Suggestions for revision or reasons for rejection

(visible to the public if the article is accepted and published)

I have already commented on the first and second versions of this ms. In those last revisions, I was unsure, whether the results supported the conclusions. I am happy to say that this has now been amended. Since the last (second) revision the manuscript has gained clarity and I was able to follow the methods, except regarding the deseasonalization, and I agree with the fundamental parts of the discussion and conclusion. In my eyes, the ms still needs some work regarding clarity and rigor in the presentation, but it is now more editorial.

I recommend minor revisions.

Major comments

- Generally, the readability of the ms has strongly improved in this revision and it is much easier to follow the methods and the narrative in general. There are however still a couple of instances, where it is almost impossible to follow, for example, Line 701-727. I have indicated them below in the detailed comments.

- Some citations do not properly support the claim made. This needs to be improved. See details below.

All citations have been authenticated

- I have commented previously on the lack of explanation regarding the descriptive statistics and this has been improved. However, in most occasions where seasonal, e.g. twelve months, temporal coefficient of variation (temporal CV) is shown, the surrounding information is still incomplete. It is unclear whether the number refers to CV within this calendar month averaged across years or CV between values for this month between different years. Please add this information.

This is a valid observation. We have now indicated the different CVs for within the calendar averaged across years

- I am missing a short statement already in the methods section of what information those CV carry. Are we expecting (or not) differences in CVs for ET between phenological seasons? Are high CVs an indication of uncertainty or are they expected in some seasons? This information follows very late in the discussion of the manuscript and the reader is a bit lost up to this point.

When evaluating temporal variations in individual satellite-based evaporation estimates, high coefficients of variation (CVs) in certain phenophases may not necessarily indicate uncertainties in estimating evaporation. Instead, they could be a result of temporal variations in climate variables such as leaf area, rainfall, soil moisture, and temperature. On the other hand, when comparing the means of different satellite-based evaporation estimates over a specific phenophase, high CV values indicate larger differences between the means of individual evaporation estimates. In this case, these high CVs may be indicative of differences in the ability to estimate evaporation in that phenophase by an individual satellite-based evaporation estimate. We have now explained this in the revised manuscript.

- The time series are „deseasonalized" in a way that is not properly explained and unclear when following the references. It is not simply the calculation of anomalies from the seasonal average. But without understanding this, I cannot judge the results obtained based on the deseasonalized data, e.g. in sections 3.3.1 and 3.3.2. This can hopefully be cured easily, by shortly repeating in the methods section the basic steps applied.

The information on how the time series were deseasonalised using the centred moving average has been added.

- The ms, specifically the figures, mix two definitions of seasons, (a) based on climate-based seasons (e.g. Fig 15), (b) based on phenological seasons (e.g. Fig 11). Sometimes the same property is shown for both types of seasons (Fig 12, 13). In either case, there is no explanation for why one or the other option is chosen. It would streamline the paper if only one option was used throughout. Based on the title of the manuscript and discussion, I propose to only use phenological seasons.

This has been revised throughout the manuscript and the satellite-based phenophases has been adopted. The use of both classification systems was as a result of one f the reviewers suggesting that the climate phenophases be highlighted. The sentence "To mitigate potential confusion arising from the use of dual phenophase classifications, this study exclusively employs satellite-based phenophases for analysis purposes." Has been added.

Detailed comments

Abstract

Line 20: „flux observations" better „surface exchange observations"

The words "flux observations" have been replaced with "surface exchange observations". However, even the term flux observation would still be appropriate.

Line 37: „warm dry season ": It is a bit confusing from the reader's perspective that the seasons are not discussed in chronological order. Therefore, would be good to guide the reader, e.g. "the preceding warm and dry season"

The seasons have been replaced with phenophases and have been discussed chronologically as advised

Lines 43-45: Here I expect a more general conclusion that directly relates to the title of the ms and possibly expands over the Miombo case. Is it appropriate to say that satellite products do not well represent ET over this data-sparse region with a phenology and seasonality that differ substantially from the typical case within the data-rich ground-truthing locations, this may also be the case for other locations with low data coverage?

