Hydrology and Earth System Sciences

Discussions

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Interactive comment on "Assessing the perturbations of the hydrogeological regime in sloping fens through roads" *by* Fabien Cochand et al.

Anonymous Referee #3

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Dear authors,

Your answer sounds quite promising and I am curious about reading the revision. If you would extent your story according to the listed points, I see potential for an improvement of your manuscript.

However, I still not really see the connection of the tracer test and modelling. I agree that a quantitative coupling (e.g. comparison of simulated and observed concentrations) will be very challenging caused by parameter heterogeneities, which are difficult to capture. Also, I can somehow agree to the argument that you want to provide a general modelling framework. However, this leaves me with the question: Why you

incorporate the tracer test at all? How does it support your synthetic model? Besides showing natural heterogeneities, you just prove that a L-drain constitutes a preferential flow path. Isn't that a bit too trivial?

Moreover, regarding the term novelty, we seem to have a slightly different opinion. For me novelty should be more than the application of an existing model to just a new case. Sure, not all HESS papers present an entirely new model or method, but they should present at least a creative solution or new combination of methods.

I encourage you to strongly revise your manuscript by adding some new ideas regarding e.g. drying up of fens or gully erosion (could be also something else). Basically, you should dig a bit deeper, but I am optimistic that you are able to do it.

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2018-476, 2018.