

Interactive comment on “Resolution dependence of uncertainties in gridded emission inventories: a case study in Hebei, China” by Bo Zheng et al.

Bo Zheng et al.

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Anonymous Referee #2:

The manuscript describes the effect spatial resolution has on emission inventories and subsequent pollutant concentrations toward exposure estimates. The study is well-formulated and concise. The methodology is clear and shows how the resolution of a bottom-up approach is more appropriate at smaller scales when compared with a less-well approximated inventory relying on spatial proxies. Overall, the manuscript is well-written and I recommend it for publication. There are two sections that could be improved for clarity:

Response to Referee #2:

C1

We thank Referee #2 for the constructive comment and address it as below.

Lines 305-307: Here it would help the reader if it is stated explicitly that the point source emissions are allocated as nonpoint sources. Although it seems clear after some rereading, it was not immediately obvious that the point sources were, in effect, converted to nonpoint sources using the methodology described. It may be useful to generate a more comprehensive Table 3 where the actual emissions by source types are listed.

Response:

Thanks for the suggestion. We clarified the statement in this paragraph to make it clear how the point sources are processed in the sensitivity analysis. For Table 3, we listed the actual emissions by source types in the revised manuscript.

Table 1: There is a reference to Zheng et al 2014 (e) but I don't see that on the table.

Response:

The reference to Zheng et al 2014 (e) is labeled on the subsector of on-road emissions in Table 1.

Interactive comment on Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2016-907, 2016.

C2