Supplementary Material

Historical sedimentary deposition and flux of PAHs, PCBs and DDTs in sediment cores from the western Adriatic Sea

*Tatiane Combi[1,2], Marina G. Pintado-Herrera[3], Pablo A. Lara-Martín[3], Marília L. Rocha[2], Stefano Miserocchi[4], Leonardo Langone[4], Roberta Guerra[2,5]

[1]Universidade Federal da Bahia, Instituto de Geociências, Departamento de Oceanografia. Rua Barão de Jeremoabo, 40170-020 Salvador, Bahia, Brazil.

[2] Centro Interdipartimentale di Ricerca per le Scienze Ambientali, Università di Bologna, Via Sant'Alberto 123, 48123 Ravenna, Italy

[3] Departamento de Química-Física, Facultad de Ciencias del Mar y Ambientales, Universidad de Cádiz, 11510 Puerto Real, Cádiz, Spain

[4] Istituto di Scienze Marine, Consiglio Nazionale delle Ricerche, 40129 Bologna, Italy

[5] Dipartimento di Fisica e Astronomia, Università di Bologna, Bologna, Italy

***Corresponding author**

E-mail address: tatiane.combi@ufba.br

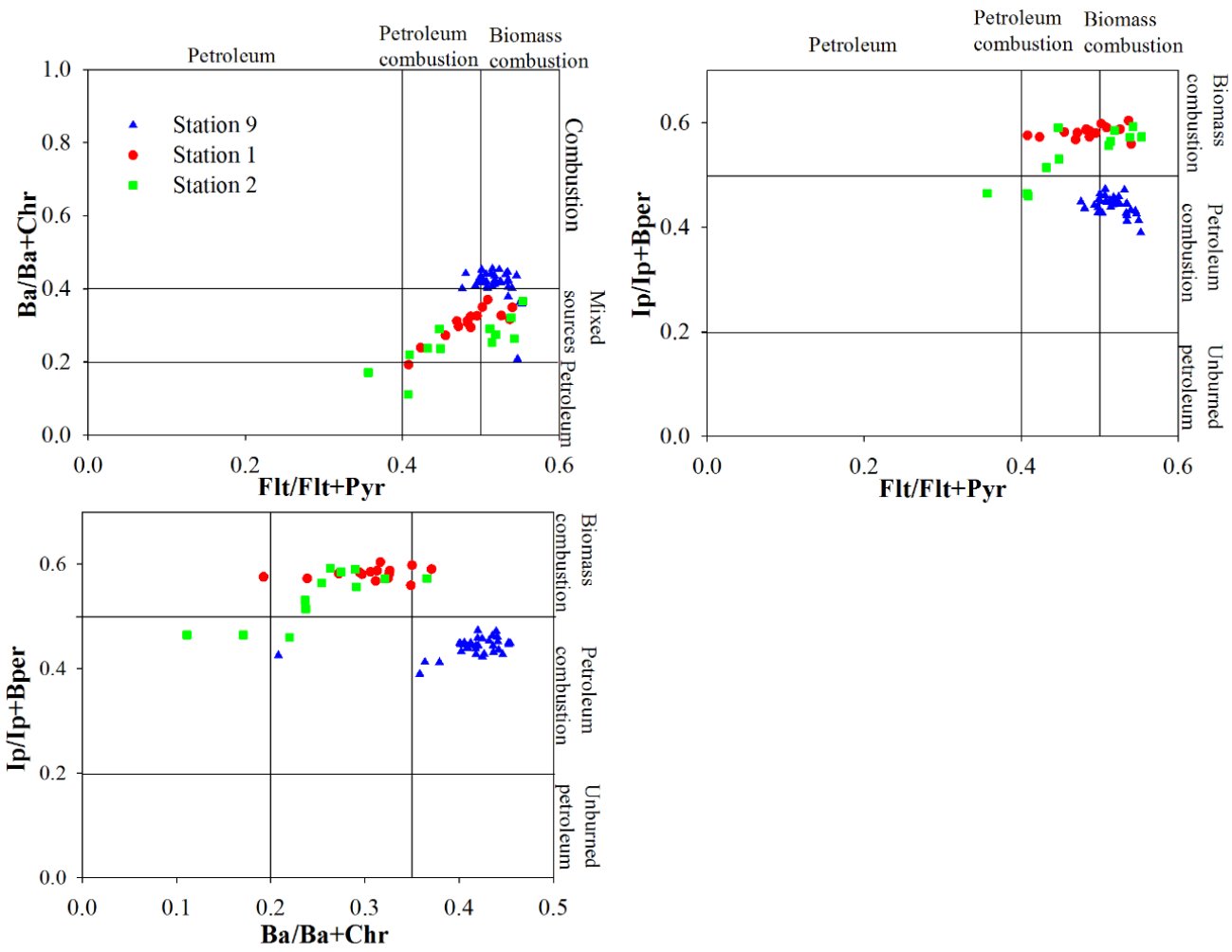

Figure S1. Cross plots of Ba/Ba+Chr and Ip/Ip+Bper versus Flt/Flt+Pyr and Ip/Ip+Bper versus Ba/Ba+Chr for the sediment cores from the Po River prodelta (station 9) and southern Adriatic (stations 1 and 2).

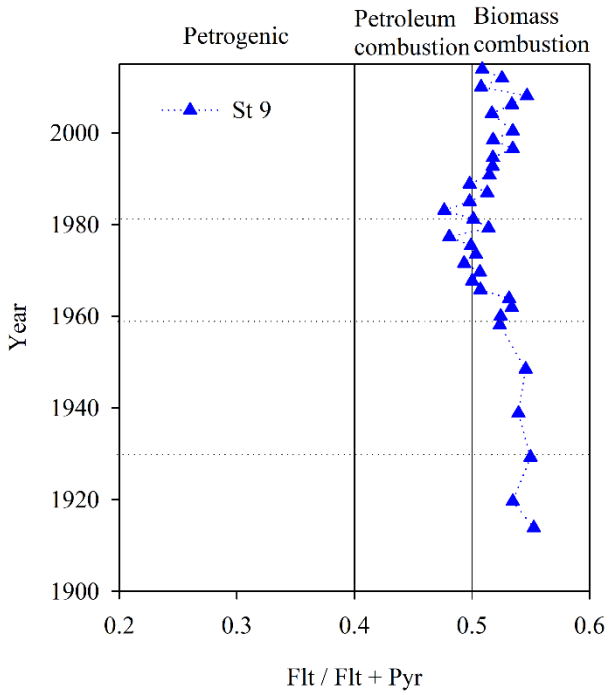

Figure S2. Historical variation on Flt/Flt+Pyr in the sediment core from the Po River prodelta (station 9).

