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Hydrology and Earth System Sciences Discussions

Interactive comment on "Determining spatial variability of dry spells – a Markov based method, applied to the Makanya catchment, Tanzania" *by* B. M. C. Fischer et al.

Anonymous Referee #1

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The paper is indeed useful as unlike what we did, it took into consideration distribution of rainfall over the locality with soil profiles and evaporation as potential inputs to determine spatial dry spell occurrences vulnerability to local agriculture. The effort to develop spatially distributed critical dry spell map made out of distributed soil, potential evaporation maps and dry/wet spells will indeed be useful for agricultural planning especially if it could be done for the entire country in future. Since in Tanzania a rainy day is considered as any day with at least a millimetre of rainfall, future work may consider using this threshold for the sake of compatibility of other research works in agriculture/, water resources, energy (hydro), forestry etc.

While going through the work, I realised there are some citations which were erroneously captured in this paper and perhaps they need to be adjusted to fit the correct citation:

Example:

- Falkenmark, 1998; Sivakumar, 1991 and Savenije, 1999 were cited in the document and in the reference list differently; and

- There are two citations which featured in the reference list but not in the document. They include PBWO, . . . 2007 and USGS, ... 2007.

Authors may wish to look at this.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 11707, 2012.