**Table S1.** Determination parameters of AFS 9230 atomic fluorescence photometer.

| Instrument condition | Parameters | Instrument condition | Parameters |
|---|---|---|---|
| Negative high pressure | 285 V | Reading time | 12 s |
| Lamp current | 30 mA | Delay time | 0.5 s |
| Atomizer height | 12 mm | Measurement method | Std. Curve |
| Atomizer temperature | 200 ℃ | Reading method | Peak Area |
| Carrier gas flow rate | 300 mL/min | Effective measurement times | 2 |
| Shielding gas flow | 800 mL/min | | |

**Table S2.** Reference dose (*RfD*) for each exposure pathways.

| Pathways | Reference dose/ mg/(kg×day) |
|---|---|
| Direct ingestion | 3.00E-04 |
| Inhalation of particles | 8.57E-05 |
| Dermal absorption | 2.10E-05 |

**Table S3.** Descriptive statistics of mercury concentrations (mg/kg) in soils, dust, foliar dust and camphor tree leaves in Shanghai.

| Descriptive | Soil | Dust | Foliar dust | Leaves |
|---|---|---|---|---|
| Mean | 0.361 | 0.596 | 0.259 | 0.088 |
| Medium | 0.3364 | 0.5019 | 0.1132 | 0.0564 |
| Std. Deviation | 0.240 | 0.366 | 0.482 | 0.083 |
| CV % | 66.4 | 61.5 | 185.8 | 93.8 |
| Minimum | 0.078 | 0.210 | 0.024 | 0.026 |
| Maximum | 1.362 | 2.184 | 2.260 | 0.453 |

**Table S4.** Pearson correlation coefficient (r) of mercury concentrations in soils, dust, foliar dust and camphor tree leaves in Shanghai. (*: Significantly at 99.9% confidence level)

| | Soil | Road dust | Foliar dust | Leaves |
|---|---|---|---|---|
| Soil | 1 | | | |
| Road dust | 0.0512 | 1 | | |
| Foliar dust | -0.2335 | -0.0559 | 1 | |
| Leaves | -0.0093 | 0.5648* | 0.0612 | 1 |

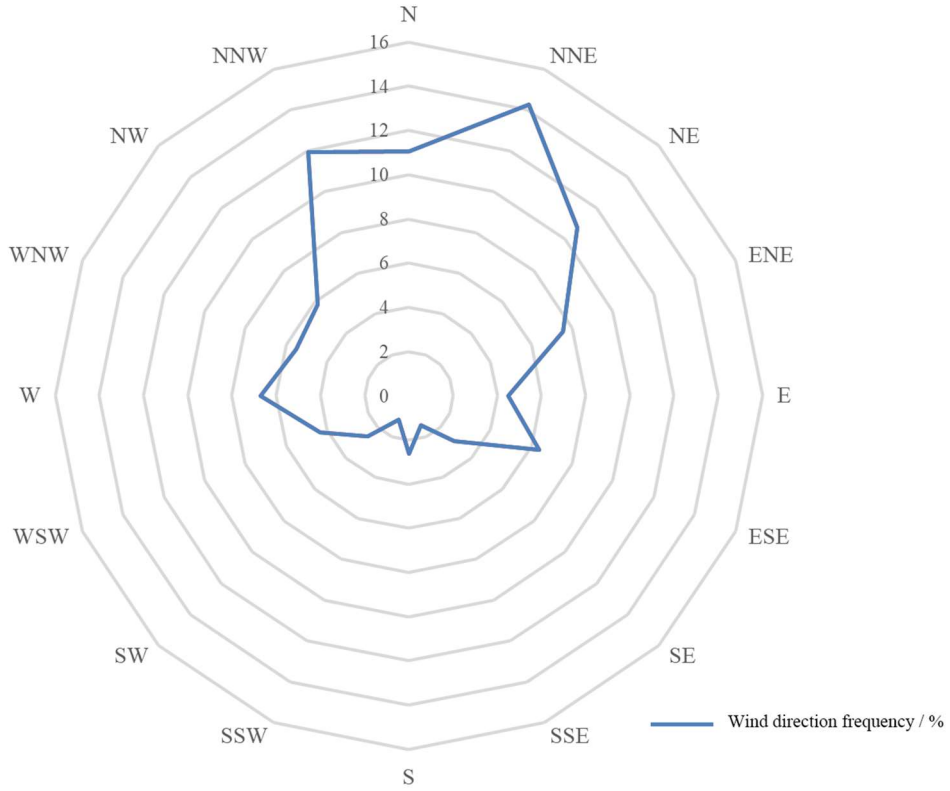


**Figure S1.** Shanghai winter (December - February) wind rose. The meteorological data are derived from the measured meteorological data of Shanghai from 1971 to 2003 [1].

## References

1. Meteorological Information Center of China Meteorological Administration. Special data set for China's building thermal environment analysis. *China Building Industry Press* **2005**. (in Chinese)