

Nat. Hazards Earth Syst. Sci. Discuss., author comment AC2  
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## Reply on RC1

Zongjia Zhang et al.

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Author comment on "A multi-strategy-mode waterlogging-prediction framework for urban flood depth" by Zongjia Zhang et al., Nat. Hazards Earth Syst. Sci. Discuss.,  
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Dear Editors and Reviewers:

Thank you for your letter and for the reviewers' comments concerning our manuscript entitled "A Multi-strategy-mode-waterlogging-prediction Framework for Urban Flood Depth" (ID: nhess-2022-36). Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guiding significance to our research. We have studied comments carefully and have made the correction which we hope meet with approval. The main corrections in the manuscript and the responses to the reviewer' s comments are as flowing:

Comment #1: **A flowchart is necessary for the case study as well, as there have been many details regarding data extraction, preprocessing and comparison between methods, etc. in the case study.**

**Reply:** Your comment is constructive, and we believe that a flowchart would more clearly reflect the steps of the case study and allow for a more progressive approach to the results and conclusions. We have modified the case study sections according to the process steps in the framework and expressed them in flowchart form.

Comment #2: **Figure 13 to 15, if not individually discussed in detail, are suggested to be moved to appendix.**

**Reply:** Thanks for the opinion. Given the large number of figures in this section, we have placed figures 13 to 15 in the appendix to simplify the manuscript and give a brief description.

Comment #3: **There still remain grammatical errors throughout the manuscript. A thorough proofreading is needed.**

**Reply:** Considering the reviewer's suggestion, we have revised the grammar and words throughout the manuscript to enhance the grammatical accuracy.

Based on the review comments, we rewrote the results analysis and conclusion sections of the manuscript to make the key information of this study clearer and easier to read for the reader. In the case study section, a framework flowchart step-by-step approach was used for the progressive study. The section is more clearly organized overall, from data description and processing to the application of the research methodology. To keep the reader's attention on the tasks conducted with the research objectives, parts of the conclusions and arguments poorly relevant to the research questions were removed from the manuscript. We have revised the wording and grammar of the manuscript and corrected some grammatical errors.

Thanks to the reviewers' professional comments, we could quickly target the problems and make targeted corrections. We tried our best to improve the manuscript and made some changes.

Yours sincerely,

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Please also note the supplement to this comment:

<https://nhess.copernicus.org/preprints/nhess-2022-36/nhess-2022-36-AC2-supplement.pdf>