

VISUALIZING TOBACCO LITTER AND PEOPLE SMOKING NEAR SCHOOLS IN 6 CITIES OF CHINA

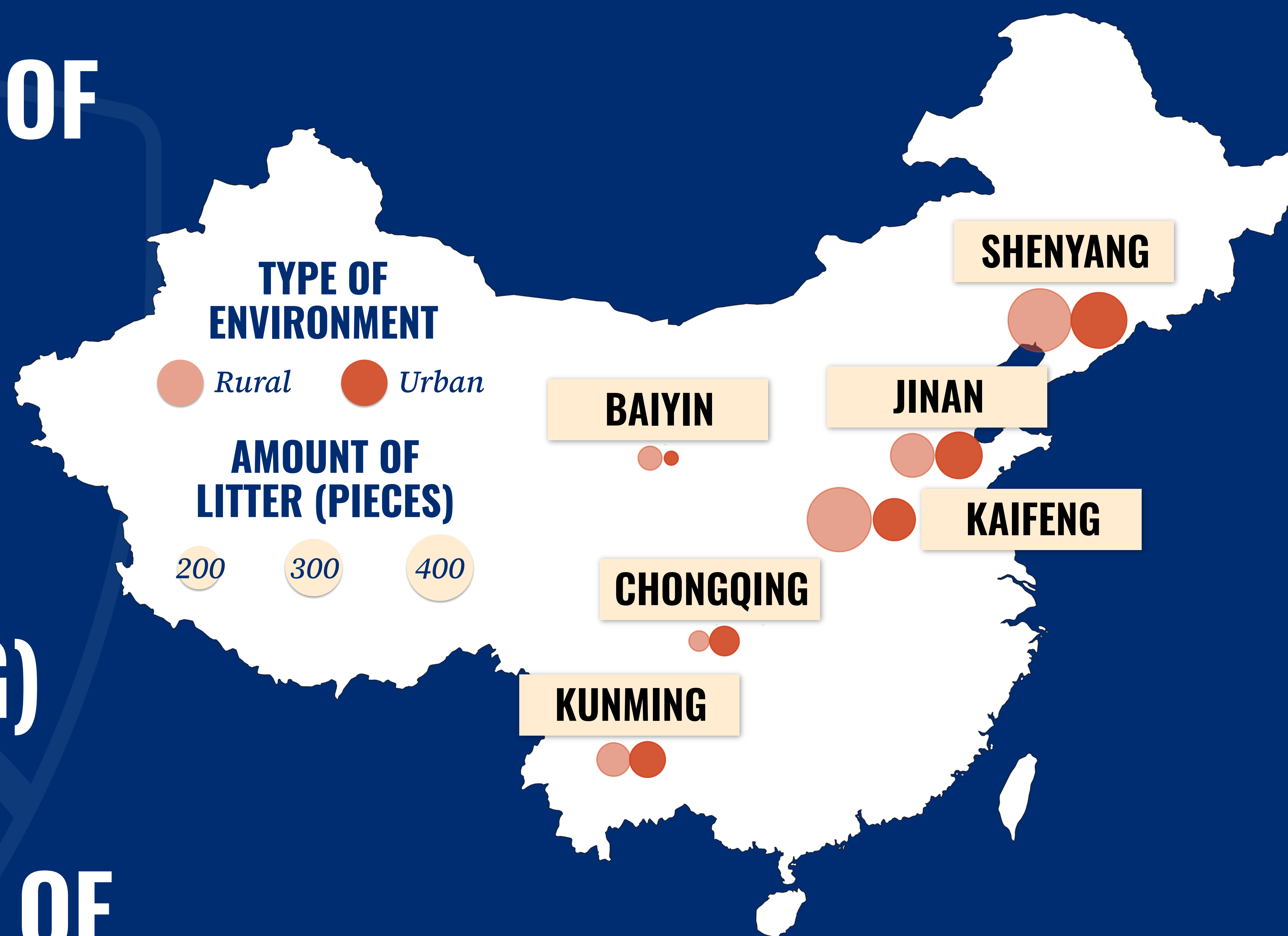
SIGNIFICANCE

The presence of tobacco product litter and public smoking near schools raises environmental and public health concerns, including post-consumption waste/marketing and secondhand smoke exposure. Conducted in fall 2025, this study visualizes the distribution of tobacco product litter and people observed smoking near schools in six cities across China.

