Dear Referee,

Thank you very much for taking the time to read the manuscript and commenting on parts of it. We are pleased that you consider both the topic and findings interesting for HESS readers. As for the way it is written, we agree with you that the presentation of this research can be clarified. Below you will find the answers to the comments you made about the manuscript titled "Evaluation of drought representation and propagation in Regional Climate Model simulations over Spain" by A. Barella-Ortiz and P. Quintana-Seguí.

Once the other referee's comments are available, we will study them and see to complement the modifications proposed by this referee with yours.

General comments:

1. The title is misleading. This study is not only used RCMs but also LSMs and hydrological models (HMs).
   You are right in that the study uses LSMs and a hydrological model besides RCMs, but simulations from these are used as references to evaluate how RCMs represent droughts and the way precipitation anomalies propagate to soil moisture and streamflow anomalies. This is explained in the Introduction section (page 4, lines 1-5) and in Sect. 3 (page 7, lines 19 and 32 and page 8, line 11). Nevertheless, we will make it clearer in Sect. 3 (Datasets). In our opinion it is not necessary to modify the title as the evaluation of drought representation and propagation is performed for RCMs, but if the referees and the editor deem it necessary, we can think about an alternative

2. The abstract is not informative and poorly written. The objective of this study is not clear. For example authors stated that it is vital to study the evolution of drought in relation to climate change, and therefore better understanding processes involved in "it" is a key. This is not your objective to study the evolution of drought related to climate change. Second, the methods and tools that authors used in the study are not well defined in the abstract. Last, the conclusion does not summarize the main findings.
   We will rewrite the abstract indicating more clearly the main problematic and reason why we performed the study, the methodology employed, the RCMs analysed as well as the LSMs and hydrological model used as reference data, and the conclusions.

3. The way the authors wrote their introduction can be concluded as follows: 1) many sentences in the introduction part are unclear and need to be re-written, 2) there is no clear story line, 3) the introduction is not well structured in reasoning, 4) missing many related references e.g., increase of drought in Mediterranean due to climate change, drought propagation, models uncertainty from WATCH.
   We agree with you that the introduction should be clarified. We will restructure it in order to make clear the story line and reasoning. More references will be added too.

4.
We wrote separately sections 2 and 3 because the first one describes the study area and the second one, explains i) the forcing and driving datasets and ii) the models (RCM, LSM, and HM) used in this study. We think that this separation is necessary and reasonable, but if the editor thinks that they must be fusioned, we can find a way to put them together.

   1. The reason why precipitation amount is discussed in Sect. 2 is to provide the reader with the general behaviour of the precipitation regime in Spain. This is key to analyse meteorological drought and its propagation. However, we agree with you that there might be redundant information regarding the precipitation regime in Sects. 2 and 5.1.1. We will rewrite them to avoid this issue.
   2. We agree with the author that Sects. 3.2 and 3.3 should be unified. There is a numbering error.
   3. This is similar to the previous point, there is a numbering error and Sects. 3.2.2 and 3.2.3 should be sub-sections of Sect. 3.2.1.
   4. We will follow your advice and restructure Sect. 3 as follows:

      3 Datasets

         3.1 Forcings and driving data

            3.1.1 SAFRAN meteorological analysis
            3.1.2 ERA-Interim

         3.2 Models

            3.2.1 Regional climate models
            3.2.2 Land Surface Models

               SURFEX
               ORCHIDEE

            3.2.3 Hydrological models

         3.3 Observations

      SURFEX and ORCHIDEE sub-sections will not be numbered, because only three levels of sectioning are allowed.

5.
We are pleased that you find these sections better structured.

We think that your phrase "Of course the meteorological drought is better represented using climate model, and hydrological drought better represented using hydrological models" does not correctly describe the results of our study. Three types of drought (meteorological, soil moisture, and hydrological) are analysed, not two types. In addition, besides drought representation, we also analyse drought propagation: from a precipitation anomaly to soil moisture and streamflow anomalies. Finally, it is important to bear in mind that the study is focused on drought representation and propagation by RCMs and that the other types of models (LSMs and hydrological) are used as reference.

