



EGUsphere, referee comment RC2  
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## **Comment on egusphere-2022-287**

Anonymous Referee #2

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Referee comment on "Past and future climate analysis at regional scale: the case study of the Campania Region, Italy" by Giuseppe Giugliano et al., EGU sphere,  
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This manuscript deals with an interesting and state-of-art topic, since climate analyses are needed by the scientific community to perform risk assessments and to establish adaptation and mitigation strategies, especially in those areas classified as at high risk of natural hazards, such as many zones of Campania. However, I regret to inform that I cannot recommend the publication, being the manuscript affected by serious issues:

The general level of the manuscript is very poor, being more similar to a technical report than to a scientific paper. The English style is inadequate, with many syntax and grammar errors, and it does not meet the minimum standard requirements for a peer reviewed international paper. Several concepts are uselessly repeated several times throughout the manuscript, other ones are "taken for granted" or prosaic (see also specific comments for some examples of errors).

ETCCDI provides a list of 27 indicators, it is not clear why authors have used only the limited subset shown in Table 3. In particular, only one indicator for temperature is not sufficient.

A wide part of the manuscript (about seven pages) is devoted to the description of the methods used for completeness and homogenization tests, but these techniques are well established in literature, they can be easily found in books, but also in multimedia channel, e.g:

- <https://www.youtube.com/watch?v=KQsshJ04WxM>
- <https://rdr.io/cran/trend/man/br.test.html>

so, there is no need to describe them in details. They can be only mentioned with their pro and cons, while the full description could be replaced by proper references.

The analysis of past climate, although formally correct, looks just as a description of numbers, but no scientific interpretation is provided, apart from some prosaic and obvious sentences. Some unusual behaviors have been observed, but no physical interpretation or justification is given.

The analysis of future climate projections is pretty modest. The authors do not explain the reason why these two models (cosmo-clm and eurocordex ensemble mean) and these two RCP scenarios have been selected. Also, before performing future analysis, the model must be validated against observational data, in order to assess the capabilities of the models in reproducing the climate features of the area under study. Biases affecting simulations must be quantified. Finally, a critical analysis of the projections is completely missing, as well as comparison with other available projections (even at lower resolutions) to check their consistency.

Specific comments

Line 11: Probably "testing" is not the most appropriate word in this context.

Line 41: COSMO-CLM is not of the CMCC Foundation, but it is owned by CLM Community, please clarify.

Line 47: compared... comparing... sounds bad, please improve the style.

Line 49: "the Methodology section describes the methodology". It is quite obvious... please improve the style.

Lines 56-58: The aims of the work were already explained in the introduction, this sentence can be removed or modified.

Line 80: This concept (need of 30 years) was already expressed in the introduction, please remove.

Line 87-92: Honestly, I do not understand what you mean in this sentence.

Line 97: Add a reference for the conditions expressed in Table 1.

Line 106: "is is"?

Line 115: "over the entire period" is repeated twice.

Line 135: "In this work will be analyzed", grammar error.

Line 137: add a reference for this classification.

Line 149: "it is also a single breakpoint the standard deviation could suffer a weak bias".  
Not clear, syntax error.

Line 235: "the climate changes expected in the future due to climate change". It is quite obvious that climate changes are due to climate changes!!!

Line 280: You probably mean Table 3 (not 1).

Line 286-287: "The different seasons are respectively the winter, called DJF; spring, called MAM; summer, called JJA; and autumn, called SON". It is well known what the season are....

Lines 293-295: "it is noted that those located in the innermost areas of the region and higher in altitude register a lower mean temperature, while the stations located in the plains have a higher mean temperature." This finding is quite obvious and well expected...

Line 300: how can you say that this is an "expected value"?

Line 308: A lot of grammar errors in this sentence.

Line 325: Change precipitations with precipitation.

Line 337: Figure 3 has no sense...

Line 351-354: This concept has already been expressed previously.

Line 355: Seasons have already been defined previously.

Line 394: greater than what?

Line 425: change "awaited" with "expected".

Line 427: what do you mean by "under review"? are you talking of a paper???