

I think this manuscript on wet and dry spells in Senegal as derived from different datasets is now in an acceptable state and a useful contribution to West African literature. I have a few last minor comments that I hope will be addressed before publication:

We thank again the reviewer for providing these useful comments which allow the paper to reach the standard of the journal. We took into account all of them to substantially improve the quality of this study. We have replied to all his/her minors comments in red.

- Introduction, p3 ll6-11: “The reference dataset chosen [...] We therefore suggest BK as the best available reference candidate” This new added paragraph seems misplaced in the introduction and should be moved into the “Rain Gauge Data and Kriging Methods” section to after the kriging methods have been explained. The justification for the reference dataset seems much more fitting here.

According to this comment, we have decided to move the new sentence from the Introduction to the “Rain Gauge Data and Kriging Methods” section to after the kriging methods have been explained.

- Dataset description: Reading through the satellite dataset description again, it would be better to be more precise about the input that is used to create different datasets, for example:

p4 ll 17-18: “TRMM-3B42 V7 and CMORPH V1.0 are exclusively satellite based” - this is not entirely true. TRMM-3B42 V7 uses GPCP monthly gauge rainfall for a bias adjustment of derived MW / IR rainfall estimates. Similarly, only CMORPH-RAW does not use gauge information (it’s not further specified in the manuscript which CMORPH product is used). I suggest not using “exclusively” when it’s not in fact exclusive.

Thank you for the clarification. Modified as suggested

ll19-21: “ TRMM-3B42 V7 and CMORPH V1.0 are characterized by combining infrared and microwave measurements while CHIRPS and TAMSAT exclusively use infrared measurement techniques.”

Again, the wording is not accurate. CHIRPS uses TRMM3B42 to calibrate the rainfall estimation from cold cloud duration and uses gauge data for bias adjustment, while TAMSAT exploits gauges to generate their climatological calibration. Wording like “primarily based on thermal-infrared” while acknowledging other data sources would be more appropriate.

A useful recent overview is given in Le Coz and Van De Giesen (2020), Journal of Hydrometeorology

We thank the reviewer for these comments. We have modified the text as follows:

“TRMM-3B42 V7 and CMORPH V1.0 are exclusively satellite based, while CHIRPS V2.0 and TAMSAT V3 combine both raingauges and reanalyses with satellite data (Kummerow et al., 1998; Nesbitt et al., 2006; Huffman et al., 2007). TRMM-3B42 V7 and CMORPH V1.0 are characterized by combining infrared and microwave measurements while

CHIRPS and TAMSAT exclusively use infrared measurement techniques (Funk et al., 2015; Maidment et al., 2017)."

have been replaced by:

"TRMM-3B42 V7 and CMORPH V1.0 are characterized by combining infrared and microwave measurements while CHIRPS and TAMSAT primarily based on thermal-infrared measurement techniques (Kummerow et al., 1998; Nesbitt et al., 2006; Huffman et al., 2007, Funk et al., 2015; Maidment et al., 2017). Recently, Le Coz and Van De Giesen (2020) provide a detailed overview of these products and their recommendations to detect different types of hazards."

- In my previous review, I pointed out that in Figure 7 a,b,d the dry spell frequencies in Nov/Dec do not seem realistic when compared to Jan-March. If this was plotted continuously through the dry season (rather than stopping in Dec) the Dec-Jan transition would show a sudden step change. The authors explained the difference with "there being some rain in Nov/Dec while Jan is the peak of the dry season", which I think isn't a valid answer here. It does not explain the Dec/Jan step change, which reaches almost 40% for (d) Dsxl for ERA5 and just does not seem realistic (Fig5 does not suggest such jumps). However, since the dry season does not affect the main results I would just ask the authors again to check the "end of year"-handling of their code and if needed to correct Fig7 accordingly.

We thank the reviewer for pointing out that problem. Indeed, after careful verification and as suspected, we have detected an effect due to the end of the year and the too large window of smoothing. We have corrected that problem and we provide a new graph with correct values and a smaller smoothing window.

- There are still frequent, mostly minor, language issues, which I won't comment on any more – I don't know whether some of this can still be resolved at the editorial level. However, I definitely suggest using "similarity" or "correspondence" for all cases of "similitude"/ "affinity" in the conclusion.

Again, we are sorry about that. The document has been corrected by a native english speaker (we still have the receipt). We have also corrected the suggested modifications.