Comment on essd-2022-60
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Referee comment on "Multitemporal glacier inventory revealing four decades of glacier changes in the Ladakh region" by Mohd Soheb et al., Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2022-60-RC2, 2022

The manuscript entitled “Multitemporal glacier inventory revealing four decades of glacier changes in the Ladakh region”, is a very nicely written work by Soheb et al. The study presents multitemporal inventory of glaciers of Ladakh region using Landsat data.

The work has been done meticulously by the authors and presented well in the manuscript. The datasets resulted from the study would be useful as a baseline for further study in this line. The writing of the manuscript is impeccable and publishable. However, I have noticed two minor issues which authors should justify in the manuscript. These points are:

- Data Section 3.1, line 101: Landsat datasets used for multitemporal inventory for the year 1977 varies for +-5 years. For the other years variations is 1 year, which is understandable considering cloud and snow conditions. However, knowing the status of the change of snout of glaciers is it justifiable to consider one result from datasets with 5 years span period.

2. Glacier Mapping, section 3.3., line 162-163: authors have fixed map scale for digitization to reduce error. Landsat is a medium resolution data, which can produce a map of scale of 1:25,000. Pan sharpen data will give larger scale map. Zooming to 1:10,000 may distort pixels which can make the digitization a little difficult. Setting 1:10,000 map scale for MSS data having 60m spatial resolution will further have deterioration. How authors have dealt with this minor but practical issues related to digitization should be made clear.