

The authors have clearly addressed each point posted by two reviewers. I recommend it to be published after minor changes.

- 1, Line 36: I assume that “CH₄ mixing ratio” here is “XCH₄”.
- 2, Figure 3: Some lines for BIR and HTM are truncated. Why not show the whole range?
- 3, Line 353: “in inaccurate” should be “inaccurate”
- 4, Line 420: If I remember correctly, Saunio et al. (2020) built a bottom-up emission inventory at a resolution of 0.1°.
- 5, Line 430: I don’t get the idea why the authors added “These values are close to the value used in the ‘modelled’ prior, based on the work by Poursanidis et al. (2024).” Does it help to better explain the conclusions than previous version?