The statement "Satellite-based evaporation estimates do not accurately represent evaporation in this data-sparse region, which has a phenology and seasonality that significantly differ from the typical case in data-rich ground-truthing locations. This may also be true for other locations with limited data coverage." has been incorporated in the abstract.

Introduction

Line 59: „Intercepted radiation directly affects canopy conductance "

I disagree with this statement as written.

When stomata are closed, the radiation can be intercepted while canopy conductance remains low. I believe you mean that increased LAI enhances the transpiring surface and therefore canopy conductance. If yes, please reformulate and if no, please give a reference to support this statement. Also in the next sentence, it would be more correct to argue via the change in leaf area affecting the transpiring surface.

The sentence has been revised and citations included. "Intercepted radiation has shown to influence plant transpiration (Auzmendi et al., 2011) (Pieruschka et al., 2010)."

Line 63: „by moisture availability in both the vegetation .."

In all environments I am aware of, the vegetation water content is not the main driver for transpiration. Are you sure that is the case here or is this maybe a typo? If indeed water storage within the vegetation is considered a substantial contribution to transpiration, this should also be accounted for in the discussion section.

The degree to which the vegetation water storage contributes to transpiration in the dry season in the miombo woodland has not been assessed. We make reference to Tian et al (2018) findings about the miombo woodland that "Transpiration generally co-varied with LAI seasonal variations. In contrast, L-VOD increased from the latter period of the rainy season until the beginning of the dry season, stayed high throughout the rain-free period and decreased when LAI increased again. Together, these results indicate a critical role of plant water storage in buffering the seasonal dynamics of water supply and demand, and sustaining fresh leaves formed before the rain in these tropical dry woodlands".

Line 68-75: I propose moving the first sentence (L 68-70) to the end of this part (now Line 75), thus starting with the definition of evaporation and then addressing the evaporation in woodlands

Sentence revised as suggested

Line 78: Please correct the reference to Roberts

Refence edited as suggested

Line 67-91: This paragraph is too long, pls split it up. For example, move lines 81 - 91 to a new paragraph

The paragraph has been split up as recommended.

Line 85-88: The meaning of this sentence is unclear to me.

Line 82: „diverse" unless you are referring to species diversity, I propose erasing this, as it is confusing. If you are indeed referring to species diversity, better write „species diversity ".

Line 86-87: „plant water storage" - Why all of a sudden plant water storage comes up, while before only evaporation was in the focus? Is it important, can it be erased? If it is important, it needs to be introduced better. But since the remainder of the ms, including the discussion does not touch on plant water storage, I propose erasing it here.

Line 89: „ecohydrology": Can you be a bit more specific? While evaporation is clearly defined above, the same is not true for ecohydrology. Therefore, it is unclear what is meant by this sentence. Maybe replace "ecohydrology" with "evaporation"?

This term replaced "plant-water interactions" as was recommended by another reviewer. However, it has now been replaced with the term "climate".

Line 93-94: „which accounts for around 10% of the continent's land area" - Great! Thanks for adding this.

Well noted

Line 101-102: Erase „control exerted by the woodlands over". Confusing wordiness, as vegetation reflects on phenology.

The statement was erased as a recommended and replaced with "its control of leaf phenology".

Line 123: Replace „The deep rooting characteristic" with „Deep rooting, which is a characteristic"

Sentence revised and now starts "The deep rooting in most miombo species…"

Line 125-126: Erase „canopy serves as an evaporative surface that, in conjunction with other environmental factors, potentially". Confusing wordiness, no information is lost when erasing this.

We suggest retaining the sentence in a revised form "As a result, the canopy provides an evaporative surface that, in combination with other environmental variables, possibly facilitates continued transpiration even during the driest periods"

Line 124: Neither Fan et al. (2017) nor Kleidon and Heimann (1998) have worked on the Miombo, but the way they are cited makes it appear so. Please rephrase or remove the citations.

