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Hydrology and Earth System Sciences Discussions

Interactive comment on "Research on the initial abstraction – storage ratio and its effect on hydrograph simulation at a watershed in Greece" *by* E. A. Baltas et al.

Anonymous Referee #1

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This paper describes the application of the SCS (Soil conservation service) method to simulate the discharge of a 15m2 watershed in Greece. The SCS equation is an empirical model that is often used in practical applications.

My main concern is that this paper reflects more an engineering approach than a research approach, and for this reason I don't find this journal the most appropriate location for it.

The purpose of the paper, clearly stated in the abstract and at the end of the introduction, is the application of the tool itself, rather than the understanding of catchment behaviour. The introduction does not link to open questions or to problems that have

been poorly addressed in the literature, and focuses on the specific case study only. The methodology follows a manual-like approach, which does not introduce relevant innovations. Also the discussion and conclusion sections focus on the interpretation of the results in the specific case study, and do not relate the findings of this paper to other works.

With respect to the SCS equation, my personal opinion is that it is an old fashioned method to explore catchment behaviour, perhaps superior to more empirical approaches such as the rational method, but inferior to other approaches, such as, for example, conceptual models.

Hence, while I think that this work may be interesting as a benchmark for engineering applications, I do not find its contribution particularly relevant at the level of research.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 4, 2169, 2007.