This is an interesting work. The idea of combining soil, atmosphere, and vegetation status in one index reflects the developing holistic understanding of the soil- vegetation-atmosphere system.

We thank referee 1 for this positive evaluation.

There are two issues that preclude the publication of the manuscript in its present form.

A. Four important questions are not answered.

1. How did the authors arrive to the number of classes and boundaries shown in Table 3?

This work is based on other similar indicators that have been published in the literature. The boundaries of SPI are very close to those originally proposed by McKe; those for NDVI are close to those defined for the vegetation index fAPAR by Sepulcre-Cantó et al. (2012); and those for the soil moisture categories were like those used by the NDVI.

2. How did the authors evaluate the index? What was the objective way to do that? The Fig. 6 looks undoubtedly good, but no method of the index quantitative assessment is provided in the manuscript.

We agree that future work should focus on improving the evaluation. At present, the limited data available only allows a qualitative evaluation. In other words, when we see some watch, warning or type of alert, we check that this corresponds to high levels of yield loss and insurance claims. While we realize that it would be better to do so quantitatively, we want to stress that even this type of qualitative evaluation has only rarely been undertaken in previous studies, so we think it is highly valuable.

3. Does the proposed index work better than previously proposed indices?

We have reported in the paper that our combined index works better than, for instance, SPI alone, which is an index that is now frequently used in drought management. See page 10, lines 9 - 11. We have not made a full evaluation against other combined indices, which is beyond the scope of this study. It would imply using other models (such as LISFLOOD which was the model used to calculate soil moisture anomalies for the CDI indicator proposed by Sepulcre-Cantó et al., 2012) and working on different spatial scales, so it would make the presentation of this indicator and its evaluation too complex. However, in a new study, this could be done and we therefore agree that it would be of interest to study it in future work.

4. What is the purpose of the index development?
Who and how will use it?

This is an interesting observation. We hope that this type of drought index could be employed by different users: (i) scientists; (ii) policy analysts and technicians working in drought management; and (iii) insurance companies.
We mentioned this in the introduction, page 1 lines 19-20 " For the management of local policy and mitigation actions, such as farm-scale insurance schemes, smaller spatial scales than those used by Sepulcre-Cantó et al. (2012) are required."but we have added another phrase to make it clearer:, page 1 lines 24-25: " It is expected that this new CDI will be useful at the local policy level and for planning farm-scale insurance schemes."

B. The English is unsatisfactory. Many statements are incomprehensible. Here are examples from the P. 1. L 21 "appreciated under different forms" What does this mean? L. 23 "proper definition" What does this mean? L. 24 "phenomenon for this reason, and of the spatial extent of its effects." What does this mean? L. 27 "influence affect the normal manifestations of the society" What does this mean? L 29 – 30 "denominated Old World Drought Atlas" What does this mean?

We have double checked the manuscript and have also sent it to a professional native English speaker for correction.
-P1.L21. This phrase has been replaced by "...*which may have economic, social and environmental impacts*"
-P.1.L24 has been rephrased *" Tannehill (1974) called drought "the creeping phenomenon", given the complexity of accurately delimiting its start time and end time, and of adequately demarcating the spatial extent of its effects.* "
-P1 L27 this fourth type of drought has been rephrased as " *(iv) socioeconomic when it affects the normal functioning of society.* "
-P.1 L 29-30 this is the name given to the published results of this study, see http://drought.memphis.edu/OWDA/
We have deleted the reference to its name and focused on describing the results of this study.

Terms are used that have not been defined.
Examples 6/25 "which phase" the phase was never defined SPI-3 to identify the first "level of precipitation deficit" What levels are you talking about. 6/27 "This study proposes a CDI that combines three combines, as mentioned before"

With "which phase" we referred to the previous sentence, that explains the different phases: " A precipitation deficit leads initially to a soil water deficit, which, if prolonged over time, will result in crop water stress, and be reflected in the observed NDVI observed, which finally generates a reduction in cereal yields. "
The same goes for "first level of precipitation deficit", we refer to the first thing occurring during a drought, i.e. the absence of precipitation (which then leads to a soil moisture deficit, etc...)
As this was obviously expressed in a confusing way, we have adapted this paragraph completely. It now reads as follows:

"The main idea behind the combined drought indicator (CDI) for identifying agricultural drought is an idealized cause-effect relationship between water deficit and yield. There are different phases in this relation: a precipitation deficit (phase 1) leads initially to a soil water deficit (phase 2), which, if prolonged over time, will result in crop water stress, and be reflected in the NDVI observed (phase 3), which finally a reduction in cereal yields (phase 4).

In its simplest form, this CDI would allow to identify which phase of the cause-effect relation the agricultural system takes reached in the event of a drought. This indicator would then permit the establishment allow to establish of a series of drought warnings, depending on the phase. The CDI should be seen as a first step towards designing that warning system.

This study proposes a CDI that combines three indicator variables:

- *SPI-3 to identify the first level of precipitation deficit (phase 1)*
- *SMAI to identify anomalies in the soil moisture (phase 2)*
- *NDVI anomalies to characterize the subsequent effect of soil water stress on crops (phase 3). "*

The last sentence has been changed to " *This study proposes a CDI that combines three indices:* ", as suggested by reviewer 1.

Some text pieces reflect simple negligence. Examples "representative value for loam clay according to USDA classification." Does not exist

We apologize, this has been corrected to "clay loam".

4.3 NDVIA insurance data were gently supplied by

Yes, we are sorry, "gently" was a slip, it should be "kindly" " The insurance data were kindly supplied by Agroseguro."