



EGUsphere, referee comment RC2
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Comment on egusphere-2022-977

Anonymous Referee #1

Referee comment on "Temporal and spatial variations in atmospheric unintentional PCB emissions in Chinese mainland from 1960 to 2019" by Ye Li et al., EGU sphere,
<https://doi.org/10.5194/egusphere-2022-977-RC2>, 2022

This manuscript presents an estimation on emissions of 12 dioxin like UP-PCBs from China. Historical provincial emissions from 66 sources in China were estimated. Furtherly, a $0.1^\circ \times 0.1^\circ$ gridded emission inventory for 2019 was developed. This study provides key information about temporal and spatial characteristics of UP-PCBs emissions in China. The inventory could be used as key input in modelling the environment behaviours of UP-PCBs and support the assessment of health and ecology risks due to UP-PCBs pollution. The paper is overall well organized and properly documented. It can be published after minor revisions.

Specific comments

PCBs have many congeners, but only 12 congeners were considered in this study, a brief explanation of choosing these 12 congeners might add in the introduction.

The first sentence in the abstract is about PCBs, but the following contents are about dioxin like UP-PCBs. This sentence should be reorganized.

In section "2.3 Emission estimation and spatial allocation", spatial allocation of fuels in PKU-FUEL might be briefly described here

Line 66: resulting in potential underestimation of

Line 74: Provincial atmospheric emissions of 12 dioxin-like UP-PCBs

Line 94: due to lack of in-depth data

Line 131: Due to variations in

Line 132: land use/cover

Line 157: should be the priority concern

Line 176: change "represented" to "were"

Line 182: change "extremely" to "much"

Line 205-206: were rising until 1990, but have been decreasing ever since

Line 206: was similar to that of other pollutants

Line 224-226 is not clear, should rewrite

Line 245: "which indicated ... regions" should be removed as there is no necessary connection

Line 253: exist

In Fig. S6, "UP-PCBs emissions, g WHO-TEQ" in blue should be removed.