

Glacier runoff variations since 1955 in the Maipo River Basin, semiarid Andes of central Chile

Response to Editor

Editor: Black font

Authors: Blue font

Thank you for your thorough response to the reviewer's comments and thorough revision of your manuscript. The paper was reviewed again by one of the reviewers and they were impressed with your improvements. There are a small number of technical issues (see below) which should be corrected.

I look forward to receiving the final version of the manuscript.

Best regards,

Dr Liz Bagshaw

We thank the Editor very much for her comments and guidance during the review process. We have corrected the technical issues pointed out by the reviewer, updated a few references, and submitted the final version of the manuscript. Please see our responses to the technical issues below.

Please be aware of the discrepancy of the numbers between your response letter and the manuscript regarding the following sentence, just in case any possible misspelling had been transferred into the manuscript.

- In response letter: "As elevation decreases south, we estimate that sublimation varies from about 20 mm w.e. yr⁻¹ in the Colorado sub-catchment to about 3 mm w.e. yr⁻¹ in the southern ones (using values normalized by the entire Maipo River Basin area)."

- In the manuscript: "As elevation decreases south, the discarded snow varies from about 121 mm w.e. yr⁻¹ over the Colorado sub-catchment to about 10 mm w.e. yr⁻¹ over Upper Maipo."

We thank the Editor for noticing this issue. The correct numbers and text are those in the manuscript, whereas those in the response letter were extracted from a previous version of the calculation. The second text is also more precise about the origin of those numbers.

The reviewer raises the following minor technical corrections:

We thank the reviewer very much for the new evaluation of our article. Please see our detailed responses below.

- Figure 1: keeps saying glaciers.

Corrected. We changed "glaciers" to "main glaciers" as suggested in the first round of reviews.

- Section S1: That stereoscopically reconstructs

Corrected. We changed “That stereoscopically reconstruct” to “That stereoscopically reconstructs”.

- Figure S2: There is an obvious overlap of st. Rio Olivares antes junta Colorado & Rio Colorado antes junta Olivares, just raise that issue on legend.

We added “Note that gauges 5 and 6 are closely located.” to the figure caption.

Figure 2c: the legends overlap the plots such they are hard to read. Please adjust the spacing.

Corrected. We adjusted the spacing to avoid the overlap between the legend and lines.

Finally, we also updated the reference to the article in which the geodetic mass balances used in our study are presented. The new reference is:

Farías-Barahona, D., Ayala, Á., Bravo, C., Vivero, S., Seehaus, T., Vijay, S., Schaefer, M., Buglio, F., Casassa, G. and Braun, M. H.: 60 years of glacier elevation and mass changes in the Maipo River Basin, central Andes of Chile, *Remote Sens.*, In review, 2020.