

Hydrol. Earth Syst. Sci. Discuss., author comment AC1  
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## Response to the comments of Reviewer1

Lionel Benoit et al.

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Author comment on "Stochastic daily rainfall generation on tropical islands with complex topography" by Lionel Benoit et al., Hydrol. Earth Syst. Sci. Discuss.,  
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Dear Editor and Reviewers,

Thank you for your detailed comments and suggestions about our manuscript entitled "Stochastic daily rainfall generation on tropical islands with complex topography".

In response to your suggestions, we propose to expand the discussion section of our manuscript to better justify our modelling choices, and to contrast them with alternative approaches in the field of stochastic weather generators, in particular Hidden Markov Models (HMMs) and Generalized Linear Models (GLMs). In addition, we will improve the conclusion section to better describe the advantages and limitations of our model, and to precisely delineate its application range. We will also improve the description of the model to address the reviewers' inquiries about model formulation.

More details about the proposed improvements can be found in our point-by-point responses in the supplementary pdf documents. In these responses, "RC" denotes a reviewer comment and "AR" denotes our response to the comment. Line numbers refer to those from the original manuscript (<https://doi.org/10.5194/hess-2021-453>).

We hope that our responses will address your concerns, and that our proposed improvements will meet your expectations.

Best regards,

Lionel Benoit, on behalf the authors.

Please also note the supplement to this comment:

<https://hess.copernicus.org/preprints/hess-2021-453/hess-2021-453-AC1-supplement.pdf>