

## **Income-based emissions of Jing-Jin-Ji megaregion at city level**

Topic: China's Interregional Input-Output Database: Construction and Applications

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This paper uses the multi-regional input-output (MRIO) framework at city level to carry out the Jing-Jin-Ji income-based emissions for the year 2013. The work encompasses a range of advances that reach beyond the previous studies.

(1) Calculate income-based emission at the city level. This can find the relationship between emissions mitigation and economic growth at city and sectoral level and guide new policies at industrial level from the income-based perspective; (2) Build a nested subnational MRIO table with cities and provinces in China, including 14 cities of Jing-Jin-Ji megaregion and 28 provinces of the rest of China; (3) Chose a meaningful latest year for 2013 when China central government was concerning about Jing-Jin-Ji Coordinated Development strategies.

The results show the distribution of emissions enabled by primary input (income): (1) Higher production-based emissions always accompany higher income-based emissions. (2) Ten in fourteen cities have more than half of income-based emissions occur at domestic, except Beijing, Xingtai, Baoding and Langfang. (3) The main emitters of 14 cities of income-based emissions are developed provinces (such as Jiangsu, Guangdong, Shandong and Zhejiang) and resourceful provinces (including Inner Mongolia, Shanxi, Liaoning and Xinjia