Contrary to the observation by the reviewer, actually the studies by both Fan et al (2017) on "Hydrologic regulation of plant rooting depth" and Kleidon and Heimann (1998) on "A method of determining rooting depth from a terrestrial biosphere model and its impacts on the global water and carbon cycle" includes the miombo woodland as shown in the screenshot below.

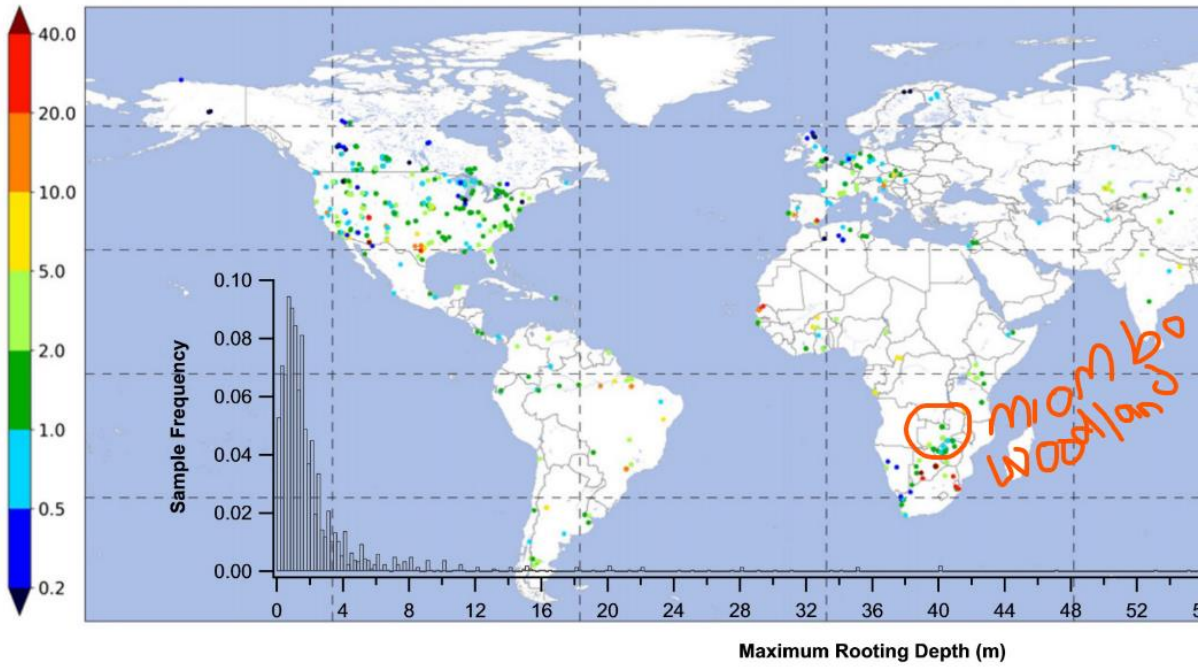
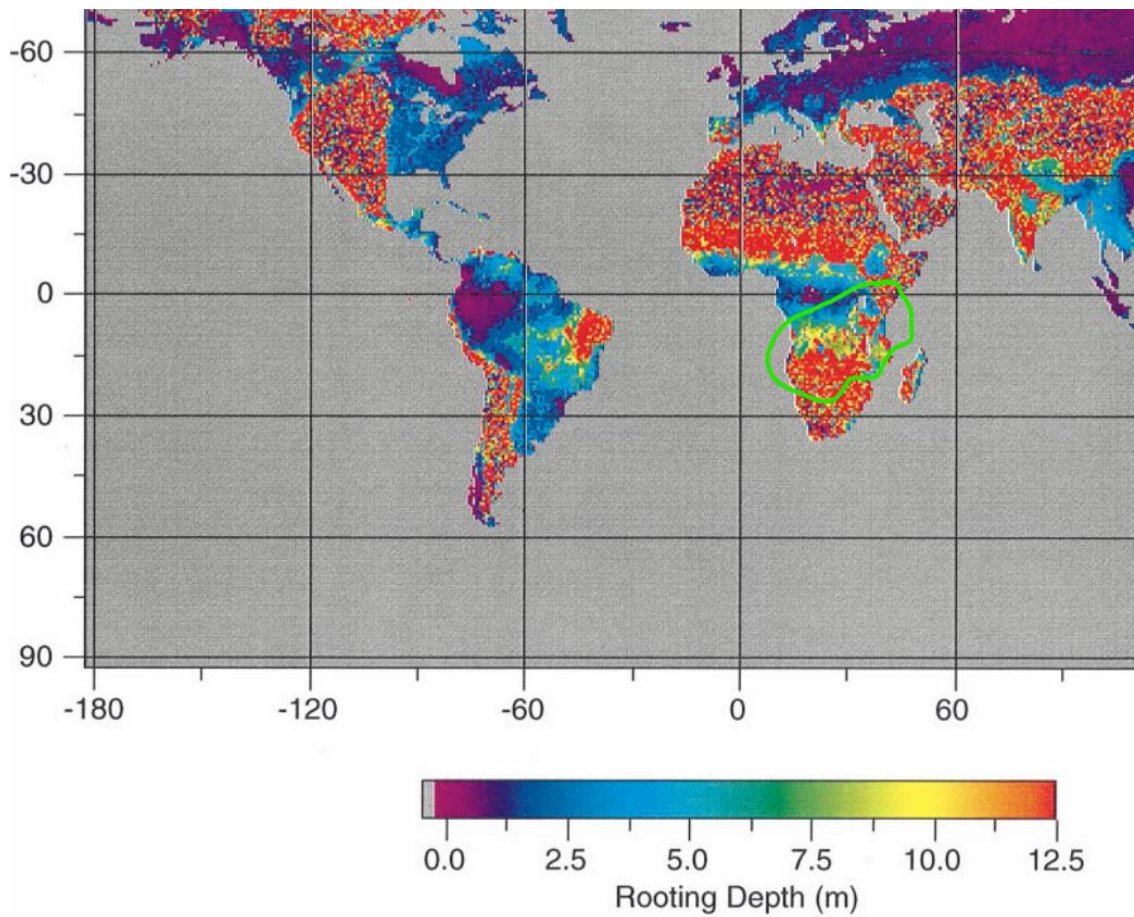



