

Toulouse, Lyon, Grenoble, October 2023

Dear Editor,

We are grateful to you and the three reviewers for the work on the revised manuscript, and your assessment that the manuscript could be accepted subject to technical corrections.

We have taken into account the last round of suggestions, mostly by Reviewer #1, see below.

Regarding the general comments, we agree that it is now quite late into the editorial process to shorten the manuscript.

We also hope that this manuscript will trigger further investigations, by other teams as well as by us, to further refine the modelling tools used and also to apply it other contexts so as to lead to more generalizable conclusions.

Regarding the quality of the english text : we have checked again the text, and we note that the Copernicus typesetting process includes an efficient english language editing step, which will ensure that the quality of the final text is further improved.

Yours sincerely,

Samuel Morin, on behalf of the author team

Detailed comments and suggestions by the reviewers

Reviewer #1

I still would recommend to better formulate something like „Simulated hydrological effects of grooming and snowmaking in ski resorts on the water balance“ and avoid the „alteration“ term (even though it is used by USGS or EEA; there the context is a different one). „Alteration“ suggests that some significant alteration effectively occurs, but the result is that the latter is almost none.

The revised title was « A model study of the local alteration of the hydrological cycle downstream of a ski resort due to grooming and snowmaking », and Reviewer #1 proposes a different one : « Simulated hydrological effects of grooming and snowmaking in ski resorts on the water balance ». We have taken this suggestion into account and propose a newly revised title as « Simulated hydrological effects of grooming and snowmaking in a ski resort on the local water balance »

The reference from HydroDem to TauDem is still there (l 215); I do still recommend to explain what HydroDem does, and not to refer from one to another software.

We have removed the reference to TauDem.

In the new text parts are still several mistakes. This needs careful correction prior to submission.

We have checked again the text, and as indicated above, the manuscript will benefit from the english language check performed during the typesetting process by the Copernicus staff.

The manuscript in its present form is very long. I wonder if it would profit from shortening here and there where possible?

We agree that the manuscript is quite long, but, as indicated by the Editor, it is now quite late in the editorial process to perform major adjustments of the text content and length. Hence we keep it as it is and expect that the combination of text and figures in the final, formatted article, will effectively convey the main messages and results of this work.

Reviewer #2

N/A

Reviewer #3

My only comment is to check the use of "piste" vs "slope" within the manuscript. "Ski slopes" is still used in some section instead of "ski pistes".

We have checked again the text and adjusted the text where it was needed, in response to this suggestion.