Regarding the perspectives, we believe that it is interesting to analyse more RCMs, because it helps to better understand uncertainties and improve modelling. As for the indices, we provide two examples that we believe are of interest to improve drought knowledge and modelling, one referred to a variable (temperature) and another one referred to a process (evapotranspiration). Both have an important impact on drought, but it is true that this also depends on the objectives. In our case, the objectives are to understand drought in a way as complete as possible

6. Some typos and grammar mistakes found in the texts.
   Line by line comment: L refers to Line and P refers to Page Note: Authors still need to pay attention for other sentences that are not mentioned here.
   We would like to thank you for pointing out the typos and grammar mistakes you found in the text. We will send the manuscript to a Scientific Editing Service to assure that the manuscript's English is correct.

Below you will find the replies to the line by line comments.

1. L171: Already in line 1 I do not understand with your sentence. Here you stated: "Drought is an important climatic risk, of modeling.." what do you mean with that? Rephrase the sentence.
   The objective of the phrase is to inform that drought is an important climatic risk (which is expressed in a large number of scientific papers) and that drought is difficult to model because the interaction of several processes (atmospheric and continental), with different temporal scales, has to be taken into account. We will rephrase the sentence.

2. L4P1: You may remove "comma" from: "The study here presented, analyses.."
   The comma will be removed.

3. L5P1: here you only mention RCM models. How about LSMs and HMs that you used?
   RCMs are mentioned because they are the models that we have evaluated in this work. However, as explained in the "General comments", number 2 reply, the abstract will be rewritten and the models whose simulations are used as references, will be mentioned.

4. L6-7P1: You stated: ". . .these models improve meteorological drought representation, but. . ." It is unclear how you tested this? It was not stated in the previous sentences.
This was tested by means of standardized indices computed using variables directly related to each type of drought:
   - SPI index computed using precipitation (meteorological drought).
   - SSMI index computed using soil moisture (soil moisture drought).
   - SRI and SSI index computed using runoff and streamflow, respectively (hydrological drought).

The comparison between the indices provided by i) RCMs and ii) the reference data was performed by means of the RMSD and the Pearson correlation.
As explained in the "General comments", number 2 reply, the abstract will be rewritten and the methodology will be informed.

5. L8P1: You said: "These are mainly due to the relevance of model formulation" Is it model formulation or structure?
We mean model structure. We would like to thank you for pointing this out.

6. L13-14P1: You stated: ". . .impacts from recent climate related extremes show a significant vulnerability. . ." I do not understand this. Impacts from climate extremes show vulnerability?
No, the ecosystems and human systems are vulnerable, as the phrase mentions. Maybe the phrase could be rewritten for better clarity. In fact, this is mentioned in the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report.

7. L15P1: Do you mean different development level such as less develop and well develop countries?
Yes, we refer to well developed, developing, and underdeveloped countries. We will rephrase the sentence to make it clear.

8. L18P1: Limited references. There are many.
More references will be added.

9. L22P1: There are more references for drought types, e.g., Van Loon (2015): hydrological drought explained, Mishra and Singh (2010): A review of drought concepts.
We would like to thank you for suggesting these references. In fact they are already given in the text. Following your advice, we will also include them in this sentence.

10. L4P2: What do you mean with there are no thresholds for soil moisture drought?
There are no standard determined values that once they are exceeded imply that there is a soil moisture drought. This is because this type of drought depends on other aspects, like the soil's type of vegetation or crop, its location, and season. But we agree that it is not clear now and we will remove this phrase from the text.

11. L6P2: Runoff is also one of hydrological drought where you also used in this study.
We would like to thank you for pointing this out. Runoff will be included in the hydrological drought description.

12. L9P2: Here you introduce environmental drought. Can you give references about that? As far as I know, it is socio-economic drought.
The Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report. WGII: Impacts, Adaptation, and Vulnerability lists the four types of drought given in the manuscript. Regarding environmental drought, it says that it is a combination of the other three types. We would like to thank you for pointing this out, since the reference provided is not the correct one. It should be IPCC (2007).

