

Dear Top Editor Klaus Klingmüller:

Thank you very much for your kind work and consideration on publication of our manuscript. We really appreciate your constructive comments and suggestions for helping us improve this paper. Please see below for a response to some necessary corrections. The comments are shown in *black italics*. Our replies are shown in indented black text.

Sincerely

Yinchang Feng and co-authors

*1 The input datasets for WRF have a DOI which should be used instead of the link in the Data availability section, i.e., <https://rda.ucar.edu/datasets/ds351.0/index.html> should be replaced by <https://doi.org/10.5065/39C5-Z211>. Also, please adjust the link to the MEIC dataset, the current link leads to the citation rules, not to the data itself.*

**Response:** Thank you for your suggestion. We have replaced the link to the input datasets of WRF with a DOI. Also, the emission data (MEIC dataset) used in this paper are available at <https://zenodo.org/record/7865675>. These corrections are on page 26, lines 589 and 595-596 of our revised manuscript and Table S2 of *Supplementary Material* (ds083.2: <https://doi.org/10.5065/D6M043C6>; ds351.0: <https://doi.org/10.5065/39C5-Z211>; ds461.0: <https://doi.org/10.5065/4F4P-E398>).

*2 Regarding the figures 1, S2, S3, S4, S5: please ensure that the colour schemes used in your maps and charts allow readers with colour vision deficiencies to correctly interpret your findings. Please check your figures using the Coblis – Color Blindness Simulator (<https://www.color-blindness.com/coblis-color-blindness-simulator/>) and revise the colour schemes accordingly.*

**Response:** Thank you for your advice. We have revised the color schemes (Figures 1, S2, S3, S4, S5) accordingly. And sorry for not considering this important factor.