

Dr. Andrés Rivera
Editor

Following the editorial processes established in the Journal *Climate of the Past*, we are enclosing our response to your comments and upload a new version of our manuscript: Fluctuation of Glaciar Esperanza Norte in the north Patagonian Andes of Argentina during the past 400 years by L. Ruiz, M.H. Masiokas and R. Villalba.

We thank you for your comments on the figures. We believe that the visual quality of our manuscript has been improved after incorporation of your suggestions.

Editor comments in black.

Authors' responses and comments in red.

-Figure 1. Could it be possible to use a recent satellite image as background? The grey colour scale is not very useful, and I'm not sure how good it will look like the new version. Please consider this recommendation, in order to improve the visual quality of the paper.

We change the topographic map for a satellite image.

-Figure 2. The distance between the glacier tongue and moraine M1 will be added, however, I realized the huge deformation of the photo used in this figure, when I saw the map in Figure 4. The distance between M1 and the glacier tongue is approx. 3.3 km, but in Figure 2, most of the viewed area is between M11 and M1 representing only 1.1 km. I'm not sure how to address this problem. Maybe you can use the distances between the glacier tongue and M11 and then another between M11 and M1. Maybe you can explain the panoramic condition of the photo redirecting the reader to Figure 4 for a better understanding of the distances.

The location where the panoramic photo was taken was added to Figure 4, and the distances and distortion of the panorama of Figure 2 is explained in the caption.

-Figure 3. Please consider eliminating the use of colours as boxes for years. I think you don't need both (only the year). I have difficulties in reading the levels within the boxes. Also you can consider adding a satellite image as background for the 2007 position (for example).

In Fig. 3 and 4 color boxes for each date were deleted. Because of the high relief of lateral valley walls in the Esperanza Norte valley satellite images of the valley are highly cast shadow, so we discard the use of satellite images as illustrations.

Lakes: -In Figure 2 I see two lakes one next to M11 and the other next to a big boulder.

-In Figure 3 there is no lake -In Figure 4 I see two lakes (one next to M19 and one next to M11).

So, there are 3 lagoons (lakes is for bigger water bodies), but they are not clearly visible in the mentioned figures. Maybe you can add Lake Superior (M19) to Figure 3 and in figure 4 you can add the small lagoon next to the boulder.

We use lakes as bodies of slow moving water surrounded by land without reference to the size of the water body (Petticrew 2006). The water body next to the big boulder is a small pool (less than 1 m deep) located in a meander of the river. The meander was formed by the river to avoid the boulder.

We aggregated to Figure 3 the Lake Superior.

Petticrew E. L. 2006. Lakes, In *Encyclopedia of Geomorphology*, Ed. Goudie A. S. Vol II, 509-602.