

Interactive comment on “Impact of climate change on water resources in a tropical West African catchment using an ensemble of climate simulations” by Y. Yira et al.

Anonymous Referee #1

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The paper presents a study about the impact of climate change on water resources in a small catchment in West Africa. It is generally well written and presents interesting findings. The methodology is, with the exception of the new interpolation method, standard and also the results are in line with most other studies in West Africa and analysis of Cordex Africa for West Africa, projecting huge uncertainty even in the direction of trend. The novelty of the study, mentioned by the authors, is the small catchments size.

The paper has two major shortcomings and some minor issues. The newly introduced method of using single projections of a grid that surround the actual catchment is new and not justified in the article. Why was no standard interpolation or 9-point fil-

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ter method used? The climate input of a square of 250 km x 200 km is used to assess the impact in a 18 x 11 km catchment without explaining the theoretical background of the approach or showing that the climatic differences do not affect the hydrology.

Another study is cited (Yira et al. 2016), which analysed the impacts of Land use and land cover changes on the hydrology. These results would be very interesting when talking about climate change impacts and I suggest to include them in the discussion of the paper.

All other comments are added directly into the PDF.

Please also note the supplement to this comment:

<http://www.hydrol-earth-syst-sci-discuss.net/hess-2016-387/hess-2016-387-RC1-supplement.pdf>

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