

Comments to the author:

Dear Christin Hilbich and coauthors,

Thank you for your revised submission and for addressing the comments and suggestions of both reviewers. Below I make some additional suggestions to improve the clarity of your manuscript. I appreciate the efforts you have made to present this comprehensive dataset, which promises to make a lasting contribution to the field.

With best wishes, Huw Horgan

Dear Editor,

Thank you very much for your suggestions to improve clarity and language of the paper. We strongly appreciate this, and we adjusted/corrected the text as proposed for most of your suggestions. They are visible in the document with the track-changes-mode. In the case of three of your comments, please find a separate reply below.

With our best wishes,

Christin Hilbich (on behalf of all co-authors)

Minor editorial points. Some of these are suggestions, some are grammatical corrections.

L9. 'In view of...' Avoid sentence constructs like this wherever possible as they detract from the point you are trying to make. I suggest: 'Water scarcity in the Central Andes due to ongoing climate change means that the significance of permafrost occurrences for the hydrologic cycle is controversial.'

Reply: we slightly modified your proposition, which now reads as: "Increasing water scarcity in the Central Andes due to ongoing climate change recently induced a controversial debate on the significance of permafrost occurrences for the hydrologic cycle."

L24 'We state the geophysics...' I appreciate your point but encourage you to consider the tone of this sentence. I don't think it is your intent to devalue remote sensing studies and gloss over the limitation of field geophysics. Your text is much more nuanced than this sentence implies. I suggest something like 'We show that field geophysics based estimates of ground ice content, while more labor intensive, are considerably more accurate than remote sensing approaches.'

Reply: thank you for this comment. It was not our intention to devalue remote sensing studies, so we are happy for your proposition and took it over like this.

L163 '...the context of the projects has no further relevance for the scientific content of this paper' I appreciate what you wish to state here but suggest you include what the context is, even though you have already stated it earlier. > 'the Environmental Impact Assessment context of the projects has no further relevance for the scientific...'

Reply: we corrected the text like this: "Apart from the fact that some of the considered permafrost landforms had surface disturbances (e.g., access roads or drilling platforms), the context of developing environmental impact assessments for mining projects has no further relevance for the scientific content of this paper."