. There are a few exceptions where the local groundwater level approaches the surface, where it is accounted for by the index as described in the mapping (e.g., local springs, GW-exfiltration, water logging). Again, we will make a comment to this effect in the revised paper.