METHODS

- Trained data collectors observed 360 schools (240 elementary, 120 middle/high) during end-of-day dismissal in urban (n=180) and rural (n=180) settings of Shenyang, Kaifeng, Jinan, Kunming, Chongqing, and Baiyin
- Recorded observed presence of **littered cigarette butts/packs** and **people smoking** within ~10 meters of each school's gate or (where applicable) designated waiting area
- Reported descriptive statistics and used proportional symbol maps to visualize outcomes (amount of litter, prevalence) by city:
 - Amount of litter: Symbol (circle) size scaled to outcome values, with different colors representing urban vs. rural settings
 - Prevalence: Color shading indicating higher (darker) vs. lower (lighter) prevalence

PREVALENCE OF TOBACCO LITTER NEAR SCHOOLS (VARYING BY CITY/SETTING) EMPHASIZES IMPORTANCE OF SCHOOL SMOKE-FREE ZONES



DIFFERENCE IN LITTER COUNT BY CITY, STRATIFIED BY SETTING (URBAN VS. RURAL)

In Chongqing, Jinan, and Kunming, **urban** areas had more litter, while in Kaifeng, Shenyang, and Baiyin, **rural** areas had more litter.



Access this poster and other IGTC work presented at the SRNT 2026 Annual Meeting

GLOBALTOBACCOCONTROL.ORG

This work was supported with funding from Bloomberg Philanthropies' Bloomberg Initiative to Reduce Tobacco Use (bloomberg.org).

The work being presented has received funding or other means of support from any of the following sources:

Any of the authors have received funding (including consultancy) from any of the following sources in the past five years:

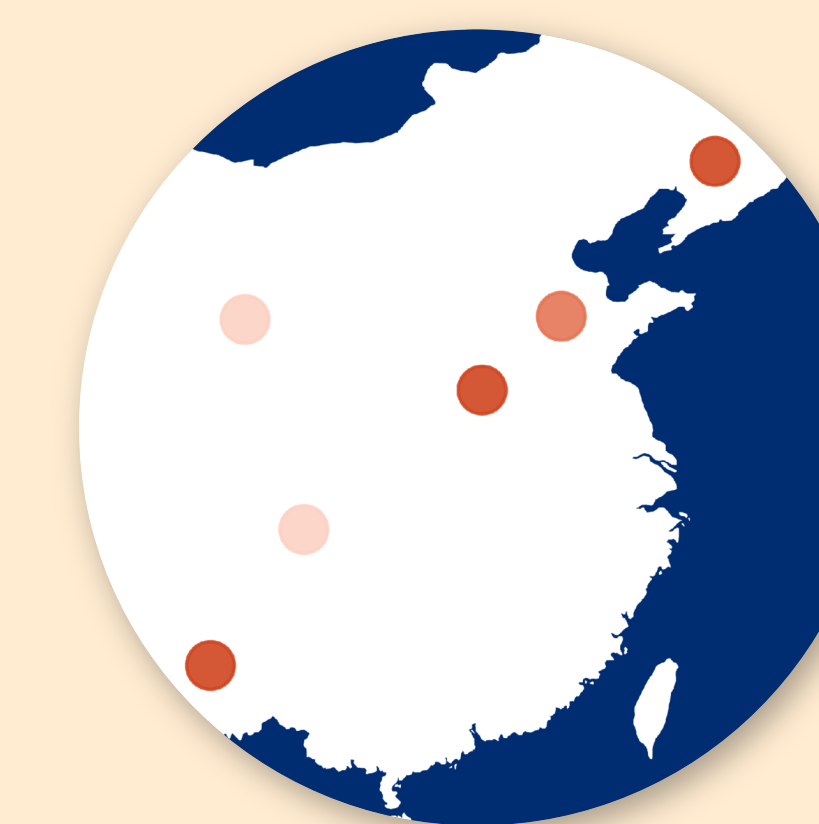
	Tobacco industry	E-cigarette & nicotine product industry	Pharma industry
The work being presented has received funding or other means of support from any of the following sources:	NO	NO	NO
Any of the authors have received funding (including consultancy) from any of the following sources in the past five years:	NO	NO	NO

