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Interactive comment on "Assessing the impact of hydrodynamics on large-scale flood wave propagation – a case study for the Amazon Basin" *by* Jannis M. Hoch et al.

Anonymous Referee #1

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The paper investigates the benefits of coupling hydrological and hydrodynamic models to simulate large-scale flood propagation and inundation processes. The topic is very relevant and fits the journal's scope. Also, I found the paper well written and nice to read. Yet, I have two major concerns that I think should be addressed by the authors.

1) As models with more parameters obviously tend to fit data better, one of the traditional approaches to compare different model structures is to calibrate the alternative model configurations by using a set of data and then validate them against another (independent) set of data. It was not entirely clear to me if this was done here and how exactly model parameterisation was implemented. I think this is a crucial aspect because literature in both hydrological and hydraulic modelling has shown that the im-

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pact of model parameters is often as significant as the impact of using specific model structures.

2) The focus of this case study is on flood inundation in a part of the Amazon basin, which is also the core of this modelling effort. Yet, numerical results are not compared in terms of flood extent. Isn't there any satellite data to get flood extent information? If not, is this the right case study to test this new methodology?

In conclusion, this is a very nice paper tackling a useful and timely issue, but it should: i) clarify the parameterization strategy and its impact on the conclusions as well as ii) justify the choice of the test site and the absence of a model comparison in terms of flood extent.

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