Revision for *Intensified upwelling: normalized sea surface temperature trends expose climate change in coastal areas* by Gutierrez-Guerra et al.

This manuscript describes an alternate methodology to study trends in Eastern Boundary Upwelling Systems (EBUS) based on SST data from remote sensing. After reviewing the revised manuscript and the responses to both Anonymous Reviewers, I find the authors have addressed the main concerns raised by the previous reviewers. These main comments from both reviewers were the robustness of selecting only two upwelling points and the calculation of uncertainties. In this revised version, the authors have included sensitivity tests assessing the differences between diverse spatial averaging and single grids that show the viability of their choice for upwelling points and ocean interior. I find this is a relevant and interesting topic and recommend publication after the authors address some technical corrections listed below.

TECHNICAL CORRECTIONS:

- In the abstract, SLP is mentioned in line 25, without being first defined at its first mention in line 16. Please make sure all abbreviations appear at first mention throughout the text.
- Figure 1. Could it be possible to add labels to the SST contours or a colorbar if they are in the same color scale? Why is SST only for the EBUS regions? Would it be better a global map of SST with boxes defining each EBUS? I don't think the bathymetry is of any interest for this study, specially away from the regions of study.
- Lines 60-65. Here you establish the relationship between SST and upwelling intensity and report a higher S2N ratio between SST and Ekman transport. Could you add any reference to support these statements?
- Lines 76-77. I think it would be best expressed without repeating 'the results': *Section 4 describes the relevant results, which are discussed…*
- Line 83. 'the 40-years' doesn't need the slash: *the 40 years*. This is a repeating issue throughout the manuscript.
- Line 88. Similarly, I think 'with a dataset of 40-years length' should be rewritten to something like: *with a 40-year dataset* or *with a dataset of a length of 40 years*
- Line 106. The text should be modified: *offers a resolution of 2.5 degrees and covers the period*
- Line 114. There should be a space between the magnitude and the unit: *100 km*
- Section 3.1. The descriptions the selection of each dynamical point for each EBUS is appreciated, but I think it would improve if, for each subsection, you specified which point is UP1 and UP2. For example, for CalUS, between Cape Mendocino and Point Conception, which one would be UP1 or UP2. As these geographical features don't appear in the maps, only being referred to as UP1 or 2, I think it would be useful to specified it in the text.
- Lines 136 and throughout the text. There should be no space between the magnitude and the degree symbol (either angle or lat/long), and also no space between the degree symbol and N/S/E/W (e.g. 23°S).
- Line 156. Please consider replacing '(>30 years)' to: *With a minimum data length of over 30 years, a climate…*
- Line 171. Here appears the definition of SLP but has already been mentioned above (line 102).
- Line 173. The authors mention Rykaczweski hypothesis, but there's no description of it or any reference in the text. It is explained below in the discussion section.
- Line 200. I think the notation is wrong on my version of the file, with the average bar above the slash. In this case, I would also recommend removing the slash: *within their respective uncertainty ranges for (Up) and (Oc).*
- Figure 2. I would recommend the authors to select a different color for the land. It is in a very similar palette to the colorbar used for SST. Also, it is difficult to differentiate between the dynamical points (black dots)

and the cruise data (also black dots). Please consider differentiating them. In the caption, please add the distinction between blue and red dots for subplots a and b.

- Tables 1 and 2. I think it would add value to the analysis if the statistically significant correlations were marked (either with an asterisk or in bold).
- Line 193. Please correct to: *A cooling signal*
- Figure 3. In the caption, you mention 'the color scale indicates the trend values and the right margin of each graph'. Should this be changed to *the color scale indicates the trend values at the bottom of the figure*? Also, correct 'black-dots': *Shaded area with black dots* or *Black-dot shaded areas*
- Line 315. To avoid repeating, maybe remove second upwelling: *These points include the upwelling centers…*
- Figure 4. In the caption, you may just say *asterisk* instead of 'with the symbol "*"'
- Lines 359 and 363. Consider replacing La Niña y El Niño with *the cool and warm phases of El Niño Southern Oscillation (ENSO).* If so, remove the description of ENSO from line 524.
- Line 363. No 'appeared' needed: *there are two prominent peaks associated with El Niño around 1983 and 1997*
- Line 394. No need to describe again EBUS abbreviation.
- Lines 395-399. Please replace 'mb' to *mbar* for the pressure units and specify that the values within parenthesis represent the spatial SD.
- Table 3. Please replace 'mb' to *mbar* for the pressure units
- Line 405-408. I think the text would read better with a few modifications: *Bakun proposes an intensification of the upwelling due to the increase of the continental low-pressure system driven by global warming. However, controversies arise from discrepancies between wind stress datasets and differences in the methodologies used.*
- Line 484. Please consider replacing 'coolest trends' to *largest cooling trends*