Competing Interests: Dr. Cohen was a paid consultant in litigation against a tobacco company.

RESULTS

Tobacco product litter:

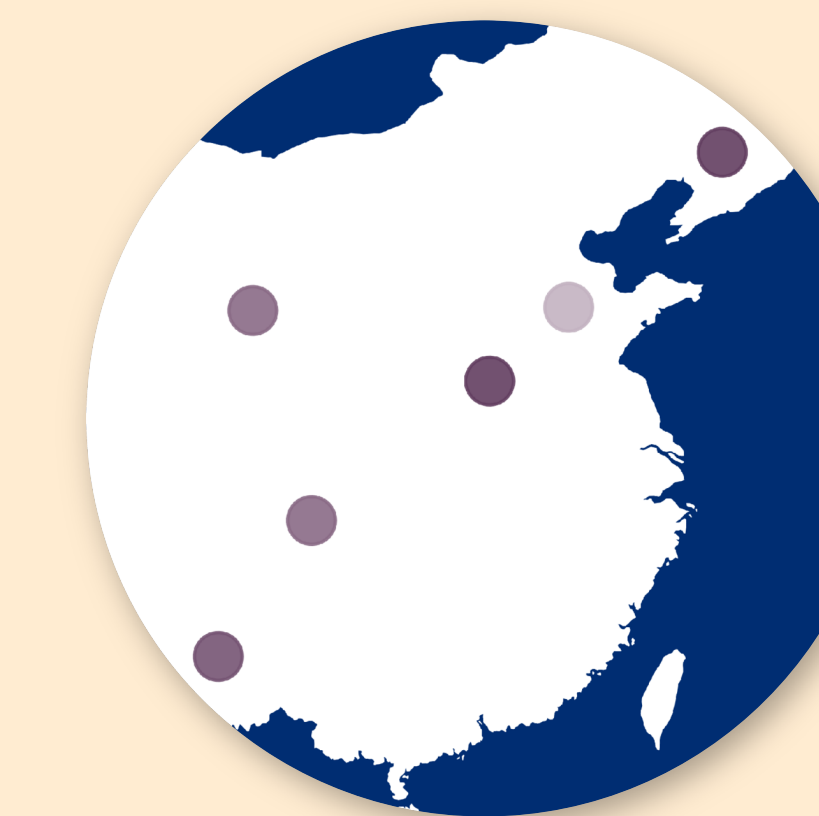
- 2,529 pieces observed (2,491 cigarette butts/38 packs)
- Present at 94% of schools



Prevalence by city:
Highest (100%): Shenyang, Kaifeng, Kunming
Lowest (85%): Chongqing, Baiyin

People smoking:

- 111 people observed
- Present at 21% of schools



Prevalence by city:
Highest (27%): Shenyang, Kaifeng
Lowest (10%): Jinan

CONCLUSIONS

Maps show the prevalence of tobacco litter near schools across cities, between-city variations in amounts of litter and smoking, and differences between urban and rural settings. Map-based visualizations can help communicate findings to policymakers and the public, support advocacy for implementing 100% smoke-free zones within 10–20 meters of school grounds, and inform tailored, city-level actions to better protect youth.

AUTHORS

Emma K. Walker, Qinghua Nian, Grazielle Grilo, Raniyan Zaman, Kevin Welding, Ryan David Kennedy, Shuai Zhang, Joanna Cohen