Fig. 2. Maximum observed rooting depth (in meters). Points overlap due to multiple samples in a small area. The deepe samples. *Inset* gives frequency distribution (0.2-m bin width).

Fan et al (2017)

Kleidon and Heimann (1998)

Line 129-130: „It appears that in the miombo woodlands, soil moisture increases with depth" - This comment on soil moisture comes a bit out of the blue. Maybe move it up to line 124. the hydrology is introduced? Also, is this comment based on measurements?

Measurements were performed as per citations (Chidumayo, 1994; Jeffers and Boaler, 1996; Savory, 1963)

The sentence has been moved as suggested by reviewer

Line 134-136: References are missing to the studies mentioned here. Especially, the comment on the carbon sink is surprising, since studies on an ecosystem acting as a carbon sink would be performed with eddy covariance data. And the latter would always also deliver information on evapotranspiration. However, it is mentioned earlier that almost no information on ET is available in the Miombo. This seems therefore a contradiction. Maybe specify the comment and also add some references to give examples of the existing studies mentioned.

The citations have been placed appropriately.

The methods used (Pelletier et al., 2018) to determine the carbon sink role of the miombo woodland did not include any of the approaches mentioned by the reviewer.

Line 140: „on publicly available literature "- are there further studies that are not publicly available? If yes, better state so explicitly.

Its possible there are unpublished literature which is not in public domain. We have no access to such information but we cant confidently say they don't exist, hence the way the sentence is framed.

Line 167-168: „these satellite-based evaporation estimates have primarily been developed for agricultural crops (i.e., Biggs et al., 2015; Zhang et al., 2016) "

I am not convinced by the references. Zhang et al (2016) also do not seem to agree. The terms „crop" and „agriculture" do not appear in the article, and the schematic Fig 3 in the paper shows tree canopies. Please either add other references or rephrase.

The terms crops are agriculture may not be used but this is what is implied by irrigated agriculture/systems as per reference below. Its quite explicit that the methods were **developed** to estimate evaporation from **irrigated agriculture** (crops basically).