13. L10P2: You may add Van Loon et al. (2012): Evaluation of drought propagation in an ensemble mean of large-scale hydrological models.
We would like to thank you for suggesting this references. In fact it is already given in the text. Following your advice, we will also include it in this sentence.

14. L12P2: I do believe it is not potential evapotranspiration but actual evapotranspiration.
We will replace "potential" by "actual".

15. L12-13P2: This statement: ". . ..related to the availability of irrigation water in irrigated areas, thus depending on the hydrological drought" is unclear.
Our purpose is to show that the different types of drought are related between them in different ways. A key factor defining the relation of soil moisture drought with the other types is irrigation.
   ● Non irrigated areas: soil moisture drought appears slightly out of phase of the meteorological drought and depends on several factors (soil type, capacity to retain water, and evapotranspiration).
   ● Irrigated areas: we can distinguish two cases:
      ○ In purely irrigated areas, soil moisture drought is directly related to the availability of irrigation water and, therefore, it depends on hydrological drought.
      ○ In regions where irrigation is carried out under unusual circumstances, to avoid crop loss, soil moisture drought is not due to a lack of irrigation water, but of the water content in the soil. In this case, soil moisture drought is related to meteorological drought.
We will rewrite the text to make it more clear.

16. L15P2: You may write "some years"
Following your advice, we will replace "year" by "years".

17. L15-16P2: You wrote: "However, if there is no further delay in precipitation, it can occur that no hydrological drought is observed" What do you mean? Small precipitation amount may not alleviate hydrological drought.

After re-reading the paragraph we think that it should be simplified, as it is not clear enough. What we mean is that soil moisture and hydrological drought are related to meteorological drought, but that meteorological drought alone does not explain the other kinds of drought.

18. L19-20P2: Repetition with first paragraph.

The sentence will be removed from this paragraph.

19. L21-22P2: It is not necessary if you analyze drought without human influence where this may be the case in the models that you used.

We agree with you that if the models used to analyse drought representation and propagation do not consider anthropization, human action does not have to be taken into account in the drought modelling process. However, we believe that it is important to include this information. The reason being that, at this stage of the Introduction section, we are talking about modelling drought from a general perspective, without being restricted to the RCMs' characteristics. But this passage can be removed if necessary.

20. L28P2: You may remove the word "used"

The word "used" will be removed.

21. L32-33P2: It is not clear sentence: "following this line". Also you may replace ";" with ","

We will modify the sentence to "Other studies following this line of improvement are:...".
We will also replace the semicolon by a comma.

22. L4-5P3: I do not agree that RCM simulation is cheaper than GCM in terms of computing resources. First RCM needs GCM outputs for boundary model's inputs, second the computing resources depends on the resolutions of the model.

We would like to thank you for pointing this out. We will remove this phrase from the text.

23. L13-14P3: Unclear sentence. What kind of tools and what will be improved?

We will rephrase the sentence as "This will enable the development of drought prediction and management tools and the improvement of the existing ones".

24. L15P3: You may remove ","

We will remove the comma from the first sentence.

25. L15P3: you may replace "capacity" with "capability"

According to the Oxford dictionary, both capacity and capability can be defined as "the ability or power to do something."

26. L17P3: Too many "it" can you define what are it?
   We are sorry that the sentence is not clear. If the "it" are removed, the sentence is as follows: "The comparison allows to analyse the RCM's contribution with respect to the global model that drives the RCM, and see whether if the RCM improves drought simulation". We will rephrase it to make it clearer.

27. L19P3: Should be analyzed since they did the studies in the past.
   In comments 27 to 34, you suggest to write the text about the state-of-the-art using the past tense. We will follow your advice.

28. L20P3: Replace "uses" with "used" and also define those three drought indices. What are they?
   Same reply as comment number 27.

