

Dear authors,

Thank you for your detailed responses and changes to the manuscript.

The manuscript is much clearer now, but it will profit from a detailed work with the text. I selected major revisions, due to the amount of writing and editing work required.

l. 33 – 34: Please reformulate.

l. 36: Do you mean a total river length of 188 km?

l. 36 – 37: Please describe why you divide the catchment into three sub-catchments.

l. 45 – 46: Clarify the difference between the information in Ghobrial et al. (2023) and Montero et al. (2023) to which you are referring above. Is it only the river ice characteristics?

l. 39 – 46: Please also describe the third sub catchment, the Famine. It is also better to start with the sub-catchments of interest.

l. 60f: Please refer to table 2 here.

Table 1: Please add the mean river slope for the Famine sub-catchment.

Fig 1: You are mentioning in the legend only that you are developing the model on the Intermediate Chaudière only. I think you can make this clearer also in the figure, because the currently used color difference is hard to see. Also, the legend for your DEM is missing. Concerning the DEM, the elevation differences are hardly visible, you may want to use a hillshade with vertical exaggeration. Please translate your map labels whenever possible, e.g. “lac”, “rivière”, “Ville de Québec”.

Table 2: Please clarify the difference between the precipitation data.

l. 86: “is” is missing.

l. 90: “estimates”

l. 131: “Study area and data” or you may name this section “Data”, 2.1. “Study area: The Chaudière River” and 2.2. “(Available) data”

l. 140 – 146: Please describe here all sub-catchments you are working on.

l. 215: Your methodology is not easy to follow. Please add a workflow including the major steps, models or data you are using to clarify your approach.

l. 216 – 225: This seems to be rather part of the introduction where you are stating the research gaps. To my understanding, this is not part of your methodology.

l. 226 – 245: Please split and make sure that you have one paragraph where you are only describing the overall approach, without comparing to the literature. The state of the art should be part of the introduction, and a comparison or evaluation of your work compared to existent literature goes into the discussion section.

l. 233: Do you mean Environment and Climate Change Canada?

l. 245 (section 3.1.): Please clearly state if you are using only their data or performing any forecasts yourself. In the first case, you may even add it to the previous section detailing the data availability.

Fig 3: Please give more information in the legend of this figure, similar to your response to my previous comment. Moreover, your arrangement of tiny catchments and much not necessarily important space around them makes this figure still hard to read.

l. 261 – 286: Please split this section into paragraphs of standard length (~100 to 200 words) and clarify.

l. 268 – 272: Please describe your data in the previous section on available data to avoid confusion and improve readability here.

l. 274: Please clarify why you choose a 3h timestep.

l. 278 - 280: How are the procedures to average daily discharge series to 3h discharge series used here and in 2.2 different? Please clarify this paragraph.

l. 294 -307 and figures 4 & 5: The evaluation of your model should be part of your results, instead of methodology section. Please rearrange and only describe concisely your methodology here.

l. 366 – 376: Please verify this section again and include the information in their corresponding sections, i.e. the data or results section.

l. 377 – section 3.4.: This section is overly long, please be concise and/or split into subsections.

l. 378 – 409: As far as I understand, you are only describing the Delft-FEWS framework here, without any direct link to your methodology and project. Please be more concise here and refer, when necessary, to existent literature and include only information relevant for your approach.

l. 410 – 413 & figure 7: This seems to be the general methodology, not part of Delft-FEWS. If I understand this right, please move it to the beginning of the methods section, where such a general workflow is missing.

l. 454 – 463 & figure 9: This seems to me again too much specific information in the main part of the article on Delft-FEWS. I do not see how the screenshot is conveying relevant information about your approach to the reader. If you do want to specify your work on Delft-FEWS, I recommend including them in the supplementary materials.

L467: Who has developed this system? In this study or a previous study? Due to the mixing of literature, description of software and your work, your contribution is hard to identify.

l. 485 – 496: Similarly, it does not seem to me that these sections belong here as they are, as they are only referring to the hydrological model.

Throughout this methodology section, you are referring to the numerical processing load. It may be useful to regroup these considerations in a separate paragraph.

l. 547 – 548: Please separate clearly the methodology and results section. I don't think that this is the right place to explain the forecasting procedure.

l. 548 -560: Please be concise on the data availability and the used data.

Fig 10: These data are input data you have downloaded and processed, if I am understanding well. Therefore, I do not think that they should be included here, because they are not a result of your work.

Fig. 11: The difference between the two forecasts is difficult to see. Please improve the readability of your figure.