"Each of the three families of methods used to estimate ET has different strengths and weaknesses (Table 3.1). Temperature based methods were developed to estimate ET from irrigated agriculture and therefore are more likely to perform best there but are often sensitive to how they are calibrated and sometimes depend on the existence of extreme values of ET in the image. Vegetation-based methods were developed for global application, **with a focus on rainfed systems**, and may have lower accuracy in irrigated systems where ET may be decoupled from a VI, particularly on the shoulders of the growing season".

Biggs et al (2015, page 86) Remote Sensing of Evapotranspiration from Croplands

3.3 ET Methods Intercomparison Studies

Each of the three families of methods used to estimate ET has different strengths and weaknesses (Table 3.1). Temperature-based methods were developed to estimate ET from irrigated agriculture and therefore are more likely to perform best there but are often sensitive to how they are calibrated and sometimes depend on the existence of extreme values of ET in the image. Vegetation-based methods were developed for global application, with a focus on rainfed systems, and may have lower accuracy in irrigated systems where ET may be decoupled from a VI, particularly on the shoulders of the growing season. Scatterplot methods incorporate both temperature and vegetation but usually require internal calibration and, like some one-source energy-based methods, often depend on extremes of ET to be present in the image. Studies that compare vegetation-, temperature-, and scatterplot-based methods together are not common, and here, we review some recent examples. Such intercomparisons are important, because vegetation- and temperature-based methods have strengths in different environments, and quantitative information on which does better under what climate and land use conditions can guide the user in method selection.

Line 170: I could not find this statement confirmed in Wang-Erlandson et al. (2016). Please double-check (also the other references, I do not have access to Snyder and Spano, 2013, but they seem more to be targeted at phenology, not remote sensing of ET in woodlands).

The citations are appropriate. The statement is about the differences in the interactions between phenology and Evapotranspiration in various ecosystems (i.e., woodlands/forests).

"It also discusses how to account for water stress effects to determine actual crop ET (ET a) and it presents some of the problems associated with estimating the ET of natural ecosystems".

Line 183-186: This statement needs to be justified. The reference to one paper that makes recommendations for Europe („Bogawski and Bednorz (2014)") does not serve the purpose.

We believe this is an important statement and reference which has now been justified.

Materials and Methods

Line 260-264: Split up this sentence, it is difficult to decipher.

Revised as suggested by reviewer

Line 262: „contradicting " is not the right verb here. Do you mean „to test"?

Sentence has been revised

Line 302-306: Erase or add information? It seems trivial that e.g. leaf area index changes with phenology.

The sentence has been deleted as suggested

Line 314: „Identified five phenological seasons"

Here you are referring to season categories based on climate, not phenology Please omit the word "phenophase" here to avoid confusion. By definition this refers to the vegetation condition, which is not part of the classification explained in this paragraph. Also, it would be good to move the climate-based description before the phenophase description, because it explains the general frame in which the vegetation phenology is set.

The sentences have been moved and revised as suggested by reviewer

Line 329: „ the comparison .. was conducted" compared with what? please add.

Sentence has been revised

Line 438: „serves as a practical solution" - to what problem?

Line 475-490: It would be good to see the annual averages of the stations used to calculate the water balance separately because this would put the differences in the satellite products into perspective.

The information is already Kindly refer to Table A1 in the supplementary data

Line 536-541:

Please briefly explain the procedure in some sentences.

The first two references do not contain the words "adjusted seasonal factor" or "centered moving average". I am not sure whether those terms are explained in the third reference since I have no access to it. In either case, the description is not sufficiently self-explanatory, to understand generally what was done and why it was required. Why not just calculate seasonal anomalies? Thus, for completeness, please add an explanation of the de-seasonalizing procedure. It should be possible to do so in very few words and would improve completeness.

The procedure for deseasonalising time series has been explained in the revised manuscript as suggested by reviewer.

