

General comment

This study analyses the natural variability of the water and soil-related component over the Okavango Delta (OD) region. The authors compare their surface soil moisture, land surface temperature, and vegetation optical depth Climate Data Record (CDR), previously derived using passive microwave (PMW), to model outputs (ERA-5 Land), infrared-based estimates, and auxiliary datasets. The objective is threefold: 1) analyzing the complex hydrological region of the OD, 2) validating to some extent their CDR using ERA5, and 3) demonstrating the benefit of using PMW information to characterize processes that are not well implemented in the ERA5-L model such as the lateral flow-induced soil moisture.

The authors have provided valuable responses to all of my previous comments and questions and the readability of the text, numbers, and figures has been improved in the revised version of the manuscript. **If I am looking forward to reading their answer to the following comments, I consider the manuscript ready for publication after technical revision.**

I acknowledge here their negative response regarding my suggestions to add:

- 1) a figure with the original (non-anomaly) data in the appendix.
- 2) the figure on the LST time series for ERA5

If I think such information is useful for a broader view of the analysis, I will not insist on these points as this might imply enlarging the article in losing its key message on anomalies.

Two comments on the author's response :

- 1) Some of my comments had received positive answers from the author's reply but were not implemented in the revised manuscript with no additional information.
see the following point :

-Add PRim in Figure 5 as well as PRe5 and PRim for RO1 (can be in annexes) as it is stated that PRe5 has high positive anomalies over the catchment (p21-L478) with no supporting information.

-To make sure all the information is included in the figures, we will include the PRE5 (ROI1) and PRIM (ROI1/2) in Figure 5 so it includes information on all support data.

Information on the final author's decision concerning this point is needed.

- 2) I would like to clarify a point regarding the inter-calibrated brightness temperature. In their answer, the authors state that they decide to not include a figure depicting inter-calibrated brightness temperatures. To my knowledge, no such comment was raised in the first round of review. This confusion might be due to the lack of clarity in my first comment from the first round in which I deal with both information on the inter-calibration and the original CDR (i.e. retrieved variable) at once.

Comments on the revised manuscript:

- Equations 1, 2,3 are empty, white boxes replace variable names.

- l.19 : 'long-term'
- l.60 : 'are' described
- l.78 make's'
- l.98 'The' republic of Botswana
- l.114 'the' evaluation
'and of' sounds awkward
- l. 125 'an' actively inundated...
- l.141 In this study','
- l.155 a growing 'water demand'
- l.156 and 'was' likely
- l.183 'nighttime'
- l.188 unfortunetly','
- l.213 analysis','
- l.218 ', 'the layer
- l.223 period 'from'
- l.231 'long-term'
- l.234 '1998-2020' period
- l.237 'derived from SWIR' or 'derived by using SWIR'
- l.241 'up-to-date'
- l.243 per unit 'of' ground
- l.259 for this study','
- l.269 delete : from the soil and 'the' from ...
- l.313 'long-term'
- l.324 representative 'of' the moisture
- l.326 what cause 'them'
- l.329 'dataset'
- l.343 'nighttime'
- l.350 '91-day'
- l358 'the' following section
- l.366 'datasets'
- l.368 'a first step in this' sound awkward for the beginning of a paragraph
- l.378 delete as 'for'. Furthermore what is the subject of can ?
- l.393 : time 'serie' to avoid redundancy
- l.444: 'breakaway'
- l.478: 'long-term'
- l.546: 'occurrences'
- l.573: 'such' as the Okavango
- l.600: 'the 'highest quality