

Anonymous Reviewer #2

The authors thank Reviewer #2 for critical comments on the manuscript. We disagree with most of the points of view from Reviewer #2 and explain the reasons from the authors's points of view.

I read this paper with interest, because of the mention of infiltration wells to reduce flood peaks. This approach is similar to the introduction of so-called green infrastructure in cities being trialed in different parts of the world.

However, unfortunately, the paper came across more as a consulting engineer's report than a journal article that is aimed to be published in a top hydrology science journal. Even though the paper talks about the effect on floods, there is no test of the predictions through observations – this is just a design study, and I also understand that such a prediction cannot be tested due to lack of appropriate data. Therefore, this paper may be more suitable for an engineering hydrology journal, such as the Journal of Hydrologic Engineering.

The authors disagree with Reviewer #3 who considers this manuscript as a consulting engineer's report than a journal article. There are few things that the authors believe that this manuscript can be considered as a journal article and can be published in a top hydrology science journal such as HESS. The writing of this manuscript follows the rule for writing a journal article, i.e. based on research, method or approach is clearly explained, results are clearly explained, and the manuscript is presented in a systematic way and discussed in an objective manner.

The prediction in this study cannot be tested due to lack of appropriate data, it is true because especially flow data is very limited. There is no long period measurement of flow data in this catchment to validate the prediction. However, the approach used in this study provides valuable insights on how land use change will increase flood peak. Recently, some areas which are not used to flooding have experienced flooding recently and the areas which usually experience flooding the magnitude of flood peak increases. All of these are related to land use changes. Therefore research on the impact of land use changes are important and solution for the problem needs to be examined too. This manuscript describes the problem, uses an approach, presents the results and discusses it in scientific way.

While I can understand the case study aspect of this paper, for publication in HESS, the authors should try and frame it as a broader study, with the case study in Indonesia a particular case study. More effort should be spent towards the development of general conclusions that can be extrapolated to other places.

One possibility to overcome this limitation is to present the work as the effects of withinstorm rainfall distribution, and how this impacts on the flood peak, with and without the presence of infiltration wells (not just the effects of infiltration wells on flood peaks – therefore a slight twist to the framing of the problem). This could be interesting, and the results could be extrapolated to other places. This is the only thing I can think of to turn the paper around, but it will require considerable re-working of the paper, and of course rewriting the paper.

The first author have an article journal published in HESS (D. I. Kusumastuti, I. Struthers, M. Sivapalan, and D. A. Reynolds, Threshold effects in catchment storm response and the occurrence and magnitude of flood events: implications for flood frequency, Hydrol. Earth Syst. Sci., 11, 1515–1528, 2007) which used the effect of withinstorm rainfall distribution approach to see the effect on flood peaks. In that paper withinstorm rainfall distribution is classisfied into less, medium and high variability to represent regions with particular type of withinstorm pattern. However, the authors consider that the approach used in this study, especially the approach to define design rainfall, is more appropriate for this current manuscript. The results and conclusion may not be able to be extrapolated to other places, but the approach can be used elsewhere.

A practical concern for me is that the presence of these infiltration wells could very well be a safety hazard for people and animals, especially the density that the authors are talking about. Are the authors, and the Indonesian authorities serious about the construction of these wells?

The authors and the Indonesian government are serious about the construction of infiltration wells. In fact, in Lampung itself and other places in Indonesia infiltration wells have already been implemented but the number is still limited. Local government consider to make an Act to encourage people about implementation of these walls.

Finally, once it is revised for technical content, the paper must go through a language editor: there are far too numerous language errors that I could not be bothered to list them in my review.

I hope these comments are useful to the authors towards their revision.

There are some language mistakes that are mentioned by Reviewer #1 and #3 and these have been corrected in revised manuscript. I think it is not fair mentioning that there are far too numerous language errors without specifically pointing out which lines and pages of the manuscript contained the mistakes.