Dear Larissa,

Thank you for being so patient while waiting for my delayed response.

I have read your responses to the reviews and the updated manuscript. I am satisfied that you have addressed these issues and clarified the text where needed. As a result, I am very happy to recommend the manuscript for acceptance.

There are some matters that I believe would clarify and strengthen the manuscript, which are related to the presentation and organization, and not any scientific content.

Congratulations and best wishes,
Ian

Dear Ian,

Thank you very much for your response! We've edited the paper according to the responses (in blue) below.

I'm grateful for your patience and guidance throughout this process! With kind regards, on behalf of the author team,

Larissa

Paragraph 306- 327-> What is the result of the t-test and binomial test in this paragraph?

To not overcomplicate matters, we've limited the results to 'significant difference' or 'not significant difference' for the t-test and for how many glaciers the result is improved for the binomial test.

Line 307-> "between" to amongst as there are three, not two cases.

Done

Consider a new paragraph for binomial tests, starting at line 308.

Done

Line 318 -> "across glaciers". It seems from 301, this is the set of glaciers from each experiment. Also in the previous paragraph, some values are significant. Can this be explained? Or is it due to the "might"? Maybe this sentence can be slightly clarified. Also, see next comment.

Clarified: *"Thus, while in some cases, the t-test does not indicate a statistically significant difference, due to variability across glaciers and the relatively small magnitude of improvement on average, the binomial test can indicate statistical significance simply*

because more glaciers improve under one approach compared to another than would be expected by chance alone."

Paragraph 318-322 -> should this be moved before 301? It might help clarify the previous point.

We tried both moving and not moving, but for text flow and clarity, decided against moving this and hope the altered sentence from the comment above is enough clarification.

For tables 4 and 5 -> would it make sense to add a row with the average of all RGI regions? This could make comparison easier amongst the three tests, and I believe that this would help support statements such as the one at lines 421-422

This is a good idea! We have added it.

Point 3 R1 -> Make sure point is referenced in Line 409. Recommend citation of the figure.

Done

Line 401-> Can a reference (i.e. figure/table) be provided for this statement?

Done

Ln 424-5 -> Can a referencing figure or finding be mentioned that supports this statement about the narrower ensemble spreads?

Edited the statement to be more specific to uncertainty rather than ensemble spread, and added citation: *"Initialized decadal forecasts also provide a more constant uncertainty over time than uninitialized projects, whose uncertainty increases significantly with lead time (Strobach et al., 2017). Future improvements in initialization, e.g. regarding the initialization of the North Atlantic Oscillation (Nicoli et al., 2025), may therefore still offer potential for reducing uncertainties in near-term glacier modeling, even if the current benefits are limited."*

Line 436-> "Despite these advantages, decadal forecasts are far from perfect, and the continuation of projects such as the DCPP contribution to CMIP6 (Boer et al., 2016) is essential to ensure their operational use."

Can this sentence be modified to either examine what specifically about these "forecasts are not perfect" or change the sentence?

Changed to: *"Despite these advantages, decadal forecasts are still in development, and the continuation of projects such as the DCPP contribution to CMIP6 (Boer et al., 2016) is essential to ensure their operational use."*

Line 437 -> "Current work" -> this work or other external work? Please cite if needed.

This work, changed

Line 443 -> "Statistically, we observe no significant difference between the decadal re-forecast and GCM Historical experiment per individual glacier." -> Referencing a figure or table in the text would strengthen this statement.

Done

Line 450 -> Should student be capitalized?

Yes, this has now been corrected.

Line 450 "While this does not imply larger actual improvement" -> improvement in model skill? Please specify the improvement.

Edited to: *"This poses that even modest skill increases from initialization may be reliably attributed to improved forecast initialization rather than random chance."*

Line 466 "The results shown here are limited by multiple factors and we especially highlight the need for continuing this research with a larger ensemble, which could increase predictive skill (Smith et al., 2013), and a more detailed look into ensemble spread, explicitly quantifying and incorporating ensemble spread as a measure of uncertainty." -> I think a verb is missing in the last part of this sentence. Would it be possible to shorten?

Agreed this was convoluted, we have turned into two sentences: "The results shown here are limited by multiple factors and we especially highlight the need for continuing this research with a larger ensemble, which could increase predictive skill (Smith et al., 2013). We also propose a more detailed look into ensemble spread, explicitly quantifying and incorporating ensemble spread as a measure of uncertainty.