

Interactive comment on “Evaluation of anthropogenic CH₄ emissions over China using bottom-up inventories” by Xiaohui Lin et al.

Nellie Elguindi (Editor)

elgn@aero.obs-mip.fr

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Dear Xiaohui et al.,

Two referees have posted reviews of your manuscript requiring major revisions. Both reviewers have expressed concerns about the depth of the analysis as well as the amount of new information the paper brings to the community, particularly regarding sources of uncertainties in methane emissions in China. In submitting a revised manuscript, I encourage the authors to carefully consider whether they adequately address all of the concerns and comments detailed by the two reviewers.

Additionally, I'm concerned by the fact that the inventories presented in this study are outdated and don't provide any information on recent trends in methane emissions in

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China which have most likely changed significantly. The authors should make every effort possible to include more recent estimates of methane emissions which would be of great interest to the community and necessary information for policy makers. If this information does not exist, or is not publicly available, please speculate as to why this is the case in the manuscript. For example, in the authors' response to Reviewer #1 it is stated that the REAS inventory no longer includes methane emissions. Please inquire or speculate as to why. If there really are no recent estimates of methane emissions for China, perhaps the authors could use proxies to infer, at least qualitatively, how emissions have changed in recent years. For example, many coal-fired power plants have closed recently following the implementation of strict air pollutant policies in China after 2012. If a revised manuscript is submitted, please include a thorough discussion addressing all these points regarding recent trends in the last 5-10 years. This discussion is viewed as very important to a paper whose goal is to provide a comprehensive evaluation of China's methane emissions to aid in climate change mitigation.

Please note that a revised manuscript does not necessarily guarantee acceptance and could be subject to additional reviews.

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