

Interactive comment on “Action-based flood forecasting for triggering humanitarian action” by E. Coughlan de Perez et al.

Anonymous Referee #2

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This article illustrates a very interesting example of use of a prototype global forecasting system for taking flood preventive actions, in areas where no alternative flood warning is available. The topic is certainly of high interest, considering that the forecasting system used has global coverage and could be potentially be applied in other regions lacking flood preparedness. The authors are faced with trying to best use the limited amount of ground data available in the region, and devised a clever approach making use of news, media reports, (few) discharge time series, and the output of a global forecasting model. The research issue is well contextualized, methods are rather simple but clear and results are adequately discussed.

As a general comment, I'm surprised not to see some more detail and analysis on the recent event of November 2015 (mentioned on P4, L27 and P14, L21), given that the authors stress the scarcity of data and the limited sample of floods in the observation

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period. The current work is based on a relatively small sample of data, making the noise of uncertainty often larger than the actual signal. Hence, an additional event would certainly benefit the analysis.

Further comments

All figures should be cited in the text. This is now not the case for Fig. 1 and 2. Please add a reference.

P7, L14: Flooding is a measure of hazard, not of impact, hence it is independent of exposure and vulnerability. Unless the authors here mean flood risk. Please check.

P8, L1: The clustering algorithm needs a supporting reference.

P8, L5: Not clear how the text in the footnote 2 relates to the flood location. Please clarify.

P8, L11-12: Are these 85-15% obtained by crossing GloFAS forecasts with news report? It's not clear from the text.

The text in page 9 ultimately describes figure 3 and 4 (though with no reference to the two figures). In my opinion this should go to Sect. 4, while Sect. 3 should only include the methodological approach, that is the theory underpinning the FAR, reliability diagram, block bootstrap.

P10, L10: reading through the text it appears that the 95% threshold was chosen after matching the GloFAS data with media reports, rather than an initial qualitative selection.

P13, L21: I suggest rephrasing this, as it currently suggest that the 95% is a general threshold valid for any location. In reality this depends on different factors, not only on the local exposure and vulnerability, but certainly also on the shape of the hydrograph and in turn on the upstream area. This is a consequence of using percentiles in place of extreme value statistics, which are more commonly used for such analyses.

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