29. L21P3: Replace use(s) with used. The word "too" is informal.
   Same reply as comment number 27.

30. L23P3: Replace analyse with analysed.
   Same reply as comment number 27.

31. L25P3: Replace use and study with their past tense form.
   Same reply as comment number 27.

32. L26P3: you may replace: "..studies are. . ." with ". . .those studies were. . ."
   Same reply as comment number 27.

33. L27P3: Replace analyse with analysed.
   Same reply as comment number 27.

34. L28P3: Replace are with were.
   Same reply as comment number 27.

35. L29-32P3: Why don't you combine these two sentences?
   In our opinion, the sentences should not be combined. The first sentence provides results about the study performed by García-Valdecasas Ojeda et al. (2017), while the second one informs about other studies that carry out similar analysis, but do not necessarily obtain the same results. However, since the expression "following this line" was not clear, we will rephrase the second sentence as: "Other studies analysing the effect of the time accumulated period are Vicente-Serrano and López-Moreno (2005), Vicente-Serrano (2006), and Edossa et al. (2009)".

36. L6P4: Missing "the". The standardized indices.
   In our opinion, there is no need to include "the" before "standardized indices".

37. L7P4: You may replace "with" with "using"
   We will replace "with" by "using".

38. L8-10P4: Please write the full meaning of SSMI, SSI, and SRI first since this is the first time you introduce these acronyms.
   We will include the acronyms' description in the Introduction section.

39. L11P4: Rewrite: ". . .we will detail the study are".
   The sentence will be rewritten as "The study area is detailed in the next section".

40. L18-25P4: This paragraph should be in the result section.
   Same reply as the one from "General comments", number 2.

41. L26-27P4: Can you elaborate more why soil moisture anomaly in spring may influence droughts and heatwaves? Also this statement is not belonging to study area.
   We agree with you that this sentence may not provide relevant information for the work presented in the manuscript. Therefore, we will rephrase it to explain that soil moisture deficits in Spring over Southern Europe favours drought propagation over Northern Europe. We believe that this information helps characterizing soil moisture drought over Spain and warns about its effect regarding drought propagation towards Northern Europe.

42. L29P3: I suggest you to use different word for relief such as mountainous areas?
   We believe that this comment refers to page 4. In our opinion, "relief" is a valid word, as it refers to the difference in height from the surrounding terrain, but we can change it if necessary.

43. L31P4: What is "it" refers to?
   It refers to "a wide network of dams and river canals" that appears in the previous sentence. We will replace "It" by "This network".

44. L32P4: Rewrite "to use" into "to be used"
   We will replace "to use" by "to be used".

45. L2P5: You may write: "..a reduction of precipitation. . ."
   We will rephrase the sentence as: "However, a reduction of precipitation has been observed in Spring and Summer (de Luis et al., 2010), as well as an increase in the number of consecutive dry days (Turco and Llasat, 2011)."

46. L5P5: What is "it" refers to?
   It refers to "a rise in annual and seasonal temperatures" that appears in the previous sentence. We will replace "It" by "This rise".

47. L8P5: You write: ". . .increase this type of drought". In my opinion snow melt can increase or decrease the hydrological drought depend on early or late snow melt.

In our opinion the text is correct, as we refer to the "advance of the thaw date" and, therefore, to early snow melt. However, we will include a sentence referring to the fact that streamflows may be affected by snow melt in different ways depending on the snow melt timing and resulting in an increase or decrease of hydrological drought. For this, we will cite Van Loon (2015).

48. L17P5: Why don't you combine paragraph 2 with 1?

Paragraphs from lines 15 to 24 will be combined.

49. L23-24P5: This paragraph stands alone and can be combined with previous paragraph.

Same reply as comment number 48.

50. L28P5: Rewrite: ". . .detailed in Quintana-Segui et al. (2016).

We will rephrase the sentence as: "In Spain, SAFRAN was extended for a 35 year period (1979/1980 – 2013/2014) (Quintana-Seguí et al., 2016)."

51. L31P5: You may replace "in" with "for"

We will replace "in" by "used for".

52. L6P6: Again you may combine all paragraphs in this section (3.1.2) into 1. Paragraph 1 consists of two sentences, which are about ERA-interim and then paragraph two starts with the word "it". You should combine this paragraph since you still discuss about the same thing. Also you cannot start new paragraph with the word "it".

