NUMERICAL DATA

Phyllostachys edulis forest reduces atmospheric $PM_{2.5}$ and PAHs on hazy days at suburban area (2018)

Changes in the atmospheric concentrations of $PM_{2.5}$ and PM_{10} under diferent types of weather.

Weather	Time	Sites	$PM_{2.5}$ ($\mu g/m^3$)	PM_{10} ($\mu g/m^3$)	$PM_{2.5}/PM_{10}$ (%)
Sunny day	All day	inside	8.49 ± 0.98a	38.06 ± 4.33b	**22.30 ± 2.57a**
		outside	8.61 ± 0.87a	42.80 ± 5.21a	**20.34 ± 3.05ab**
		edge	8.27 ± 0.92a	41.58 ± 6.61a	**19.89 ± 3.98b**
		P	30.66	<0.04	**<0.001**
Hazy day	Morning	inside	110.33 ± 2.43 g	161.83 ± 21.97e	**0.75 ± 0.08a**
		outside	120.58 ± 11.10 f	225.03 ± 10.98 cd	**0.49 ± 0.03d**
		edge	107.45 ± 2.87 g	210.73 ± 19.77d	**0.51 ± 0.04d**
	Noon	inside	162.65 ± 10.83d	274.90 ± 24.34c	**0.59 ± 0.05c**
		outside	171.22 ± 9.72c	253.38 ± 16.22c	**0.68 ± 0.03ab**
		edge	164.55 ± 17.39d	250.57 ± 30.70c	**0.66 ± 0.09ab**
	Afternoon	inside	140.62 ± 6.15e	252.43 ± 38.53c	**0.56 ± 0.10 cd**
		outside	146.12 ± 4.80e	242.00 ± 16.45c	**0.60 ± 0.05c**
		edge	148.05 ± 4.01e	259.22 ± 15.13c	**0.57 ± 0.04 cd**
	Night fall	inside	197.97 ± 10.98b	331.45 ± 28.75b	**0.60 ± 0.07c**
		outside	258.35 ± 30.61a	387.73 ± 38.20a	**0.67 ± 0.02ab**
		edge	197.00 ± 15.65b	319.18 ± 22.13b	**0.62 ± 0.05bc**
		P	**<0.0001**	**<0.0001**	**<0.0001**

Changes in atmospheric $PM_{2.5}$ and PM_{10} concentration. The concentrations of $PM_{2.5}$ and PM_{10} on the hazy day were signifcantly higher than those on the sunny day. On the hazy day, the concentrations of $PM_{2.5}$ and PM_{10} ranged from 107.45–258.35 $\mu g/m^3$ and 161.83– 387.73 $\mu g/m^3$, respectively, compared to those on the sunny day, which were stable at approximately to 8$\mu g/m^3$ and 40 $\mu g/m^3$, respectively. In addition, the ratio of $PM_{2.5}$ to PM_{10} was signifcantly higher on the hazy day, i.e., over than 56% on hazy day, compared with 20% on the sunny day. The highest $PM_{2.5}$ and PM_{10} were found at the nightfall time. The daily variations of $PM_{2.5}$ and PM_{10} on the hazy day were greater than those on the sunny day and presented a trend of a slight increase followed by a sharp decrease and an increase to the highest concentrations at nightfall time, which reached 258.35$\mu g/m^3$ and 387.73$\mu g/m^3$, respectively, outside the forest.

*Inside, at the inside of P. edulis forest land
*Outside, at the outside of P. edulis forest land
*Edge, at the edge of P. edulis forest land.

