Electronic Supplementary Material (ESI) for Environmental Science: Processes & Impacts.

Distribution, sources and ecological risk of polycyclic aromatic hydrocarbons in the estuarine-coastal sediments in the East China Sea

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Table S1. Location, PAHs concentrations and physicochemical properties of sampling sites.

Areas	Sites	Longitude (East)	Latitude (North)	∑PAHs (ng g^{-1})	TOC (mg g^{-1})	BC (mg g^{-1})	Clay (%)	Silt (%)	Sand (%)
Yangtze River Estuary	30	121.41	31.56	257	7.06	3.31	0.36	0.62	0.02
	31	121.52	31.52	209	7.07	0.97	0.26	0.65	0.09
	32	121.65	31.46	126	5.20	1.43	0.26	0.69	0.05
	33	121.78	31.40	137	6.10	1.30	0.29	0.64	0.08
	34	121.92	31.34	250	5.56	1.16	0.20	0.33	0.47
	35	122.04	31.30	338	7.24	3.13	0.19	0.28	0.54
	42	121.10	31.75	144	3.70	1.09	0.14	0.26	0.60
	43	121.21	31.67	105	4.00	1.09	0.18	0.24	0.58
	44	121.32	31.58	91	3.30	1.40	0.09	0.13	0.79
	45	121.43	31.51	85	3.63	1.18	0.08	0.16	0.75
	46	121.66	31.33	79	4.51	1.42	0.12	0.19	0.69
	47	121.89	31.14	160	4.19	1.01	0.23	0.52	0.25
	48	122.05	31.05	97	3.55	1.90	0.10	0.16	0.74
	Mean			**160±80**	**5.01**	**1.57**	**0.19**	**0.37**	**0.43**
Inner shelf of East China Sea	1	122.00	32.25	99	1.80	1.59	0.16	0.44	0.40
	2	122.25	32.25	71	1.60	0.94	0.15	0.38	0.48
	3	122.50	32.25	81	1.31	1.30	0.15	0.38	0.47
	4	122.75	32.25	61	1.50	1.14	0.03	0.05	0.92
	5	123.00	32.25	65	1.70	1.15	0.03	0.08	0.89
	6	123.25	32.25	66	1.60	1.40	0.05	0.09	0.87
	7	123.50	32.25	63	1.91	1.97	0.03	0.07	0.90
	8	122.25	31.95	92	3.02	1.26	0.27	0.63	0.10
	9	122.50	31.91	76	3.40	1.81	0.10	0.29	0.61
	10	122.75	31.88	62	2.47	1.50	0.16	0.31	0.53
	11	123.00	31.85	87	3.26	1.82	0.12	0.25	0.63
	12	123.25	31.81	80	2.20	1.57	0.19	0.46	0.36
	13	123.50	31.79	66	3.50	1.27	0.05	0.09	0.87
	14	122.25	31.67	64	4.68	1.93	0.20	0.61	0.19
	15	122.37	31.65	129	3.10	2.17	0.30	0.67	0.04
	16	122.50	31.62	103	3.42	0.82	0.12	0.36	0.52
	17	122.62	31.59	128	2.85	2.43	0.10	0.22	0.68
	18	122.75	31.56	87	2.94	0.74	0.05	0.09	0.86
	19	123.00	31.50	118	3.30	1.47	0.02	0.03	0.95
	20	123.25	31.45	121	3.50	1.44	0.02	0.05	0.93
	21	123.75	31.34	129	3.89	1.59	0.11	0.26	0.63
	22	124.00	31.28	101	4.21	1.45	0.11	0.23	0.66
	23	122.37	31.34	231	4.00	1.62	0.20	0.70	0.10
	24	122.50	31.31	113	5.02	1.40	0.10	0.41	0.49
	25	122.62	31.27	143	3.90	1.99	0.28	0.61	0.11
	26	122.75	31.22	108	5.65	1.22	0.31	0.69	0.01