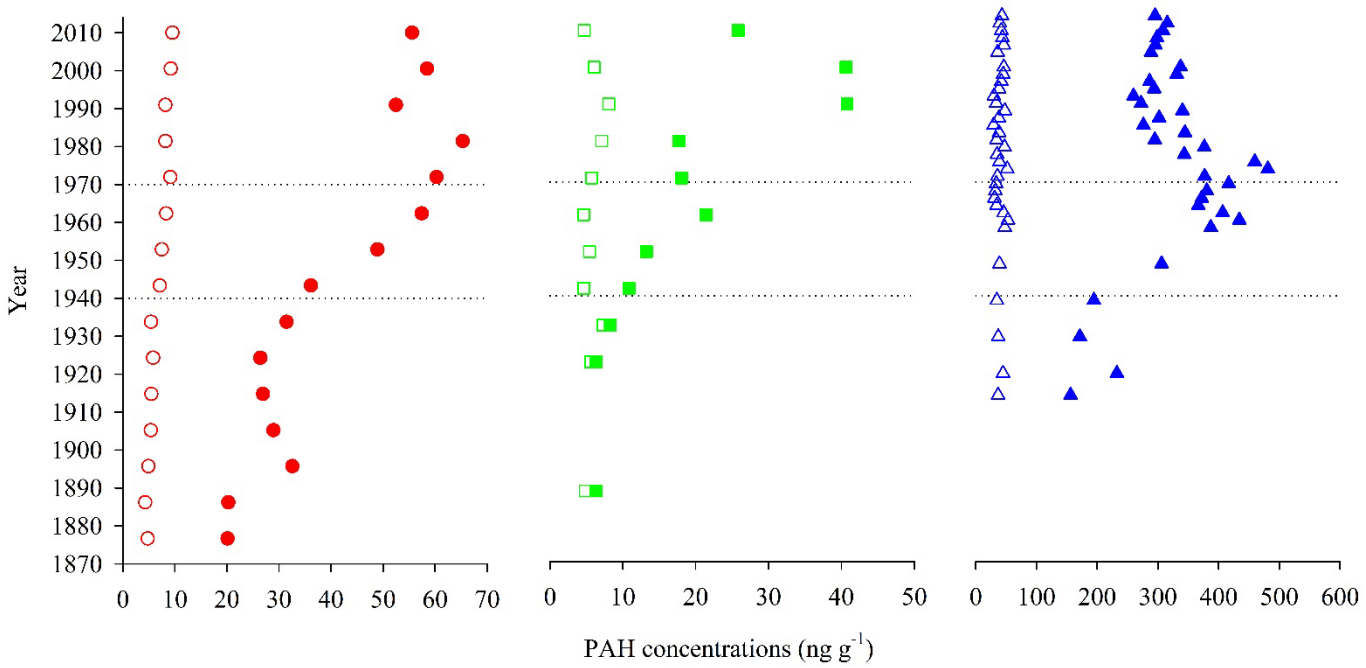

Figure S3. Concentrations of low-molecular (2-3 ring PAHs; unfilled symbols) and high-molecular (4-6 ring PAHs; filled symbols) weight PAHs over time in sediment cores from station 1, 2 and 9 (red, green and blue symbols, respectively).

Table S1. Effects Range-Low (ERL), Effects Range-Median (ERM), Probable Effects Level (PEL), and Threshold Effects Level (TEL) reference values (ng g^{-1}) and maximum concentrations (ng g^{-1}) detected in the present study (*station 9, Po river prodelta).

	ERL	TEL	PEL	ERM	This study*
Na	160	34.6	391	2100	12.0
Acy	44	5.87	128	640	6.4
Ace	16	6.71	88.9	500	1.5
Flo	19	21.2	144	540	8.3
Phe	240	86.7	544	1500	41.0
An	85	46.9	245	1100	4.5
Fl	600	113	1494	5100	62.0
Py	665	153	1398	2600	61.2
BaA	261	74.8	693	1600	30.3
Chr	384	108	846	2800	19.1
BaP	430	88.8	763	1600	41.7
DahA	63.4	6.22	135	260	19.3
∑PAHs	4022	1684	16770	44792	533.2
Total DDT	3	7	4450	350	2.5
DDD	2	3.54	8.51	20	0.9
DDE	2	1.42	6.75	15	1.6
Total PCB	50	34.1	277	400	5.2

Table S2. Mean ERM and mean PEL (i.e., m-ERM and m-PEL) estimated for *(i)* individual PAHs (Na, Acy, Ace, Flo, Phe, An, Fl, Py, BaA, Chr, BaP, and DahA) and *(ii)* ∑PCBs, ∑DDTs, and ∑PAHs in sediments from the Po river prodelta (station 9).

Year	m-ERM	m-ERM (individual PAHs)	m-PEL	m-PEL (individual PAHs)
2014	0.006	0.012	0.010	0.031
2012	0.005	0.013	0.010	0.032
2010	0.005	0.013	0.009	0.033
2008	0.006	0.011	0.010	0.029
2006	0.006	0.012	0.010	0.033
2004	0.005	0.011	0.009	0.029
2000	0.006	0.013	0.011	0.034
1998	0.006	0.013	0.011	0.034
1997	0.005	0.011	0.009	0.030
1995	0.005	0.012	0.009	0.030
1993	0.005	0.010	0.008	0.026
1991	0.005	0.011	0.009	0.028
1989	0.008	0.014	0.013	0.037
1987	0.006	0.011	0.011	0.030
1985	0.006	0.011	0.010	0.029
1983	0.007	0.014	0.012	0.035
1981	0.006	0.012	0.010	0.030
1979	0.007	0.014	0.012	0.037
1977	0.006	0.014	0.011	0.035
1975	0.009	0.016	0.015	0.040
1973	0.011	0.017	0.017	0.044
1972	0.007	0.014	0.012	0.036
1970	0.007	0.016	0.012	0.039
1968	0.006	0.014	0.011	0.035
1966	0.005	0.014	0.010	0.034
1964	0.005	0.014	0.009	0.036
1962	0.005	0.014	0.011	0.037
1960	0.007	0.016	0.013	0.042
1958	0.005	0.014	0.011	0.036
1948	0.004	0.011	0.008	0.028
1939	0.003	0.008	0.006	0.021
1929	0.003	0.007	0.005	0.020
1920	0.004	0.009	0.007	0.026
1914	0.002	0.007	0.005	0.018