

Final Editor replies

Upfront we would like to express our sincere gratitude to the editor and reviewers for the time and effort invested in reading our revised manuscript. We greatly appreciate the thorough and precise review process, which has significantly contributed to improving the clarity of our work. Below, we address the final editorial comments.

Comment:

Dear Authors,

Your revised manuscript has received favorable evaluations from the two reviewers and is close to final acceptance. As the final comments from the reviewers also indicate, the revised version remains as it is, but I suggest that the concluding section should give the reader the following additional information:

- a) The selection of the catchments used in the study is centered more on legacy (i.e., previous works of most of the present authors) and less on adequacy.*
- b) Moreover, it should be emphasized that the present study refers to a limited geographic domain (i.e., energy-limited high alpine catchments), has an extremely large free parameter space, and a small parameter exploration space [changing root-zone soil-water storage (Sr)/vegetation distribution] to identify disparities in streamflows among the selected catchments.*

Reply:

We thank the editor and reviewers for the positive evaluation of our study and for the helpful suggestions. In response to the editorial comment, we have revised the concluding section to explicitly address the two points raised:

a) **Catchment selection based on legacy considerations:**

We have clarified that the selection of catchments was guided primarily by prior work.

Line 625: Lastly, the study is confined to a narrow geographic scope of energy-limited alpine catchments, whose selection was guided by previous work

b) **Emphasis on geographic and methodological constraints:**

We have elaborated on the limitations related to geographic scope, the breadth of the free parameter space, and the narrow parameter exploration within the study.

Line 623: "Moreover, our analysis focuses exclusively on isolated changes in root zone storage parameter while keeping all other parameters constant, which limits the parameter exploration space and thereby the scope of streamflow disparities. Lastly, the study is confined to a narrow geographic scope of energy-limited alpine catchments, ..."

List of changes

Replaced: However, it is important to acknowledge the considerable uncertain [...] 30