Line 546 Erase „similar or"

Removed as suggested by reviewer

Line 551 /Eq 2:

The coefficient of variation in the general form as stated here is very well known, and the equation can be erased. The problem with understanding, e.g. further down in Fig 8d is the lack of information over which sample (across years, within the same month) the mean and variation were computed. Please indicate this specifically on all occasions where the CV is used.

If you want to keep the equation, please move further up to follow directly Line 543, where CV is introduced. Its location in Line 551 is confusing here, as it does not relate to the Kendall correlation mentioned just above in Line 550.

The paragraph has been restructured and taken into account the suggestions by the reviewer

Line 555: Unclear what „This" refers to? The differences in CV?

The sentence has been revised

Line 564 / Eq 3: Move up to follow „calculated" in Line 564

The section has been revised and taken into account the suggestions by the reviewer

Results and discussion

Line 607: „The study" - As the opening of the section "This study" reads odd, when it refers, like in this case, to a different paper. I think you want to rephrase it to "A previous study"

Revised as suggested by reviewer

Line 611: „field layer" - I am not familiar with the term "field layer" do you mean "short structured vegetation" or „understorey"? I propose renaming or moving the explanation given in line 614 up here.

The explanation has been moved up as suggested by reviewer

Line 616: „dry out" - I believe you mean "enter a dormant phase" ? Or "loos leafs"?

Sentence revised.

Grasses and non-deep rooting shrubs thrive and grow quickly when there is moisture, but they die back when moisture is scarce. During dry periods, they survive by entering a dormant state with buds located near the soil surface.

 Line 636: „trends" - I believe you mean „variation"

Rephrased as recommended

Line 639: „highest mean LAI and mean NDVI" - Not entirely. The highest NDVI in wet Miombo was observed in May in "senescence / green down". Please reformulate to acknowledge this.

Placing a straight line on the highest LAI and NDVI values confirms our earlier statement. We analysed the maximum values for each variable in both dry miombo and wet miombo woodland. The highest mean LAI and mean NDVI values are actually in the maturity/peak phenophases as stated in the manuscript. The mean NDVI values in May in the dry miombo woodland are slightly lower to those in the Maturity/Peak phenophase.

Figure 7: I am confused about the top photo with a date stamp of May 1: Above in Fig 2 and the Figure caption below you say maturity/peak is from January to March. But here the top photo with the time stamp May 1 is said to be peak too, but is later than stated above. Can you reconcile this presentation in the paper, either by adding a picture of March here or at least adding an explanation in the figure caption? Also, are you referring to the maturity/peak of the tree canopy only? If yes, would be good to add this information.

The Figure has been labelled as suggested. The order of the phenophases displayed in Figure 7 is correct. The date stamp has order of MONTH/DAY/YEAR therefore the first image showing 1/5/2021 is actually 5th January, 2021. The colour code on the edges of the images on the right indicates the phenophases as depicted in the LAI and NDVI image on the right. Its true that Figure 7 shows the phenophases as captured the changes in the canopy display.

Figure 8: The legend in 8c is difficult to decipher. It needs to be larger.

Figure 8 has been revised as suggested. The colour bar has been revised to enhance the contrast between the NDVI of the dry miombo woodland and wet miombo woodland. The colour coding of the graphs has also been improved.

Line 696: „Temporal coefficients of variation" - Across years? A within the same month?

Within month temporal coefficients of variation. Revised as suggested.

Line 7001-703: Please check the grammar of this sentence, something is wrong here, and it cannot be deciphered. Do you maybe mean to start with: "The time of peak LAI and peak NDVI" instead of "This Period of peak LAI"? Maybe use „corresponds to the NDVI peak" instead of „align"

The sentence has been revised.

Table 2: Please indicate which metric for the correlation is given specifically. I believe it is correlation coefficients, but please specify. Also, it would be good to see the corresponding coefficients for the other seasons too, even if the correlation is low.

Yes its correlation coefficients. Firstly, the within month CVs for LAI and NDVI are estimated. Then the CVs for LAI and NDVI in the dry miombo woodland and wet miombo woodland are analysed to observe the extent to which they are correlated. The full results are now given in Table 2. The meaning of the results in Table 2 has been given.

