

Referee 3

General comments:

This paper proposes a new combined drought indicator (CDI) integrating rainfall (SPI- 3), soil moisture (SMAI) and vegetation dynamics (NDVI). It is shown that this indicator is useful to predict dry periods. Therefore the research carried out in this paper is of scientific and practical interest, and in my opinion it is adequate to NHESS journal. The manuscript is in general well structured and presented. The methodology employed and the obtained results are well exposed. It seems to me that the paper could be published as long as the authors answer the following minor concerns that arose from the review process that I made

Thank you very much for this positive feedback. We have answered the comments above and changed the manuscript accordingly

Specific comments:

I only have a couple of minor specific comments to be answered by the authors.

1. Did the authors made a comparison between the new combined drought indicator (CDI) that they propose and other combined drought indicators? Could the authors include in the paper some comments in this direction?

We have included some comments in this direction in the discussion section. Please see from p.10 line 30 till page 11, line 4.

2. Did the authors apply this new combined drought indicator on geographic areas of different characteristics with respect to the characteristics of the areas in Southern Spain analyzed in the present study? Would it be possible that the evaluation of the CDI indicator should be different?

We agree this would be interesting. Up to now, we have only applied this study to the Andalusian region, which is already a very large with many contrasting climate and geographic situations. So, at present, applying it to other areas goes beyond the scope of this study. We expect and hope, however, that our CDI indicator would be similarly good however.

Minor comments:

We thank referee 3 for these comments, which have all been taken into account.

Page 4, line 9: There are a couple of words not in English. Page 5, line 2: The same comment as I did before.

corrected

Page 11, line 12: The classification of CDI is not clearly exposed in this section.

we assume that the referee refers to p.10, line 12, we have corrected the text as follows: "... are accompanied by watches, warnings and type I or II alerts of CDI in the five agricultural regions that were studied "

Page 16, Figure 2: Perhaps it should be more clear (and homogeneous) substituting the “9” that appear at the beginning of the years, by “sep”, as authors did in Figure 6. Furthermore, why the year 2013 is not printed in the figure? Also, in the description of this figure, I suppose that “La Campiña” should appear with capital letters, as in the rest of the document. everything corrected except for the year 2013 we were not given the data for that year by Agroseguro. We added this explanation in the material and methods, section 2.6 " Note that data for the last year of the study 2012/13 were not provided. "

Page 17, Figure 3: Same comments that I made for Figure 2.

corrected

Page 19, Figure 5: Same comments that I made for Figure 2.

corrected

Page 19, in the bottom: I suppose that the meaning of the colors that appear at the bottom of this page should appear inside Figure 6 of page 20.

corrected

Page 20, Figure 6: In my opinion, this figure needs to be clearer with respect to the CDI indicator, including the meaning of the colors, for a better reader comprehension. Furthermore, it is not clear to me why the value of the agricultural crop damage intensity (blue line) is not printed for the last year.

As mentioned a few lines earlier, we were not given this data by Agroseguro. We included this explanation in the material and methods, section 2.6 " Note that data for the last year of the study 2012/13 were not provided. "

With respect to the colours, we are not clear as to what the problem is. We have changed the scale to appear in the same figure so the reader can clearly see what every colour means. We have also, as suggested by referee 1, added that "figure 6 shows the monthly evolution of CDI", which we believe helps to now interpret this figure with more clarity. **Pages 20-21, Table 3: Could the authors improve the quality of this table?**

We have completely changed the layout of this table in order to satisfy the reviewer's request.