

Earth Syst. Sci. Data Discuss., referee comment RC2
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Comment on **essd-2021-59**

Anonymous Referee #2

Referee comment on "GIS dataset: geomorphological record of terrestrial-terminating ice streams, southern sector of the Baltic Ice Stream Complex, last Scandinavian Ice Sheet, Poland" by Izabela Szuman et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2021-59-RC2>, 2021

Review of "GIS dataset: geomorphological record of terrestrial-terminating ice streams, southern sector of Baltic Ice Stream Complex, last Scandinavian Ice Sheet, Poland" by Izabela Szuman et al.

This manuscript details glacial and geomorphological features for western Poland based on high resolution (0.4 m) DEM datasets. This work is critical for reconstructing the glacial history of the southern portion of the Scandinavian Ice Sheet and is therefore a valuable scientific contribution. My knowledge pertains largely to the documentation of the geomorphological record and its place within the greater context of glaciation in western Poland. I am unable to provide a thorough critique the specific methodologies employed in this study (e.g. extracting DEMs from high-resolution LIDAR point cloud data), however these methods appear to be sound and follow previously cited studies.

Overall, the manuscript is focused on methodology, documentation, and does an excellent job of providing examples of how each landform was calculated/measured, showing "comparison figures" between the plain hillshade model and resulting glacial geomorphological record that is identified in the database. The manuscript is well written, highlighting the major research gaps and the overall structure of the accompanying dataset.

Minor comments

L24- "a challenge to access their beds" – recommend adding more context here. To get a first-hand account of the ice-sheet and geomorphological processes?

L37 –“ tools have been developed to aid such comparisons” – perhaps a brief mention of what types of tools?

L48 “They are responsible for ~90% of the discharge of the Antarctic Ice Sheet (Bamber et al., 2000)” – Is it possible/appropriate to add a newer reference here given the amount of work that has taken place on ice streams in Antarctica since 2000 (e.g authors Rignot, Stokes, Livingstone...etc?). Are there any newer studies or statistics that can be cited here?

Fig 1 –Perhaps outline the “this study” box in a thicker black line? It took a few reads to understand the outline of the study area compared to the previous studies.

Fig 2 – Is it possible to draw the “study area” box in this figure? Also, while it is clear from the figure caption that this map is intended to be viewed in a higher-resolution, this this figure would benefit from a legend that explains the correspondence between lines and landforms.