

Dear Dr Schymanski,

Thank you for your quick response. We haven't made any changes, as detailed below, but the system wouldn't allow uploading the author's response without uploading a manuscript, so the newly uploaded version of the manuscript is the same as the one uploaded on 31st January.

Regarding Fig B3b, this is indeed now correct. It was changed because a comment from the reviewer (attached in the table below) revealed an error, and so we have updated the figure accordingly. It is now consistent with the area averages which have non-significant trends. We also updated the trend maps in Figures B1 and B2, although the differences are much less between the old and new versions.

Regarding the assets (and the citation of the datasets in the paper). This is the result of having recently extended the data sets to have coverage up to 2015. Since, as you note, the DOI refers to a static dataset, once we had the extra data we had to publish the full 1961-2015 datasets with new DOIs. Unfortunately, the procedures used by the data centre are such that the original data download links are superseded. However, the original 1961-2012 files are unchanged and are still available through the download links associated with the new DOIs. We appreciate this is not ideal but for now we are constrained by the procedures imposed by the data centre.

Because the analysis was performed with the 1961-2012 data, and since the update to 2015 happened very recently, we kept the original DOIs in the references and in the assets. We think this is most explicit about exactly which data were used, while also allowing for readers to follow through to download the files from the newest version of the data.

Finally, we would still be interested in giving Reviewer #2 a named acknowledgement, if they would be happy for us to know who they are.

Regards,

Emma Robinson on behalf of the authors

Reviewer comment	Author response
<p>Fig B3b: A bit odd that the local Rh trend is significant over almost all of GB, but the trend in the area-average back at Fig 14c (leftmost symbol) is not significant. Are these significances defined consistently?</p>	<p>Thank you for noticing this – the maps were in fact plotted using the wrong CIs. As part of the process of analysis we calculated CIs based on a simple linear regression, as well as the CIs allowing for the non-zero lag-1 autocorrelation. The latter are the ones that have been used throughout the analysis, but we mistakenly used the former to calculate the significant regions of the trend maps (Figures B1, B2 and B3b). The simple linear regression CIs are less conservative and more restrictive, so make it appear that more of the area of the UK has significant trends. This was the case for all the variables, although most noticeable for the relative humidity. Now that we have remade the plots using the correct CIs, they are consistent with the rest of the analysis, and show smaller regions for which the trends are significant. For the relative humidity this leaves only a few small regions with significant trends, and this is consistent with the area means having non-significant trends as well. Note that the trends shown in the maps are unchanged, just the regions that are grey (for non-significant trends) have increased. (Figures B1, B2 and B3b)</p>