Source: https://www.nature.com/articles/s41598-018-30298-9.pdf

The 10 VOCs present in the highest concentration on the hazy day. (2018)

No.	VOCs	Inside (μg/m^3)	Outside (μg/m^3)	The ratio of inside to outside (%)
1	Butane, 2-methyl-	4.62 ± 0.23	9.93 ± 0.88	**46.53**
2	Propane, 2-methoxy-2-methyl-	11.53 ± 0.98	16.84 ± 1.43	**68.47**
3	Acetic acid	14.58 ± 1.13	*<0.01	/
4	Toluene	17.66 ± 1.43	31.82 ± 2.99	**55.50**
5	Benzene, 1,3-dimethyl-	4.84 ± 0.36	*6.83 ± 0.89	**70.86**
6	Benzaldehyde	2.75 ± 0.18	*4.96 ± 0.37	**55.44**
7	Acetophenone	7.31 ± 0.48	*5.78 ± 0.44	**126.47**
8	Nonanal	10.12 ± 0.96	11.34 ± 0.87	**89.24**
9	Decanal	11.35 ± 1.14	10.23 ± 1.14	**110.95**
10	Benzoic acid	10.01 ± 1.22	*1.52 ± 0.05	**658.55**
11	1,3-Butadiene, 2-methyl-	*3.72 ± 0.23	30.95 ± 2.76	**12.02**
12	Acetone	*<0.01	7.95 ± 0.69	/
13	Pentane, 2-methyl-	*1.23 ± 0.08	9.51 ± 0.87	**12.93**
14	n-Hexane	*1.81 ± 0.06	14.12 ± 1.28	**12.82**
15	Carbon Tetrachloride	*2.72 ± 0.11	14.16 ± 1.36	**19.21**
	TVOCs	**94.77**	**156.85**	**60.42**

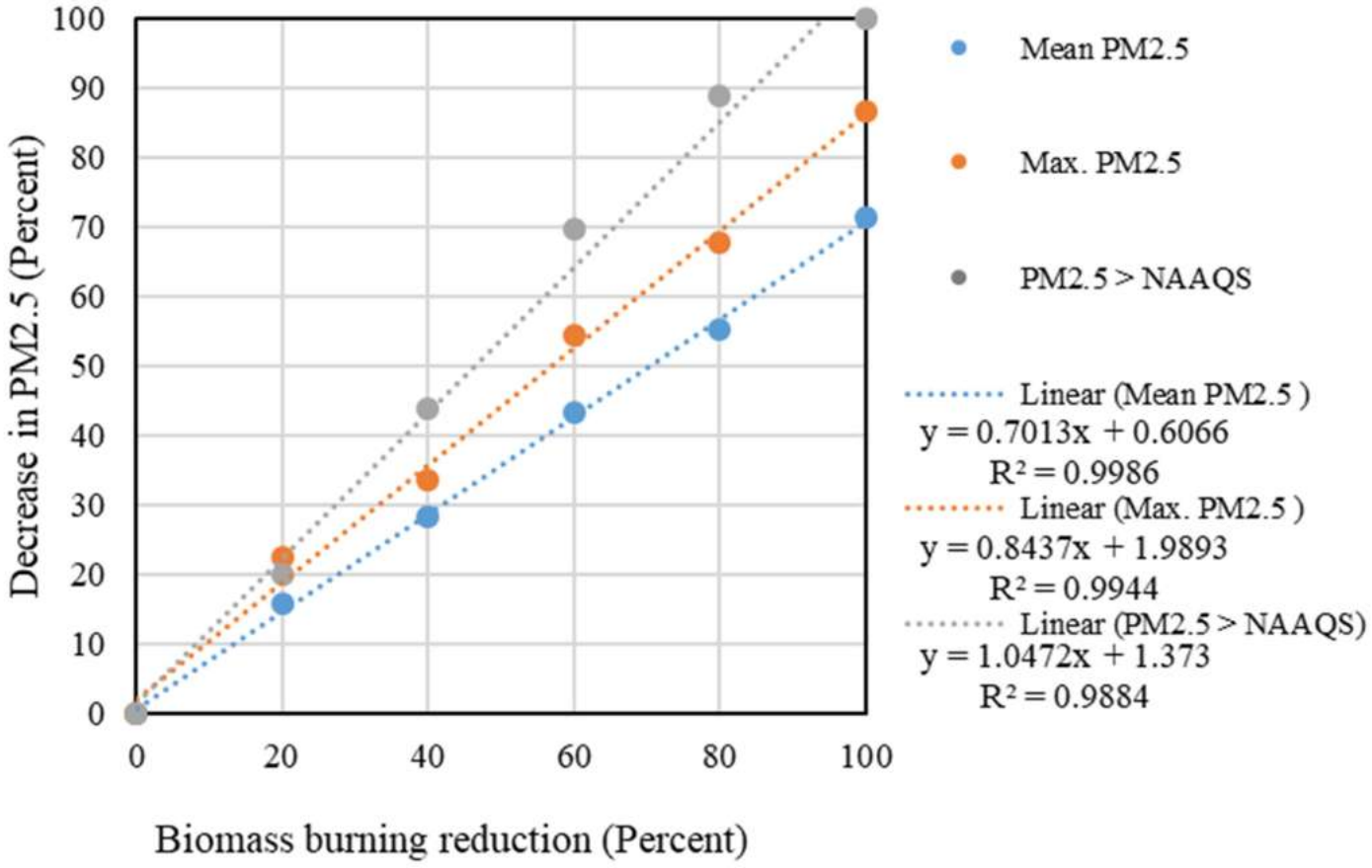
The data marked with
*was not in the list of 10 VOCs present in the highest concentration. Inside, at the inside of P. edulis forest land; Outside, at the outside of P. edulis forest land; T_{VOCs}, total concentrations of the 10 VOCs present in the highest concentration.