Paragraphs from lines 4 to 9 will be combined. However, paragraphs from lines 10 to 14 will be left alone, since the first one does not describe ERA-Interim, as the previous ones do, and the last one informs about how ERA-interim will be referred to in the rest of the paper. In our opinion, this information should be given in separate paragraphs.

53. L9P6: What is "it" refers to? Spatial resolution?

It refers to "ERA-Interim". This phrase will be moved to line 4 (page6).

54. L11-12P6: please give reference.

We will rewrite the text to better include the Ngo-Duc et al. (2005) and Weedon et al. (2011) references.

55. L12-13P6: You write: ". . .they can be corrected". How?

In our opinion that is out of the scope of this study. In addition, the Ngo-Duc et al. (2005) and Weedon et al. (2011) references, that deal with this issue, are provided.

56. L1P7: Rewrite this sentence: "Since there is no observed truth for soil moisture available,. . ."

    The sentence will be rephrased as "Since there is no ground truth for soil moisture available, LSM offline simulations are used as reference in this study to analyse both soil moisture and hydrological droughts".

57. L8-9P7: You should write the full names first before the acronyms.

    The full names will be written before the acronyms.

58. L14P7: You may add "in" before 1 km resolution.

    We agree with you that a preposition should be added before "1 km resolution". However, we think that "at" is better than "in".

59. L14P8: Rewrite the opening sentence.

    In our opinion the sentence is correct. However, we will move the reference of Ruti et al. (2015) to the end of the phrase. Regarding this paragraph, we propose to remove the last sentence. In our opinion, it is not necessary to provide further information about Med-CORDEX taking into account that references [Giorgi et al.(2009) and Ruti et al. (2015)] are provided.

60. L18P8: Replace "is" with "are" since you mention about drought representation and propagation.

    We will replace "is" by "are".

61. L20P8: You may reverse the words into ". . .represent physical processes in different ways. . ."

    The sentence will be rephrased as : "Each one of them uses a different surface scheme and, therefore, represent physical processes related to precipitation, soil moisture, and surface and sub-surface runoff in different ways".

62. L22P8: You used the name CNRM-RCSM4 but for previous sentence you use the name RCSM4 only. Please be consistent. Also for COSMO-CLM in L27.

    "CNRM-RCSM4" and "COSMO-CLM" will be introduced in Sec. 1, where we will explain that they are known as "RCSM4" and "CCLM4".

63. L1P9: In the section 3.4, please mention the number stations that you used in your study.

    A total of 87 stations containing at least 95% of data in the study period were selected. This information will be included in the "Observations" section from Sec. 3.

64. L2-3P9: Missing verb in this sentence.

    The sentence contains the following verbs "belong" and "provide".

65. L3P9: You may write: "To obtain monthly time series. . ."
We will write "time series", instead of "series".

66. L4P9: Can you elaborate why south is not as represented as the north?
We filtered the data in order to keep those stations with at least 95% of the data for the period studied and the stations kept are more abundant in the north. This could be due to i) southern basin authorities not submitting all data to the Ministry database, ii) that stations were installed later and thus the earlier part of the period is not covered, iii) problems of maintenance, iv) a combination of the three. We did not study the causes of this result.

67. L5P9: You may rewrite "to having" with "to have"
If "to having" is replaced by "to have", we will change the sentence's meaning. What we intend to say is that we can either have i) more stations containing less data or ii) less stations containing more data. We decided to work with less stations with the certainty that these have at least 95% of data in the study period. In our opinion the sentence is correct. However, we can rephrase it to make it more clear.

68. L7-8P9: You wrote: "In this way, both studies complement each other. . .." It is not clear sentence. What is in this way?
It's equivalent to saying "Like this". The same methodology is used in the study performed by Quintana-Seguí et al. (2019) and the work presented in this paper. Therefore, both studies are complementary.

69. L10-11P9: This sentence is not clear. You may write: ". . .we compute SPI and SSMI, which require precipitation and soil moisture data, respectively".
We propose to rephrase the sentence as: "For the meteorological and soil moisture drought analyses, we compute SPI and SSMI using precipitation and soil moisture data, respectively".

