Supplementary materials for

Extinction Effect of Foliar Dust Retention on Urban Vegetation as Estimated by Atmospheric PM10 Concentration in Shenzhen, China

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Table S1. **Main technical indexes of GaoFen-4 camera.**

Type	Band	Central wavelength ± full width at half maximum (μm)	Spatial resolution	revisit Time
visible light/ near-infrared	1	0.553±0.45	50 m	20 s
	2	0.519±0.07		
	3	0.550±0.08		
	4	0.628±0.06		
	5	0.770±0.14		
middle-infrared	6	3.8±0.6	400 m	20 s

Table S2. Detailed information of all stations' data and fitting lines. Latitude and longitude are picked up in the WGS84 coordinate system; Plants are all evergreen.

Num	Name	Abbrevation	n	Atmospheric PM10 concentration								
				Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9
1	Nanhai	NH01	9	83.00	110.80	100.64	61.00	46.25	29.00	37.38	36.55	54.50
2	Huaqiaocheng	HQ01	9	63.83	71.40	78.79	48.57	36.75	25.89	33.63	31.27	44.75
3	Henggang	HG01	9	70.67	102.80	77.36	50.43	44.75	29.89	39.50	37.36	57.92
4	Longgang	LG01	9	62.25	105.80	76.86	50.29	43.50	31.89	40.50	36.36	56.75
5	Meisha	MS01	9	52.83	51.20	56.57	42.57	32.25	26.00	31.88	29.23	43.33
6	Yantian	YT01	7	44.42	48.40	-	37.71	28.00	-	29.38	27.68	38.75
7	Kuiyong	KY01	9	58.92	63.60	62.86	42.43	31.25	26.67	30.25	27.18	39.83
8	Nan'ao	NA01	-	-	-	-	-	-	-	-	-	-
9	Xixiang	XX01	4	71.08	94.80	-	-	-	31.11	38.63	-	-
10	Lianhua	LH01	9	61.08	71.60	64.57	44.29	43.50	29.33	35.25	32.50	46.42
11	Tongxinling	TX01	5	68.00	83.60	-	-	-	-	33.88	30.23	45.67
12	Honghu	HH01	9	70.50	106.60	80.50	54.14	38.75	30.33	38.38	34.05	50.83
13	Minzhi	MZ01	6	77.25	98.80	80.79	49.00	44.75	-	39.00	-	-
14	Guanlan	GL01	9	91.50	144.20	99.43	60.71	47.50	32.89	40.50	47.18	71.33
15	Pingshan	PS01	9	83.50	110.60	83.29	54.29	50.25	33.33	42.38	37.91	64.42

Num	Name	Abbrevation	n	NDVI								
				Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9
1	Nanhai	NH01	9	-0.0044	-0.0237	-0.0428	0.0118	0.0198	0.0415	-0.0017	-0.0026	0.0111
2	Huaqiaocheng	HQ01	9	-0.0014	-0.0362	-0.0034	-0.0039	0.0188	0.0340	-0.0021	-0.0237	-0.0338
3	Henggang	HG01	9	0.0087	-0.0356	-0.0303	0.0061	0.0082	0.0367	0.0102	-0.0073	0.0113
4	Longgang	LG01	9	-0.0088	-0.0406	-0.0171	0.0264	0.0119	0.0447	0.0029	-0.0200	0.0145
5	Meisha	MS01	9	-0.0056	-0.0133	0.0155	-0.0054	0.0136	0.0228	-0.0180	-0.0125	-0.0469
6	Yantian	YT01	7	0.0109	-0.0346	-	-0.0072	0.0215	-	0.0030	0.0207	0.0027
7	Kuiyong	KY01	9	0.0183	-0.0066	-0.0126	0.0116	-0.0111	0.0293	0.0153	-0.0205	-0.0144
8	Nan'ao	NA01	-	-	-	-	-	-	-	-	-	-
9	Xixiang	XX01	4	0.0006	-0.0393	-	-0.0205	0.0253	0.0400	-0.0009	-	-
10	Lianhua	LH01	9	-0.0066	-0.0305	0.0091	-0.0087	0.0379	0.0097	-0.0130	-0.0302	-0.0585
11	Tongxinling	TX01	5	-0.0012	-0.0307	-	-	-	-	-0.0018	-0.0059	0.005
12	Honghu	HH01	9	-0.0098	-0.0385	-0.0143	-0.0005	0.0351	0.0251	-0.0167	0.0049	-0.0054
13	Minzhi	MZ01	6	0.0101	-0.0402	-0.0034	0.0098	0.0016	-	0.0075	-	-
14	Guanlan	GL01	9	0.0007	-0.0323	-0.0095	-0.0023	0.0291	0.0223	-0.0150	-0.0191	-0.0413
15	Pingshan	PS01	9	-0.0147	-0.0353	-0.0178	0.0034	0.0196	0.0387	-0.0085	0.0081	-0.0242

Num	Name	Abbrevation	n	Shapiro-Wilk parametric hypothesis test*		Pearson correlation coefficient (PCC)	Root mean square error (RMSE)	Regression slope (RS)
				p(PM10)	p(δNDVI)			
1	Nanhai	NH01	9	0.2815	0.914	0.792	0.0176	-6.57×10^{-4}
2	Huaqiaocheng	HQ01	9	0.3879	0.4896	0.397	0.025	-4.85×10^{-4}
3	Henggang	HG01	9	0.4646	0.228	0.791	0.0161	-7.60×10^{-4}
4	Longgang	LG01	9	0.1516	0.9966	0.708	0.0217	-7.94×10^{-4}
5	Meisha	MS01	9	0.3679	0.8625	0.128	0.0248	-2.42×10^{-4}
6	Yantian	YT01	7	0.3117	0.2095	0.742	0.016	-1.73×10^{-5}
7	Kuiyong	KY01	9	0.0659	0.2799	0.124	0.0207	-1.43×10^{-4}
8	Nan'ao	NA01	-	-	-	-	-	-
9	Xixiang	XX01	4	0.5516	0.7349	0.869	0.024	-9.53×10^{-4}
10	Lianhua	LH01	9	0.4334	0.9526	0.084	0.0329	-1.59×10^{-4}
11	Tongxinling	TX01	5	0.4746	0.0892	0.671	0.014	-4.06×10^{-4}
12	Honghu	HH01	9	0.2108	0.8398	0.772	0.0166	-6.75×10^{-4}
13	Minzhi	MZ01	6	0.3983	0.1153	0.724	0.0171	-5.80×10^{-4}
14	Guanlan	GL01	9	0.2416	0.8648	0.493	0.0237	-3.20×10^{-4}
15	Pingshan	PS01	9	0.4165	0.9188	0.811	0.016	-7.32×10^{-4}

*The missing data failed to pass availability tests. All the samples have passed Shapiro-Wilk parametric hypothesis test.

Figure S1. Fitting curves of 14 stations between their atmospheric PM10 concentrations and the normalized difference vegetation index (δNDVI). They were separated from

Figure 5.