We thank the editor and reviewers for their additional comments. In addressing these comments, we have made the following key changes to the manuscript:

1. The manuscript has been further streamlined in the Introduction, reducing the discussion on reproducibility.

2. Section 2.2.1 has been updated as per the technical comments of Reviewer 2 surrounding the compilation of C++ code in R.

3. Minor text edits in other sections as per reviewer comments, detailed in this letter.

We think that the manuscript has now addressed the concerns of reviewers, and provides a more streamlined read, particularly in the Introduction.

We answer specific reviewer comments in the following manner. Reviewer comments are in *italic*; answers are in **bold** font. **Red line numbers** refer to the plain new resubmitted version of the manuscript, and **purple line numbers** to its resubmitted track-changed version.

We need to mention that the provided LaTeX template `copernicus.cls` shows some bugs in the citations, numbering and referencing of sections, equations, figures, captions, and tables when the commands `\add{}`, `\remove{}`, `\change{}`, etc. are used. In the track changes version of the document, some added portions are shown in this colour, and text to be removed is shown in this color, in addition to the default settings for the `\add{}`, `\remove{}`, and `\change{}` commands.

1   Author Responses to Reviewer 1

We thank Mr. Astagneau for their comments, and for taking the time to review the re-submitted manuscript.

Since no further comments were provided by Mr. Astagneau that require addressing, no additional responses are provided here for Reviewer 1.

2   Author Responses to Reviewer 2

We thank the anonymous reviewer for their additional comments, and for taking the time to review the re-submitted manuscript. Responses to each submitted comment are provided below.

Reviewer comments are provided in *italics*, and author responses to the comments are in **bold** font.

2.1   Technical Comments

Line numbers refer to the version with tracked changes.

1. *l49: shapefiles are a type of spatial data, so they don't need to be mentioned separately.*
   This line has now been removed entirely as part of efforts to streamline the Introduction.

2. *l71 - 81: This section is a repetition of l45 - 55. Comparison with the manuscript without tracked changes learns that text in red has been removed?*
   That is correct, this section in red from the previous submission has been removed already.

3. *l132: "maintaining the computational speed": why would this be? As mentioned in my previous comments, one can include C++ code in an R package and achieve exactly the same speed as a separate binary (while avoiding the overhead of reading and writing in- and output files). Perhaps the authors refer here to a model fully implemented in R, but that point is irrelevant here because of the excellent interfaces of R with compiled code. So I do not think that anyone would really consider translating C++ code into R just to include it in a package.*

There would likely still be some overhead in R, though we agree that compiling the Raven code in R would generally maintain its speed, and we are not suggesting that the entire library would be rewritten in R. However, compiling Raven in R would be a massive technical undertaking, let alone ensuring that Raven continues to compile in R with each update of R libraries and frequent changes in Raven code. We have adjusted lines 112 to 117 in acknowledgement of the reviewer comments, and simply stated that this separation allows for parallel development without these technical compilation and code development challenges, which also shortens this section.

4. *l134: this point does not really hold. Even if a compiled version of the model is included as a dynamic library in the package, then it is still perfectly feasible to install the model separately for non-R workflows. The R library will not be visible outside the R environment and so will not interfere with any other installations.*

   We assert that building non-R workflows for a library contained in R would be less likely to occur, and having a pure C++ library is a cleaner way to approach this portability issue without simply maintaining two versions of the same code project (i.e. one wrapped in an R project and one separate). However, we have adjusted this section in light of the reviewer comments.

5. *l634: "Mauricio Zambrano-Bigiarini" -¿ Zambrano-Bigiarini, M.*

   This has been updated in our citations and bibliography.

3 Author Responses to Reviewer 3

We thank the anonymous reviewer for their comments, including their congratulatory note, and for taking the time to review the re-submitted manuscript. Responses to each submitted comment are provided below.

Reviewer comments are provided in *italics*, and author responses to the comments are in **bold** font.

3.1 General comments

The manuscript provides a detailed overview about the RavenR model setup and evaluation package. The authors document and demonstrate the application of this tool within the RavenR framework for the example of a specific river basin.

First of all, congrats to the authors for putting together such an extensive tool to facilitate the setup, use and evaluation of hydrological models generated within the Raven framework. I think this paper is in a good state for publication. While the tool itself is rather specific to one modeling framework, the publication of such a tool is a good blueprint for other modeling groups to develop and improve similar scripts on their own and, thus, earns its place in this journal. I only have some minor comments that the authors may use to improve the manuscript, but the publication should not be conditional to that:

1. *it might be sensible to more clearly define the intended user group of the tool right from the start. The abstract and introduction mention the potential application of RavenR for hydrological models outside the Raven framework. While this is technically true at least for such evaluation packages that only require a single time series, these evaluations are usually also found in different evaluation packages or are probably already included in the workflows of other models. Here, RavenR does not appear to be worth the effort to write output conversions scripts for other models. However, RivenR really shines as a comprehensive support software for the Raven framework. As a hydrological modeler who neither uses R nor Raven or any of the hydrological models mentioned in the manuscript, the paper is still an interesting and inspiring lecture. However, I don't feel I can profit from this tool at all with an reasonable effort. In order to manage expectations, I would mention any general application possibility only in the conclusion and otherwise target the Raven user group more directly.*

   This is fair point, and we have updated the abstract (line 7) to tone down the applicability for non-Raven users, and ensured that The Introduction in lines 68 to 75 and Section 2.2 refer to the use of RavenR specifically to support hydrologic models built with Raven, rather than more general use.

2. *section 3.2.2 appears a bit too optimistic to me. True, as long as a tool like weathercane is available RivenR can utilize its standardized interface and data format. However, as soon as user target river basins in different regions, such tools will either be not available at all or use different data formats which will require a considerable effort from user side to adapt it for working with RavenR. Such limitations should be mentioned clearly.*

   We have added lines 250 to 252 in Section 3.2.2 to address this point, which is certainly worth mentioning in this section to avoid an overly optimistic perspective on data handling outside of the defaults.

3. *Even after the revision, the manuscript feels quite long in parts of the introduction. While I very much sympathize with the authors call for transparent and open(-source) science, this statement feels a bit out of place in a journal like this, as I would assume almost all readers already share this view. One the other hand, it cannot hurt to emphasize it once again.*

   This sentiment was also echoed by other reviewers and the editor, thus we have substantially trimmed down this discussion in the introduction (see lines 38 to 67) to streamline the document. Note that this text appears as red text in the track changes document, rather than strikethrough font, as the remove command causes issues when citations are removed. Thank you for the suggestion.

4. *just having the technical opportunity to setup $8x10^{1}2$ model configuration doesn't actually seem to be a step forward as the vast majority of combinations are most likely not sensible ones. Thus, it seem to be very important to promote a tool like RavenR to guide users through the model setup.*

   We certainly agree that tools to help guide this selection and provide starting points for new users in particular are important, and are happy to have some of this functionality in the package and paper.

3.2   Technical Comments

1. *Fig 2 & 3: why are the referenced sections in bold font?*

   We have removed the bold format for section references.

2. *why is example code included and labeled as a figure? Wouldn't it be more straight forward to implement it as code blocks?*

   I was unaware of the option to include the sample code as a code block format, but am happy to address this in the formatting stage prior to publication. Thank you for the recommendation.

3. *Fig 5B: which actual variables are sim and obs? I assume all three of the others are forcing variables? Just to know that both curve are (probably) the same quantity without information about what they are, doesn't help with model evaluation.*

   Thank you for the question, we have added to the caption of Figure 5 to clarify the variables in plot B, and added to line 359 to further clarify sim and obs.