Dear reviewer,

Thanks a lot for your recognition and the valuable suggestions!

This file shows all the revised figures and supplementary table mentioned in the response text.

All the corrections and responses will be incorporated into the new revised manuscript (manuscript_R1). If further responses and corrections should be made, please don't hesitate to let me know.

Yours Sincerely Corresponding author Prof. Shuxiao Wang School of Environment, Tsinghua University Beijing 100084, P.R. China Tel & Fax: 86-10-6277-1466 E-mail: shxwang@tsinghua.edu.cn

Table caption list

Table R1: Comparison of research contents among similar studies.

Figure caption list

- Figure R1 (Figure 6 in manuscript_R1): City's ratios and their change rates of air pollutant emission to CO₂ emission during 2013–2021 in China.
- Figure R2 (Figure 9 in manuscript_R1): Emission contributions from different types of transport facilities in 2021 in China.

| Table R1: Comparison of research contents among similar studies. | | | | | |
|--|---------------------------------------|---|---------------------|---------------------|---|
| Elements | | This study | Zheng et al. (2018) | Gao et al. (2022) | Zhang et al. (2022) |
| Dataset | | ABaCAS-EI | MEIC | CHRED 3.0A | China Environment Yearbook, CHRED |
| Time | | 2005-2021 | 2010-2017 | 2018 | 2012-2018 |
| Spatial scale | | province city | nation | city grid (10km) | city |
| Sector | | 15 subsectors | 5 sectors | 21 subsectors | NA |
| Historical | reduction measures | structure adjustment energy & material saving end-of-pipe control | end-of-pipe control | NA | energy use technological progress end-of-pipe control |
| trend | co-control achievement | sector province/city | NA | NA | city |
| Future priority | potential synergistic reduction | sector province/city measure | NA | grid | measure |

Table R1: Comparison of research contents among similar studies.

NA: not analyzed

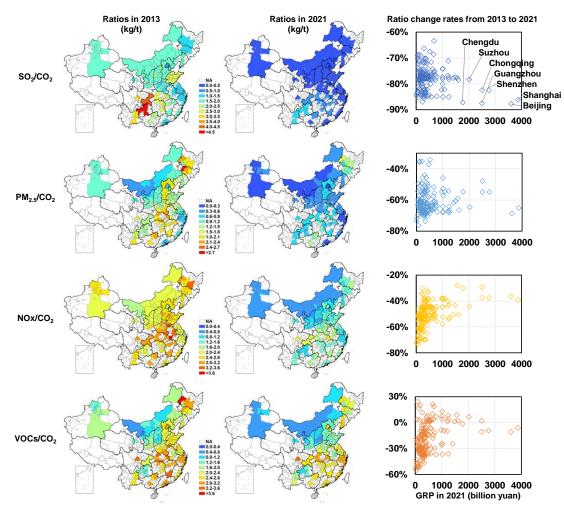


Figure R1 (Figure 6 in manuscript_R1): City's ratios and their change rates of air pollutant emission to CO₂ emission during 2013–2021 in China. (NA: data not analyzed; GRP: Gross Regional Product)

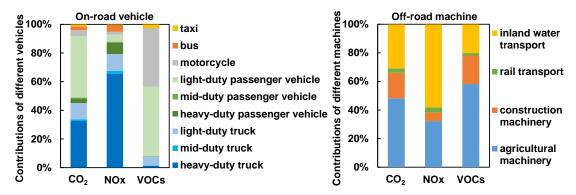


Figure R2 (Figure 9 in manuscript_R1): Emission contributions from different types of transport facilities in 2021 in China.

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