

Interactive comment on “Trend analysis by a piecewise linear regression model applied to surface air temperatures in Southeastern Spain (1973–2014)” by P. Campra and M. Morales

Anonymous Referee #1

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The paper applies a published algorithm (Muggeo, 2003) to datasets of observations in SE Spain. There seems to be no innovation in the methods. In what concerns the analysis of results, I generally found it unconvincing, for reasons explained below.

The recent deceleration of global warming is a global process, not specifically linked to anything peculiar of SE Spain. That fact makes the discussion of the location of the breakpoint in the 4 chosen stations, and the slight observed differences between them, rather irrelevant. Attributing the global deceleration to specific land use changes in a very localized region is certainly wrong, and it seems to be implied by the text (although not directly).

So, while I believe that a global analysis of mean or of spatially distributed surface

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temperature would probably find a breakpoint in the beginning of 2000s, a fact that comes from a visual inspection of mean temperature, I don't see the point of doing the same analysis on such a small set of data, unless you have something new in the methodology or in the attribution analysis. That does not seem to be the case.

Furthermore the so called "hiatus" seems to be over, after the record breaking temperatures in 2015, making the results a bit outdated.

Finally I found the discussion supported by Table 2-4 rather weak. The piecewise approach will always produce a better fit, the question being the statistical support for the extra degrees of freedom. The large differences found in the location of the breakpoints in nearby stations mostly makes me feel uncomfortable about the robustness of the individual results and not excited to look for the physical explanation of those differences.

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