Line 718- 720: „temporal coefficients of variation" and „ and Table 2" - This sentence seems to relate to the values of Table 2. But in Table 2 apparently (see comment above), the correlation coefficients are shown, not the coefficients of variation. Please correct this.

These are correlation coefficients of the coefficients of variation of LAI and NDVI within each month. The purpose of this analysis was to observe the correlation between the temporal coefficients of variations of LAI and NDVI at the wet miombo woodland and dry miombo woodland sites.

Line 724: „temporal coefficients" - Here as a reader I am lost. Do you now really refer to coefficients of variation? Please double-check and write it out completely to avoid confusion.

Please refer to above explanation.

Line 779: „Fig A4" - Figure A4 mentioned before A3?

Fig. A3 is actually mentioned/cited before Fig A4

Line 796: erase „non stationary"

To achieve consistence, "Non stationary" has been replaced with "original time series" (which refers to the time series with seasonality) throughout the manuscript.

Figure 10d-e: Using season adjustment when comparing the products and the canopy properties is very helpful. Please improve the description, however. As mentioned above, I do not understand the procedure for deseasonalization. I would expect some seasonal anomalies, but those would vary around zero, whereas here the values seem to indicate some average. It is hard to interpret. Can you please better explain what is the expected value and how the peaks and valleys in the time series can be interpreted?

The approach for deseasonalising time series has been explained. For Figure 10 seasonal anomalies have been used instead of the deseasonalised time series which have been pushed to the supplementary data. The anomalies have been explained.

Figure 11: Adjust the color scale to reach from 0 to 1 for easier readability.

Colour scale adjusted as suggested

Line 821: „anomalies" - Which "anomalies"? The specification is also essential to understanding the difference between Figures 12 and 13

We have explained the meaning of anomalies and what is meant by deseasonalising of time series

Section 3.3.2

Based on the information provided, I believe that only Figure 13 is required. It shows that there agreement between the different products shifts depending on the phenological stages. Since climate-based seasons also somehow reflect phenological stages, Figure 12 is not required.

Based on reviewers comments the entire section 3.3.2 has been revised to make it clearer and more concise

Unfortunately, there is not enough information on what is meant by "anomalies" and by "deseasonalising" so I cannot appreciate the the additional value of Fig 11. However, Fig 11 is not much discussed, and therefore maybe can also be omitted or moved to the supplement.

Based on reviewer comments the Figure 11 has been discussed in detail.

Line 882: „temporal coefficients of variation" - Within years or across years?

There are two types of coefficients of variations in this study. The first CV is derived from the comparison of the aggregated 2009 – 2020 monthly means of satellite-based evaporation estimates for each phenophase.

The second CV is derived from the comparison of the aggregated monthly means for a given satellite-based evaporation estimates/LAI/NDVI/air temperature/rainfall (This is not a comparison between satellite-based evaporation estimates but CVs of individual products in each phenophase) (Figure 16)

Line 883 „means" - spatial means?

Temporal means

Line 892-894: Erase sentence. Arguments before and after refer to how well products reflect ET during the dry season. This sentence is on a different topic and is distracting. I propose erasing or moving elsewhere, where absolute values of ET products are discussed.

The entire section has been revised and reviewer's comments taken into account.

Liner 896-899: The given information is not sufficient to understand this sentence. Do you mean "unrealistically high temporal variation in the estimates of evaporation"

The section has been revised and the meaning of the variations explained

Line 915: „the time series with seasonality revealed significant differences" - I believe you mean „the original time series revealed differences .."

Yes. Revised accordingly

Line 953-954: This is interesting. But how does the increased CV support this? Can you add a sentence?

The CVs among satellite-based evaporation estimates increase during this period because it is when the most changes occur in phenology, such as the co-occurrence of leaf fall and leaf flush (i.e., changes in LAI), as well as changes in leaf colour (i.e., changes in NDVI). This is also the driest period of the year with rising temperatures, during which adapted physiological characteristics, such as accessing groundwater, likely come into play to withstand the dry season conditions. Therefore, there are differences in how satellite-based estimates account for these changes in climate variables and phenological changes, resulting in the observed high CVs.

