Review of: "Past and future trends of civil airport emissions in China, from 2010 to 2030"

Luke Curtis

Potential competing interests: The author(s) declared that no potential competing interests exist. I have no competing interests.

Review of Past and Future Trends of Civil Airport Emissions in China, from 2010 to 2030 by Kai Wang et al.

Air travel is increasing sharply in many parts of the world including China. This interesting and well written study reports on past and project airport emissions from 2010 to 2030. Airport air pollution is growing rapidly. The methodology projecting total emissions for a sampling of 7 airports appears to be soundalthough other reviewers should also check this. I think this paper will be a useful addition to the literature. I have several questions and ideas which may be helpful in improving the quality of the paper.

USE OF COMMAS FOR NUMBERS WITH 4 MORE DIGITS. In a number of parts of this paper ie 400845 tons by 2030 in abstract. Some style guides suggest breaking up large numbers every 3 digits with commas to make them easier to read ie. break up 400845 to 400,845.

PERCENTAGE OF CHINA AIR EMISSIONS CAUSED BY AIRPORTS. If space permits- perhaps you may want to state what percentage of various air pollutants are produced by airports as compared to total pollution production in China.

WAYS OF REDUCING EMISSIONS. Perhaps you may want to explain further how air emissions in China might be reduced. Are there major differences in air pollutants produced by aircraft commonly used in China? Would using newer aircraft reduce emissions? China has a large and fairly efficient high speed rail system- can this be used to reduce air emissions?

FIGURE 4- NOx Emissions- You list ICAO airport codes here. Perhaps you may want to list the names of Chinese cities for readers who are not familiar with China.

SECTION 3.1.3 IMPACT OF COVID 19 ON EMISSIONS- NEED MORE REFERENCES. I think it was interesting for you to mention the effects of Covid 19 on air pollution and the effects of air pollution on increasing Covid 19 incidence and mortality. The Covid 19 pandemic has resulted in reduced air pollution in many parts of the world. Higher levels of air pollution have also been associated with higher incidence and mortality of Covid 19. You cite one reference on the effect of Covid 19 on air pollution- perhaps you may want to cite more references. Some good references to possibly add include (He et al. 2021, Rodríguez-Urrego &Rodríguez-Urrego 2020, Srivastava et al. 2021)

It might also be useful to cite reviews of the effects of air pollution for increasing Covid 19 incidence and mortality- some good 2021 reviews on this topic include (Curtis 2021, Marquès &Domingo 2021, Zang et al. 2021).

Curtis L (2021): PM(2.5), NO(2), wildfires, and other environmental exposures are linked to higher Covid 19 incidence, severity, and death rates. Environmental science and pollution research international, 1-19 He C, Hong S, Zhang L, Mu H, Xin A, Zhou Y, Liu J, Liu N, Su Y, Tian Y, Ke B, Wang Y, Yang L (2021): Global, continental, and national variation in PM(2.5), O(3), and NO(2) concentrations during the early 2020 COVID-19 lockdown. Atmospheric pollution research 12, 136-145 Marquès M, Domingo JL (2021): Positive association between outdoor air pollution and the incidence and severity of COVID-19. A review of the recent scientific evidences. Environ Res, 111930 Rodríguez-Urrego D, Rodríguez-Urrego L (2020): Air quality during the COVID-19: PM(2.5) analysis in the 50 most polluted capital cities in the world. Environmental pollution (Barking, Essex : 1987) 266, 115042 Srivastava AK, Bhoyar PD, Kanawade VP, Devara PCS, Thomas A, Soni VK (2021): Improved air quality during COVID-19 at an urban megacity over the Indo-Gangetic Basin: From stringent to relaxed lockdown phases. Urban climate 36, 100791

Zang ST, Luan J, Li L, Yu HX, Wu QJ, Chang Q, Zhao YH (2021): Ambient air pollution and COVID-19 risk: Evidence from 35 observational studies. Environ Res 204, 112065