70. L14-16P9: Proper citations for all indices you mention here, except if you already did so before.
In the text it is said that "We follow the spirit of the Standardized Precipitation Index (SPI)..." (L14P9). Therefore, apart from the SPI index computed using precipitation, other standardized indices are computed using other variables and following the same methodology as the one followed to compute the SPI (referenced in L6-7P3). The text provides these variables and their corresponding indices. We propose to increase the references to other studies that employ standardized indices computed using other variables besides precipitation.

71. L1P10: You said the variable's time series is transformed from its original distribution to a normal one. What kind of distribution? Gamma, GEV, Pearson, etc?.

There are several parametric distribution functions used to compute standardized indices. We propose to rephrase the sentence, since it may not clear if the text refers to standardized indices in general or to the indices computed for the study described in the manuscript.

72. L3P10: You may rewrite: ". . .in the meteorological case. . ." into "for meteorological case. . .."
The text will be rewritten.

73. L4P10: You may change "for" with "from" and also missing verb.
We will replace "for" by "from". The sentence contains the verb "to use" in its -ing form. However, we will rewrite the sentence as: "The computation is carried out using i) monthly data for all indices and ii) a time series of the accumulated precipitation from the previous n months (being n the index scale) for the SPI".

74. L8P10: Why only for SPI-12?
Considering 12 months results more robust due to seasonal reasons. We will mention this in the text.

75. L13-14P10: Please give reference.
The reference McKee et al. (1993) will be given.

76. L17P10: Please use better opening sentence.
We will rephrase the sentence as "The methodology employed to analyse meteorological drought propagation is based on Barker et al. (2015)".

77. L19P10: You may write actual evapotranspiration.
We will remove "potential" from the text.

78. L15P11: You can combine second paragraph with the first.
Paragraphs from lines 13 to 19 will be combined.

79. L17-18P11: What do you mean with relief is a determining factor in distribution?
The text aims to indicate that the way water from precipitation is distributed over a region is strongly influenced by the region's relief. We will modify the text to refer to water distribution from precipitation.

80. L21P11: Modeled precipitations usually have higher results than the observed and ERA-i. There are some papers show that.
References will be included.

81. L4P12: Drought in 2005-2006 does not coincide with those found "in" Belo-Pereira et al. (2011) but it occurred. So please rephrase.

The paper from Belo-Pereira et al. (2011) explains that "In 2005–2006, the available data sets (CRU, GPCC and ERA-I) agree on a generalized drought spell in all areas". Therefore, drought in 2005-2006 is observed by the CRU, GPCC, and ERA-I data sets. In our work, the three RCMs analysed, as well as the ERA-I (RCMs' driving data) and the SLR (reference data) data sets also show a drought in 2005-2006.

82. L6P12: It is hardly to see in the Figure. Can you write the number of months?
The number of months will be provided.

83. L2P13: typo for tan
We will correct the typographical error.

84. L10P13: You may write: "The difference is the degree to which they deviate"
We will replace "The difference is the degree to which they do it" by "The difference is the degree to which they deviate".

85. L11P13: What are "it" refer to?
The word "it" refers to the percentage of area affected by drought. The text will be rewritten as: "On the one hand, in 1995, RS4 overestimates the percentage of area affected by drought by 20 %, CL4 around 15 % and PMS does not reach 10 %. On the other hand, in 1996, PMS underestimates this percentage by more than 30 %, while RS4 and CL4 underestimate it by 10 %".

86. L12P13: What do you mean with "do it"
The words "do it" refer to the action of underestimating the percentage of area affected by drought. The text will be rewritten to make it clear (see the previous comment).

87. L6P15: How about the white color in the table?
Regions whose values are not within the colour scale are represented in white. We will inform this in the text.

88. L12P15: Please rewrite: ". . .RCMs compared between them. . ."
We are not sure about the reason why it is proposed to rewrite this sentence. Our purpose is to show that if we compare drought representation by RCMs with other RCMs, we see changes in drought category representation. This is expected because, as explained in the text's previous phrase, changes in drought category representation are identified when RCMs are compared to LSMs (the reference data sets). But we can rephrase the text to make it more clear.