Te atmospheric VOC content inside and outside the forest reached 94.77 and 156.85 μg/m^3 on the hazy day. On both the hazy and sunny days, T_{leaf} inside the forest was significantly higher than that at the edge of the forest and reached 182.35 and 86.99μg/kg, respectively. On the hazy day, T_{leaf} inside the forest was 130% higher than that at the edge of the forest. Most of the compounds exhibited similar trends.

Source: https://www.nature.com/articles/s41598-018-30298-9.pdf

Impact of biomass burning and its control on particulate matter over a city in mainland Southeast Asia during a smog episode (2018)

Decrease in PM2.5 levels resulting from biomass burning reductions in Phayao city.



The maximum daily average $PM_{2.5}$ concentrations decrease at a rate of 0.84% per % biomass burning emission decreased (slope of linear equation).

Source: https://sci-hub.tw/https://doi.org/10.1016/j.atmosenv.2018.09.053

Ambient air pollution, smog episodes and mortality in Jinan, China (2017)

Age- and gender-stratified effects of smog on mortality rates. *P <0.05.

Pollutant‡ and model	**Overall morality**	**Cardiovascular mortality**	**Respiratory morality**
	% (95% CI)	% (95% CI)	% (95% CI)
Overall	5.87 (0.16–11.58)	6.31 (0.22–12.4)	7.10 (0.11–14.09)
Age	% (95% CI)*	% (95% CI)	% (95% CI)*
<60y	3.64 (−0.07–7.35)	4.02 (0.03–8.01)	4.41 (0.17–8.65)
60–70y	5.35 (−0.44–11.14)	4.91 (0.11–9.70)	5.71 (0.76–10.66)
>70y	8.32 (0.23–16.41)	8.86 (0.55–17.17)	9.47(0.23–18.71)
Gender	% (95% CI)	% (95% CI)	% (95% CI)
Male	4.97 (0.23–9.71)	6.02 (0.13–11.91)	6.88 (0.32–14.09)
Female	6.46 (−0.47–13.39)	6.70 (0.05–13.35)	7.33 (−0.89–15.56)

In this table, results of investigation of the heterogeneous effects of smog episodes across different age and gender groups are presented. A smog episode is associated with 5.87%, 6.31% and 7.10% increase in total non-accidental, cardiovascular, and respiratory mortality respectively. The estimates for the effects of smog episodes on mortality were higher in the older age groups (age 60–70 y and age > 70 y) than the younger age group (age < 60 y). The air pollutants demonstrate greater impacts on respiratory and cardiovascular mortality than overall non-accidental mortality across the different age and gender groups.

Source: https://www.nature.com/articles/s41598-017-11338-2.pdf