

How much do emissions from China affect Northeast Asia?

*Hongliang Zhang^{1,2}, Pengfei Wang², Chun Cheng³, Yele Sun³

1. Fudan Univ., 2. LSU, 3. IAP, CAS

Air pollution in Asian countries is attracting local and international concerns and a common debate is that emissions from larger countries like China are likely to affect surrounding areas. Although this case is true at special meteorological conditions from observation analysis, it is very important to quantify the transport of pollution among different countries over long period. In this study, a source-oriented version of Community Multi-scale Air Quality (CMAQ) model was applied to quantify the contributions of nine source regions (North Korea, South Korea, Japan, Northeast China, Jing-Jin-Ji area, Shandong, Jiangsu and Shanghai (YRD) 1, Anhui and Zhejiang and rest areas in China) to PM_{2.5} and its primary PM (PPM) and secondary inorganic aerosol (SIA) in East Asia in 2019. Anthropogenic emissions were generated from a combination of the Multi-resolution Emission Inventory (MEIC) (for China area) and the MIX Asian emission inventory (for all other areas).

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