Comment on essd-2021-353
Jacob Carstensen (Referee)

Referee comment on "Patos Lagoon Estuary and Adjacent Marine Coastal Biodiversity Long-term data" by Valéria M. Lemos et al., Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2021-353-RC1, 2021

This science data manuscript presents a diverse collection of long-term monitoring time series from the Patos Lagoon Estuary and the adjacent coastal area. It provides a detailed description of the methods employed in collecting and analyzing the data, and the data sets are standardized and quality assured such that the data can be readily used for research and management. I only have two general comments and then a number of comments/editorial suggestions of technical nature.

First, datasets VI and VII appear to arise from exactly the same sampling program, even the associated environmental variables are exactly the same. If so, much of the information provided is redundant and it would be more logical to combine the two datasets into one single that includes both shrimps and fish assemblages. It is important to know, if the two data sets are actually subsets of the same sampling scheme, as this can have effect on how a combined dataset will be analysed.

Second, the abbreviation PLEA is introduced in the beginning but not always consistently employed throughout the manuscript. Please check the nomenclature for consistency.

Detailed comments:
Line 21: Add 'The' before 'database'.
Line 50: Add 'the' before 'Southern Hemisphere'. Replace 'temporal data series' with 'time series'.
Line 66: Add 'the' before 'Southern Hemisphere'.
Line 76: Delete duplicate 'discharge'.
Line 84: Replace 'to result in change in biodiversity' with 'to affect biodiversity'.
Line 102: Use small letter 'l' in latitude and longitude.
Table 1 footnote: last dataset should be 'VIII' and not 'VII'.
Table 2 footnote: same as for Table 1.
Line 179: insert 'associated with the phytoplankton sample' before 'were'.
Line 182: No comma before 'for'.
Line 184: If the sample for DSi was frozen then the authors should verify that this does not affect the sample. Problems with polymerization have been reported numerous times.
Line 195: The authors mention that new methodologies were introduced! This needs to be elaborated with respect to what was changed and when.
Line 205: Place 'were used' at the end of sentence.
Line 223: insert 'to' before 'the database'.
Line 242: 'was' should be 'were'. Please check for use of plural form of the verb in relation to 'data', as data is the plural form of datum.
Line 246: Should be ‘monitored monthly’ (change order).
Line 251: Do you mean ‘wooden posts’ or ...?
Line 266: This sentence is unclear. ‘was’ should be ‘were’. Replace ‘applied’ with ‘calculated’.
Line 271: ‘re-evaluated’.
Line 288: ‘laboratory’ with small letter.
Line 292: ‘before the uploading to the database. Data were ...’
Line 302: Should start with ‘Water temperature ...’
Line 303: ‘sampling occasion’.
Line 305: insert ‘the’ before ‘methodology’.
Line 310: PLEA instead?
Line 333: PLEA instead?
Line 338: ‘were’ should be ‘was’.
Line 362: ‘in Section 3.2 for more details)’
Line 656: ‘all datasets’ technical information has been’.
Line 666: ‘associated’
Line 674: remove comma after ‘researchers’.
Line 708: Not sure if ILTER has been spelled out before. Check and correct.