

Interactive comment on “Evaluating wildfire emissions projection methods in comparisons of simulated and observed air quality” by Uma Shankar et al.

Anonymous Referee #1

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As mentioned in my initial short review of the manuscript, both the topic and the proposed methods are interesting and suitable for the ACP journal. The scope of the article is in line with other methods used to predict atmospheric emissions under foreseen climate change scenarios, taking into account population dynamics.

My main concern is with the final results presented in the article; the methods aim at providing acceptable performance as compared to NEI, but also observational data on emissions, as that should be the ultimate goal of all models. MFBs are 25% and 51% against observations. I would therefore recommend that the initial approaches are revised so that the results they yield approximate better the known emissions.

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There are some data related to estimates of burnt areas that clearly not suitable for that, such as the count of MODIS active fires. There are much better datasets in the USA, and also globally, for these assessments, which ultimately lead to the estimation of wildfire emissions. This could be one of the causes of the large differences between model outputs and observations.

Additional comments are included in the attached pdf.

Please also note the supplement to this comment:

<https://www.atmos-chem-phys-discuss.net/acp-2018-1296/acp-2018-1296-RC1-supplement.pdf>

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2018-1296>, 2019.

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