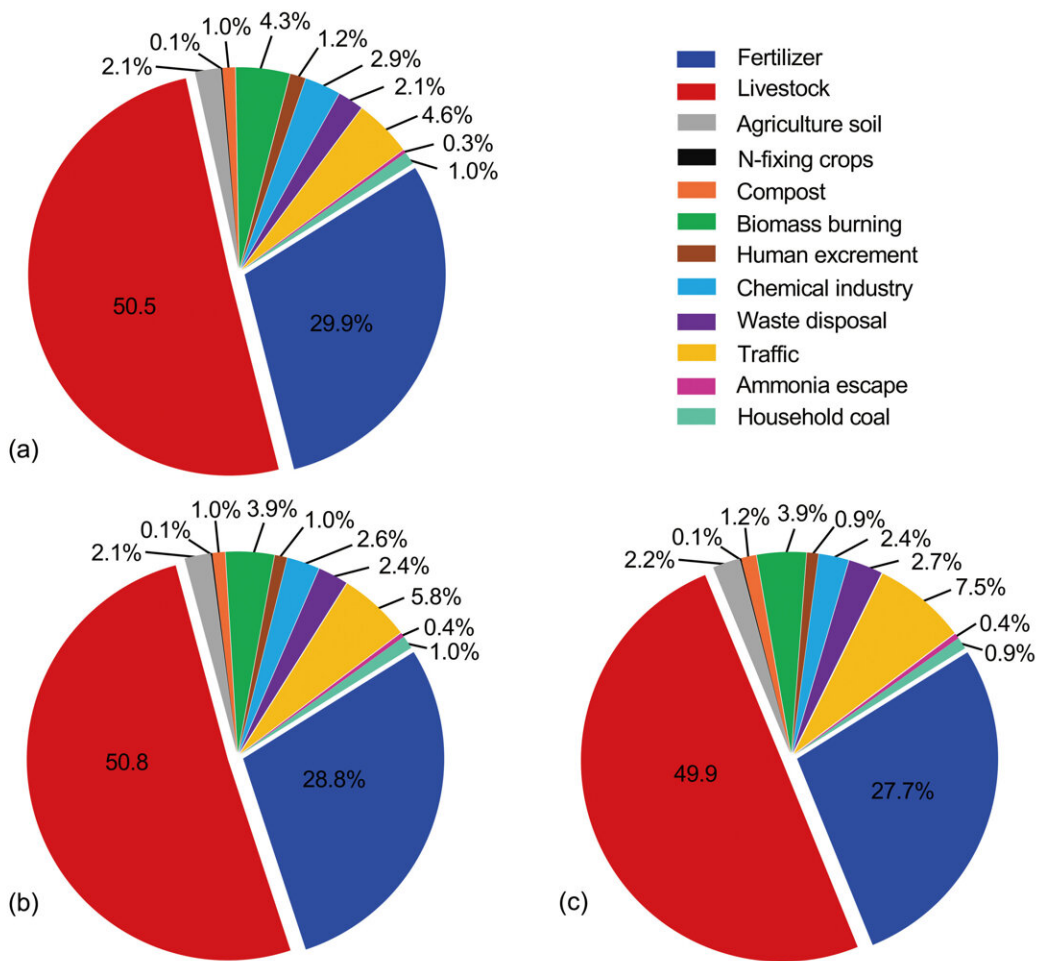


Estimation for ammonia emissions at county level in China from 2013 to 2018

July 20 2022

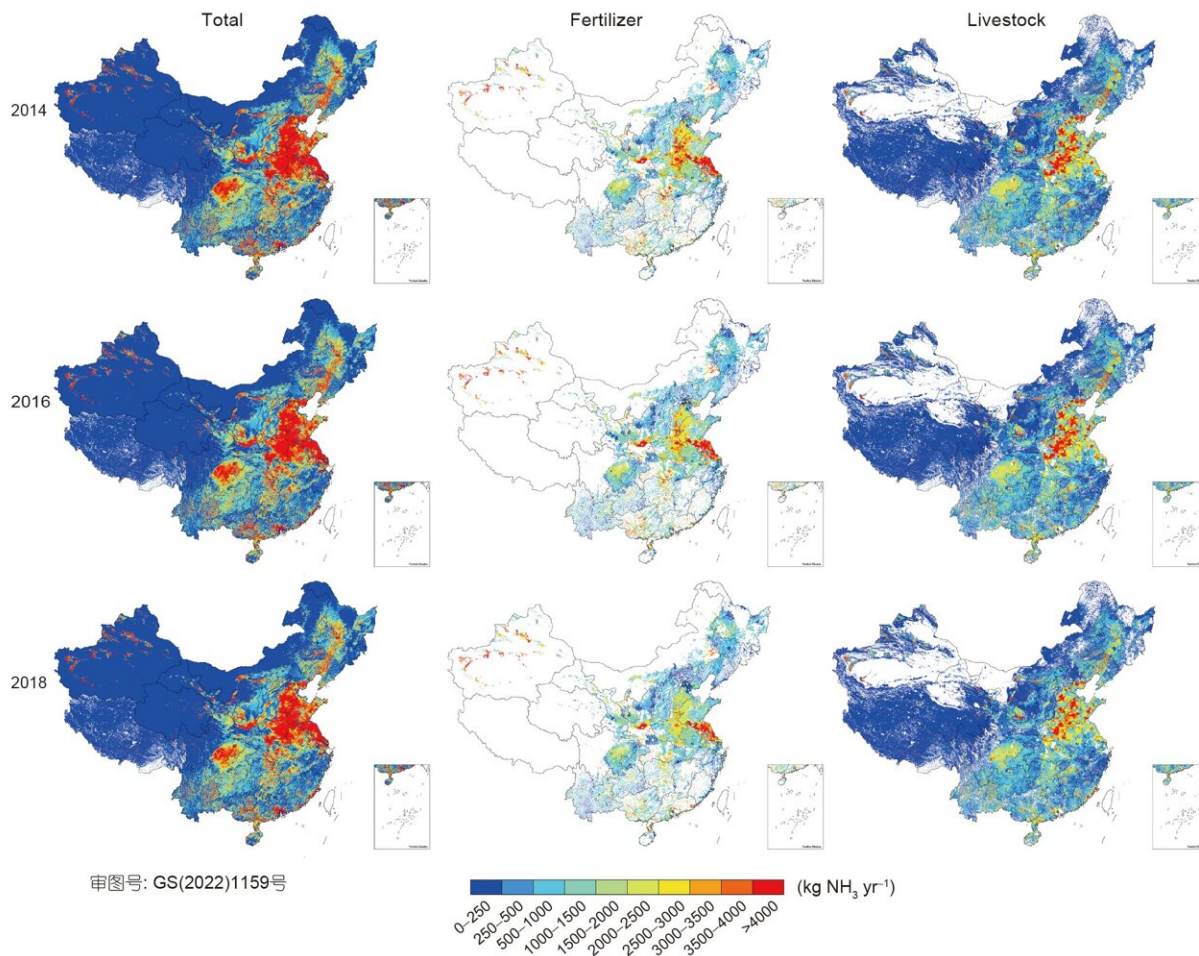


(a) 2014; (b) 2016; (c) 2018. Credit: Science China Press

Recently, research by Dr. Liao Wenling (State Key Joint Laboratory of Environmental Simulation and Pollution Control, Department of Environmental Science, Peking University) was published in *Science China Earth Sciences*. By improving the estimation method of ammonia emission inventory and the consideration of ammonia emission sources, a comprehensive county-level ammonia emission inventory with high spatial and temporal resolution in China was compiled, and the sources as well as the temporal and spatial variations of ammonia emissions were analyzed.

The results showed that the total ammonia emissions in China increased from 9.64 Tg in 2013 to 9.75 Tg in 2015, and then gradually decreased to 9.12 Tg in 2018. Fertilizer application and livestock are the main sources of ammonia emissions in China, accounting for more than 80%. However, due to changes in agricultural structure and improvements in agricultural production methods, ammonia emissions of the two showed a downward trend from 2013 to 2018.

On the other hand, with the rapid development of economy and industry, urbanization level of China is increasing rapidly, and ammonia emissions from fossil fuels are increasing year by year. In 2018, ammonia emissions from [fossil fuels](#) accounted for 8.4% of total emissions. In space, ammonia emission in central and southwest China is the highest. Seasonally, ammonia emissions peak in spring and summer.



The spatial resolution is $1 \text{ km} \times 1 \text{ km}$. The left column is total NH_3 emission, the middle column is the NH_3 emission from fertilizer application, and the right column is the NH_3 emission from livestock. Credit: Science China Press

More information: Wenling Liao et al, Estimation for ammonia emissions at county level in China from 2013 to 2018, *Science China Earth Sciences* (2022). [DOI: 10.1007/s11430-021-9897-3](https://doi.org/10.1007/s11430-021-9897-3)

Provided by Science China Press

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