Response to Referee #1

We would like to thank Referee #1 for the assessment of our manuscript and the constructive feedback. The referee raised several issues, which we address below with the referee comments written in italics.

This manuscript used three conceptual hydrological models to model evaporation under different vegetation conditions. In the current version, it isn't clear how to deal with the impact of changing vegetation in the hydrological models. More descriptions on the parameterization of vegetation, including root depth, are required.

These conceptual models generally use a few parameters that can be linked to vegetation. In general, they use one or several parameters that determine the storage in the root zone, which is related to rooting depths, although not being exactly the same. At the same time, a threshold soil moisture is usually defined after which the transpiration occurs at a potential rate. These parameters are all calibrated for the conceptual hydrological models, for the different cases in our experiments. Hence, changes in vegetation are represented by different values for the vegetation-related parameters, obtained by calibration.

We will add a more extensive description per model which parameters are related to vegetation. In addition, we will add a table with the model parameters and a description.

I suggest a flow chart for the experimental design, which can help readers more easily understand the design scheme.

Thank you for this idea, we will add a flow chart with the experimental design.

It is interesting that n might initially increase in response to suddenly reduced P, and only slowly returns to into original. It is valuable to exhibit the evolution process that the parameter n slowly returns to its original, and how long it can return to its original value. In a previous study, Zhang et al. (2016, GRL, doi:10.1002/2015GL066952) found a linear relationship of n with vegetation during 1982-2011, which possibly indicates that n can't return to its original for a 30-years period.

Thank you for this valuable remark and the reference. We will add this to our discussion.

I agree with the authors that vegetation is a result of climate. Yang et al. (2014, JoH, http://dx.doi.org/10.1016/j.jhydrol.2014.05.062) found that the parameter n has a logarithmic relationship with catchment slope, but doesn't have a significant relationship with vegetation coverage. I guess that vegetation is the result of climate and catchment characteristics (such as slope, topography, permeability and etc.), and consequently the relationship of n with vegetation can be contained in the relationship of n with catchment characteristics.

Thank you for this additional confirmation of our finding that vegetation stabilizes the n-value for a given catchment by its adaptation to the catchment properties. We will add this to our discussion.