Comment on egusphere-2022-763
Anonymous Referee #2

Referee comment on "Effect of extreme El Niño events on the precipitations of Ecuador"

It is necessary to assess the effects of extreme El Niño events on the precipitations of Ecuador under the background of climate change.

I have the following comments.

1. Why you use SPDI index to monitor precipitation spatial-temporal dynamics? It seems that this index is more appropriate for drought monitoring instead of precipitation monitoring. In the introduction part and material part, there is no review about the applicability of SPDI for extreme precipitation monitoring.

2. Following above comment, as shown in Figure 2. (Ia, Ib, IIa and IIb), even though most precipitation extremes occur in the first half of the second year of the event, the SPDI index still indicates very humid in the second half year especially in the 82/83 and 97/98 El Niño events, under the situation that the precipitation is almost zero. Thus, I further suspect the applicability of SPDI for extreme precipitation monitoring in this study.

3. Labels in Figure 2 and Figures should be clearer.

4. Obviously SPDI index is a very important part in this study, but in the abstract, there is no introduction about SPDI. Please add the information of SPDI in the abstract.

5. In session 2.4, why not re-sample SPDI estimation at 30 m resolution instead of re-sampling DEM at 0.05°, by which the altitudinal dynamics estimations would be more correct.
6. Because Central Pacific El Niños, Eastern Pacific El Niño, and Coastal El Niño are mentioned many times in the paper, please make a figure to depict where are the regions of Central Pacific El Niños, Eastern Pacific El Niño, and Coastal El Niño.

7. In the page 9. Line 17 to 18, it is confused that the sum of precipitation is only 17%, not 100%. Please clarify it.