

***Interactive comment on “A new approach to model the variability of karstic recharge” by A. Hartmann et al.***

**A. Hartmann et al.**

[andreas.hartmann@hydrology.uni-freiburg.de](mailto:andreas.hartmann@hydrology.uni-freiburg.de)

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We thank anonymous referee #1 for his valuable review. We prepare to include the following changes on the manuscript according to his specific comments:

1. The title will be changed to “A new approach to model the variability of karst aquifer recharge”.
2. The missing word in the manuscript will be added and the redundant word in the figure caption will be deleted.
3. In the abstract “perceptual model” will be replaced by “conceptual model”.
4. First paragraph will now focus on the role of the epikarst instead of the truly very

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often mentioned 25% of karst water resources:

For a sustainable groundwater management quantitative knowledge about groundwater recharge is required (Vries and Simmers, 2002). In karst regions, recharge dynamics are controlled by the epikarst. It develops due to higher dissolution activity of the carbonate rock near the surface (Williams, 1983). Field research (Aquilina, 2006, Williams, 1983, 2008) as well as modeling approaches (Perrin 2003, Kiraly et al., 1995) showed that the epikarst acts as temporary storage and distribution system for infiltrating water into karst systems.

Karst aquifer recharge can be estimated by ...

5. We would like to thank for the suggested study by Pronk et al. (2009), which will be included in the revised manuscript.

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