89. L14P16: Please elaborate more why SPI with higher accumulation period is slower.
Fig. 5 shows the month scale at which the correlation between SSMI-1 (SSMI index computed for a time accumulation of 1 month) and SPI-n (SPI index computed for a time accumulation of 1 to 28 months) is maximum. Therefore, it can be interpreted as the

temporal scale at which meteorological drought propagates to soil moisture drought. As the number of months increases, the models' dynamics decreases. Bearing this in mind, Fig. 5 does not show that the SPI is slower with higher accumulation periods, but that in the context of meteorological drought propagation to soil moisture drought, some models show slower dynamics (ORCHIDEE) than others (ISBA).

90. L3P17: you may rewrite: ". . .to the LSM with the surface scheme it is coupled to." Into ". . .LSM coupled with the surface scheme."
We propose to rephrase the sentence as: "This becomes more evident, when an RCM is compared to the LSM that has the same surface scheme".

91. L7P18: Rewrite: "To single out stations"
In our opinion, the text "To single out stations" is correct. According to the Oxford Dictionary, to single someone/something out is defined as "Choose someone or something from a group for special treatment", which corresponds to the actions described in the text.

92. L19-20P18: I thought LSMs should have better results for hydrological drought than GCMs.
In the first place, it should be noted that hydrological drought is not discussed in this subsection. In our opinion, the ideal variable to analyse hydrological drought is streamflow. Since RCMs do not provide simulated streamflow, we propose to use aggregated runoff to compute a standardized index (SRI) to study hydrological drought. For this, we first compare streamflow and aggregated runoff between them to analyse their resemblance by means of the Kling-Gupta Efficiency (KGE). This subsection addresses the comparison between both variables (streamflow and runoff). In the second place, we would like to point out that there is no comparison between LSMs and GCMs, the comparison is between RCM simulations driven by ERA-Interim and offline LSM simulations forced by i) ERA-Interim and ii) SAFRAN. RCMs provide better KGE values than LSMs, which means that aggregated runoff simulated by RCMs performs better than aggregated runoff simulated by LSMs when compared to streamflow and when forced by the same forcing data (ERA-Interim).

93. L22P18: I saw 0.6 and not 0.7. Also you said that PMS behaves better over both basins. How do you define PMS is better? By average value or by color?
The KGE value at station number 9002 for the comparison between RS4 and observations (lower table) is 0.7. The value 0.6 corresponds to the comparison between RS4 and the SIMPA model at the same station. We will modify the text to specify that 0.7 corresponds to the comparison between RS4 and observations.
We have identified PMS as the best performing according to the average value. We will include this in the text.

94. L4P19: Again what is white?

Regions whose values are not within the colour scale are represented in white. We will inform this in the text.

95. L14P21: You may change from "the 9025 station" to "station number 9025"
We will replace "the 9025 station" by "station number 9025".

96. L10P22: What is extension?
Extension refers to the area affected by a drought event. We will replace "extension" by "area" to make the text more clear.

97. L33P23: You may rewrite: "..that PMS' precipitation extremes are too strong" into ". . .that PMS simulates higher precipitation amount."
In our opinion, the phrase is valid. The paper provided as a reference (Dominguez et al., 2013) studies extreme precipitation indices. Therefore, the manuscript's text should refer to extreme precipitation.

98. L9P24: I believe you cannot avoid the error but you can minimize the error.
We will replace "avoiding" by "minimizing".

99. L15P24: Replace use with used. Past tense passive sentence.
We will replace "use" by "used".

100.   Figures: They are too small, cannot see them clearly.
Figures will be enlarged.

101.   Table 6: I cannot find the number in bold. Can you also please write the correlation numbers for each color in the caption?
We would like to thank you for pointing this out. Scales longer than 12 months will be marked in bold and the correlation ranges for each colour will be included in the caption.

We hope you will see a clear improvement in a revised version of the manuscript.

Yours sincerely,

Anaïs Barella-Ortiz