

## ***Interactive comment on “Climate or land cover variations: what is driving observed changes in river peak flows? A data-based attribution study”*** **by Jan De Niel and Patrick Willems**

### **Anonymous Referee #3**

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In general, this manuscript covers an interesting topic and makes some conclusions leading to new thinkings regarding the impacts of climate change and land use/cover change on water resources. However, to the manuscript itself, I made a few suggestions and comments as a potential reader.

1. Page 1 Line 7 - "increased urbanization": Not only urbanization but also some other land use/cover categories can have a great impact on the hydrological cycle. This word is recommended to be revised.
2. Page 1 Line 19 - "...it is very likely that further changes will...": You have to give a citation here or tell readers why you can make this conclusion.

C1

3. Page 2 Line 1 - "...knowledge on some driver-effect mechanisms is still limited (Blöschlet al., 2007; Merz et al., 2012)": When you make the conclusion of the limitation in this study, recent articles should be cited in order to inform the reader that the conclusion is not out of date.
4. Page 2 Line 15 - "...mainly because of the heterogeneity in catchments globally and the scale of the river basin/catchment considered": What kind of heterogeneity catchments have? (heterogeneity of land use/cover change or heterogeneity of hydrological responses) Moreover, citations should be given to the conclusion here if this result is not a part of your research.
5. Page 2 Line 30 - Use Section instead of Sect.
6. Page 2 Line 32 - As you are talking about the study area. "Study area and data" is suggested to be used for this section.
7. Page 2 Line 35 - Give the full explanation of mTAW.
8. Page 3 Line 9 - You have to make the consistent on the numeric format. Please be advised to use 29 instead of Twenty-nine.
9. Page 3 Line 14&15 - " For soil texture, taken from www.dov.vlaanderen.be, 3 domina...": Minor grammar suggestion. You can use "soil texture data is obtained from..."
10. Page 3 Line 21 - "The aim of the study is to find the (main) drivers ...": You have to make a decision whether including the word in the bracket or not.
11. Page 4 Line 6 - "...based on the DTM, the slope at every point in the catchment...": You do not have to say at every point; this sentence is suggested to be revised to "the slope in the catchment".
12. Page 5 Line 14 - Equation 2: What is capitalized T?
13. Page 6 Line 12 - "...the model did not improve (not shown)...": The model did not improve what?

C2

14. Page 7 Line 11 - "...as seen in Figure 9:": Figure 9 or Figure 10?

15. Page 13 - Figure 2: You don't have to give the data source here.

I read the revised manuscript which the author provided in the first referee's comment place. Although there are many places have been strengthened, I think this manuscript needs to be improved in grammar checking and make clear meanings in some sentences as well.

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