Areas	Sites	Longitude (East)	Latitude (North)	∑PAHs (ng g^{-1})	TOC (mg g^{-1})	BC (mg g^{-1})	Clay (%)	Silt (%)	Sand (%)
	27	123.00	31.15	247	4.20	3.60	0.12	0.20	0.68
	28	123.25	31.07	163	3.35	1.80	0.09	0.15	0.76
	29	123.50	31.00	212	4.05	1.71	0.15	0.39	0.47
	36	122.37	31.13	336	6.90	4.46	0.27	0.70	0.04
	37	122.50	31.10	355	6.60	3.10	0.33	0.63	0.03
	38	122.62	31.06	224	5.00	2.70	0.26	0.66	0.08
	39	122.75	31.02	193	5.18	0.99	0.24	0.75	0.00
	40	123.00	30.94	212	6.71	2.27	0.18	0.57	0.25
	41	123.50	30.78	125	4.10	1.14	0.18	0.35	0.48
	49	122.25	30.95	113	3.82	1.54	0.11	0.17	0.72
	50	122.38	30.90	81	4.00	1.39	0.09	0.15	0.76
	51	122.50	30.87	136	6.16	1.53	0.21	0.71	0.08
	52	122.62	30.84	269	6.30	5.60	0.19	0.34	0.47
	53	122.75	30.80	196	4.90	3.84	0.24	0.47	0.29
	54	123.00	30.72	177	4.14	3.25	0.10	0.16	0.74
	55	123.25	30.64	116	4.29	1.50	0.12	0.21	0.67
	56	123.50	30.56	209	4.50	3.59	0.16	0.56	0.28
Inner	57	123.75	30.49	209	4.89	3.45	0.29	0.65	0.06
shelf	58	124.00	30.43	117	3.60	1.27	0.17	0.29	0.54
of	59	122.50	30.56	105	3.70	1.36	0.15	0.20	0.65
East	60	123.00	30.41	163	4.60	1.14	0.30	0.69	0.01
China	61	123.25	30.33	175	5.73	0.97	0.33	0.64	0.03
Sea	62	123.50	30.26	153	4.37	1.09	0.30	0.69	0.01
	63	122.50	30.28	157	6.60	1.49	0.26	0.60	0.14
	64	122.75	30.20	123	5.90	1.59	0.16	0.23	0.62
	65	123.00	30.13	165	5.50	1.27	0.33	0.66	0.01
	66	123.25	30.05	159	7.20	1.19	0.33	0.66	0.01
	67	123.50	29.97	157	6.90	0.52	0.31	0.68	0.01
	68	122.50	30.00	231	6.01	2.54	0.31	0.62	0.07
	69	122.75	29.92	213	5.50	0.87	0.33	0.62	0.04
	70	123.00	29.85	121	6.20	1.09	0.04	0.10	0.86
	71	123.25	29.77	189	5.84	2.17	0.03	0.11	0.86
	72	122.37	29.53	105	6.35	1.90	0.34	0.66	0.00
	73	122.50	29.50	164	4.00	3.16	0.32	0.60	0.09
	74	122.62	29.46	176	5.37	2.35	0.14	0.57	0.30
	75	122.75	29.42	101	6.80	1.62	0.25	0.66	0.10
	76	123.00	29.34	64	3.80	1.07	0.02	0.05	0.93
	77	122.25	29.13	85	3.06	0.86	0.05	0.11	0.84
	78	122.37	29.10	198	2.75	1.11	0.03	0.06	0.91
	79	122.50	29.06	107	2.10	0.67	0.02	0.05	0.92

Areas	Sites	Longitude (East)	Latitude (North)	∑PAHs (ng g^{-1})	TOC (mg g^{-1})	BC (mg g^{-1})	Clay (%)	Silt (%)	Sand (%)
	80	122.62	29.02	207	2.48	1.85	0.05	0.11	0.84
	81	122.75	28.99	218	3.00	2.66	0.11	0.44	0.45
	Mean			**144±65**	**4.21**	**1.81**	**0.17**	**0.39**	**0.45**
	Total Mean			**146±67**	**4.34**	**1.77**	**0.17**	**0.39**	**0.44**

Table S2. PCA factors.

	Factor 1	Factor 2	Factor 3	Factor 4
BbF	0.900			
Chr	0.867			
BkF	0.805			
BaP	0.767			
BaA	0.704			
Pyr		0.926		
Flu		0.921		
Phe		0.801		
Ant		0.700		
IP		0.610		
Nap			0.871	
Ace			0.862	
DBA			-0.630	
Acy				0.834
Fl				0.675
BghiP				

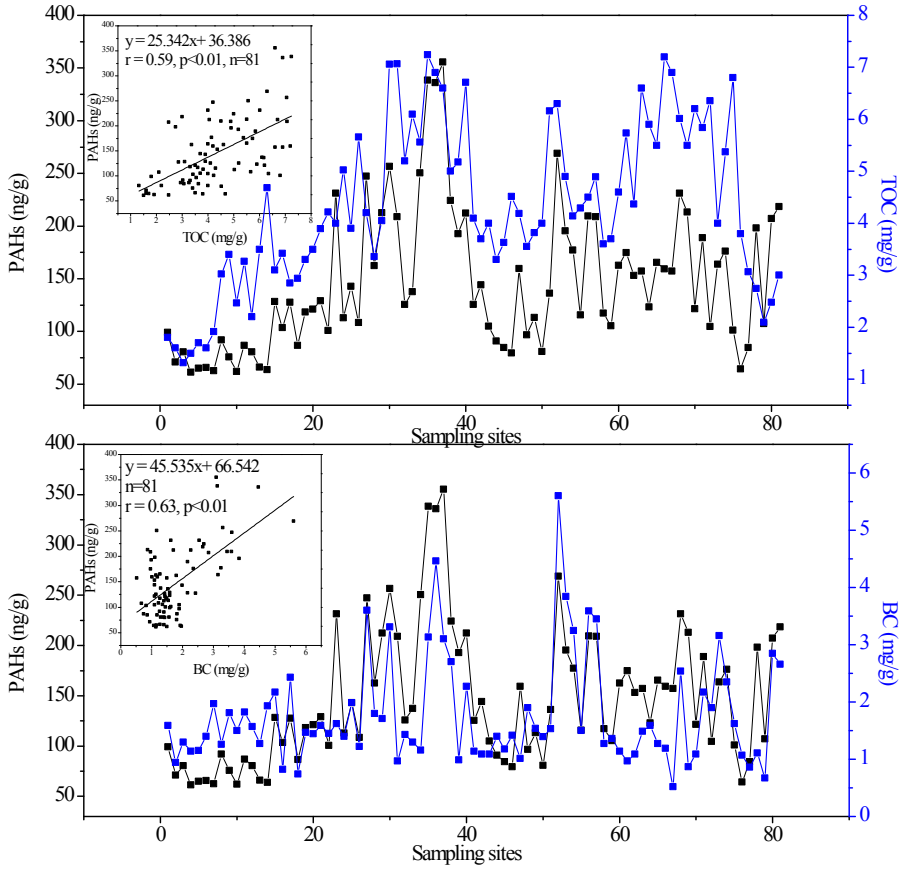

Figure S1. Distribution of PAHs concentrations and corresponding contents of TOC and BC in the sediments. Insert figures showing correlations between PAHs and TOC, between PAHs and BC respectively. (single column)