Line 956: replace „differences in temporal trend" with „differences in temporal dynamics" as temporal trends were not analyzed.

Revised as suggested.

To augment the analysis and understanding of the differences in the temporal variations in satellite-based evaporation estimates the temporal trends for the period 2009 to 2020 have been included in the revised manuscript. See Table A3 in the supplementary data.

Line 960: correct typo on „r > 0.5" instead of „r > 5"

Revised as suggested

Line 981 - 988: „The green .. (Figs. 5,7 & 9)" Erase. This has already been discussed above and does not add information here.

Erased as suggested

Line 991-993: „This implies .. dominates." - I am not convinced that this should be the case. The ET does not need to be affected by which layer is evaporating. Is there literature to show that ET is not properly estimated by satellite products during times when the understorey is more active than the overstorey? If yes, add references here.

We based our understanding on the findings by Jiménez-Rodríguez et al (2020). We have decided to remove the statement and reference in order to avoid introducing new discussions that may not be very helpful for this study.

Line 996 - 999: „This suggests .. dry season" - Could you add a sentence, about why this variation indicates that the estimates are uncertain? ET could vary depending on weather conditions and differences in weather between years.

We have revised the sentence and added more information.

Line 1048: „estimates exhibited the most variation across phenophases" If I understand correctly, you mean "is most distinct from the others"?

Yes. The sentence has been revised accordingly.

Figure 17: I find Fig A10 is easier to interpret than this one, but seems to contain similar information. I propose switching those two.

Figure 17 and Fig A10 are discussing two totally different aspects. We don't think it is a good idea to interchange the two figures

Line 1065: „Number of times" - Difficult to interpret with absolute numbers, better give as a proportion of the total, e.g. 5%

The graphs have been revised to reflect the suggestion and sentence revised as accordingly

Line 1078: After the end of the sentence, it would be good to add „Therefore, high variation is expected." It is really helpful for the reader to put the statement in context.

The sentence has been ad

ded as suggested

Line 1078 - 1081: „The temporal .. estimate" - this is a repetition and can be erased.

Revised as suggested

Line 1112: „exhibit insignificant correlation" better „showed no significant correlation"

Revised as suggested

Line 1138 / 1140 „over-year-storage" better „interannual storage"

Revised as suggested

Line 1155: At „At the basin scale" start a new paragraph and merge with the following paragraph.

Revised as suggested

Figures

The Figure captions are sometimes very sparse and the sub-panels are not referred to consistently. Please make sure all sub-panels are named (and use the same formatting, e.g. „(a)"), and also explain what is shown in the figure caption.

All sub-panels have been appropriately labelled and described throughout the manuscript and the supplementary data

For example,

in Fig 4, 11, 17 the sub-panels are named by lowercase letters, e.g. (a) - (d) (which is good), but no explanation in the figure caption is missing. Please add this information.

The captions in all figures have been explained as suggested by reviewer

The caption of Figure 5 mentions all the sup-panels (which is good), but they are not named in the Figure itself (which would be helpful). Please add names (a) - (e) both to the plots and the figure caption.

All sub-panels have been named and captioned as suggested by reviewer

Figure 7 the dates of the different fotos are important to understand the text, but they have very small fonts at the bottom of each foto. Please use sup-panel letters and indicate the dates in the figure caption.

Letters and dates indicated as suggested by reviewer

Figure 2: Please specify in the caption where the photos were taken.

Name of place and coordinates of were the photos were taken have been included

Supplement

Figure A2: Something is off with the color scale. The correlation coefficients in A2 go from -1 to 1, with negative correlation accounted for. But the color scale only covers 0 to 1 with all values <= 0 falling into green. Would be good to also have differentiation for the negative correlations, some seem to be rather high, e.g. net radiation and soil moisture in the dormant season.

Colour scale in the figure has been corrected

Table A1: caption: Please correct the typo in the second line to „2014, 2015 and 2016".

Corrected as suggested

Also, the line is missing below CFSR lowest part.

Line included as suggested