

We sincerely thank the editor for the careful and detailed review. We have carefully verified all text, data, and figures. The list of relevant revisions is as follows:

1. Line 410: Revised “and (b) same as (b) but in 2020” to “and (b) same as (a) but in 2020”, **as suggested by the editor.**
2. In Fig. 5a, Fig. 7a, Fig. S2, Fig. S3 and Fig. S7, the gridded NO_x emission colorbar unit has been corrected from “kt” to “Mg”. Although the gridded data were previously converted from kt to t (1 t = 10³ kg = 1 Mg), the unit of plotting scripts were not updated accordingly. Mg is now used to maintain consistency with the Tg units reported in the text. **This error is limited to the figure labels and does not affect any data values or the conclusions of the study. We sincerely apologize for the oversight.**
3. Lines 518–520: Revise “reaching 3.1 times in EN, ..., particularly in polluted regions” to “reaching 1.7 times in ES, 2.8–2.9 times in EN and WN, and 3.3 times in WS, ..., particularly in clean and heavily polluted regions”, corresponding to Lines 322 and 325.
4. Line 552: Add “Review statement. This paper was edited by Graciela Raga and reviewed by two anonymous referees”.

Minor editorial adjustments (e.g., punctuation, wording revisions without changing the meaning) have been made throughout the manuscript, and revisions in the manuscript are highlighted in blue.