

B[b]F, t	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Albania	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.2	3.2
Armenia	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.8	2.9	2.9	3.0	3.1
Austria	6.4	6.6	4.9	3.8	3.4	3.6	4.0	3.4	3.3	3.3	3.0	3.5	3.6	4.0	4.1	4.1	4.0	3.6
Azerbaijan	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.7	5.8	6.0	6.1	6.3	6.4	6.5
Belarus	20	20	20	20	20	20	20	20	20	20	20	20	20	19	18	20	22	21
Belgium	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.0	5.7	5.5	5.3	5.1	4.9
Bosnia&Herzegovina	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.2	6.0	5.7	5.5	5.3	5.0	4.8
Bulgaria	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.7	7.5	7.3	7.2	7.0	6.8	6.7
Croatia	5.2	5.0	4.7	4.4	4.1	3.8	3.5	3.5	3.3	3.0	3.4	2.7	2.7	3.5	3.4	3.3	3.3	2.8
Cyprus	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Czech Republic	13	13	13	13	13	13	13	13	13	13	13	10	7.3	6.9	7.2	7.0	5.0	5.0
Denmark	2.1	2.4	2.4	2.6	2.5	2.5	2.7	2.7	2.4	2.5	3.0	3.2	3.2	3.6	3.7	4.2	4.6	5.4
Estonia	4.3	4.2	2.9	2.4	2.8	4.7	5.5	5.5	4.4	4.2	4.2	4.2	4.3	4.4	4.7	4.3	3.9	4.4
Finland	5.7	5.5	5.6	5.7	5.6	6.1	5.7	5.8	5.9	5.7	5.5	5.9	6.1	6.0	6.0	4.8	4.8	4.8
France	14	16	15	15	13	13	13	12	12	11	10	10	8.7	9.0	8.6	8.1	7.7	7.1
Georgia	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.11	0.15	0.19	0.20	0.35	0.20	0.41
Germany	73	58	42	40	37	37	37	40	37	37	37	41	39	38	36	36	38	37
Greece	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.3	8.5	8.8	9.0	9.2	9.4	9.7
Hungary	15	14	8.6	8.6	8.3	7.8	7.7	7.2	6.0	6.1	6.2	6.2	6.5	7.4	7.1	8.3	8.1	4.6
Iceland	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Ireland	0.7	0.7	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Italy	37	42	40	41	42	43	40	44	43	46	46	46	42	44	51	50	51	56
Kazakhstan	20	20	20	20	20	20	20	20	20	20	20	20	21	21	22	22	23	23
Kyrgyzstan	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.5	5.6	5.8	5.9	6.0	6.2	6.3
Latvia	10	12	12	13	13	16	16	16	15	15	14	15	15	16	16	16	16	16
Lithuania	4	5	6	7	8	8	9	10	11	10.6	10.4	10	10	11	4.1	4.1	4.2	3.9
Luxembourg	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.62	0.61	0.59	0.57	0.55	0.53	0.51
Malta	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034
Monaco	0.00004	0.00004	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00004	0.00003	0.00004
Netherlands	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.3	5.1	4.9	4.7	4.6	4.4	4.2
Norway	6.0	5.8	5.6	5.8	5.8	5.8	6.1	6.0	5.9	5.4	5.7	6.1	6.8	5.3	5.8	6.5	6.8	5.6
Poland	50	55	54	80	73	75	71	62	56	56	53	51	50	49	49	52	50	46
Portugal	3.1	3.1	3.2	3.2	3.0	3.1	3.3	3.2	3.0	3.2	3.1	3.4	3.6	3.8	4.0	3.8	3.8	3.8
Republic of Moldova	6.3	4.7	2.3	1.3	2.1	1.2	1.7	1.4	0.88	0.94	1.0	0.95	1.1	1.1	1.0	1.0	1.1	1.1
Romania	129	121	113	105	97	89	81	73	65	57	49	41	32	24	16	17	16	16

Russia (European part)	22	21	19	18	19	18	18	18	18	18	19	20	21	21	21	21	21	21
Russia (Asian part)	5.9	5.6	5.0	4.9	5.0	4.9	4.8	4.8	4.7	4.9	5.0	5.4	5.8	5.8	5.8	5.8	5.8	5.8
Serbia&Montenegro	11	11	11	11	11	11	11	11	11	11	11	11	11	11	10	10	10	10
Slovakia	9.9	8.9	8.0	7.0	6.1	5.1	4.9	4.7	4.7	4.7	4.5	4.7	4.3	4.6	5.4	7.0	6.6	6.6
Slovenia	5.1	5.3	5.0	4.9	4.7	4.6	4.6	4.5	4.5	4.5	4.5	3.8	3.9	3.9	3.9	3.8	3.8	3.9
Spain	37	37	37	37	37	37	37	37	37	37	37	35	34	32	30	29	27	26
Sweden	6.0	10.0	5.8	5.6	5.7	5.9	6.2	5.3	5.6	6.2	5.0	5.3	5.2	5.8	5.7	6.4	6.8	7.0
Switzerland	0.54	0.52	0.49	0.32	0.27	0.25	0.27	0.27	0.29	0.30	0.30	0.31	0.32	0.34	0.34	0.34	0.21	0.16
Tajikistan	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
The FYR of Macedonia	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5
Turkey	60	60	60	60	60	60	60	60	60	60	60	58	57	56	54	53	52	50
Turkmenistan	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Ukraine	54	54	54	54	54	54	54	54	54	54	54	54	55	55	55	55	56	56
United Kingdom	80	74	67	53	50	40	16	11	6.3	5.1	4.1	4.4	3.9	3.5	3.5	3.5	3.7	3.8
Uzbekistan	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Extended EMEP grid	776	760	708	707	686	673	636	617	591	585	570	561	542	533	522	525	523	515

Official data on B[b]F emissions

B[b]F emissions estimated on the basis of the official total PAH emission data

Expert estimates:

B[b]F emission values were estimated using official emission data for the European part of Russia and keeping ratio between the European and Asian data on the population density derived from the GEIA inventory

Expert estimates:

Denier van der Gon, H.A.C., M. van het Bolscher A.J.H. Visschedijk P.Y.J. Zandveld [2005]

Study to the effectiveness of the UNECE Persistent Organic Pollutants Protocol and costs of possible additional measures Phase I: Estimation of emission reduction resulting from the implementation of the POP Protocol, TNO report B&O-A R 2005/194

Expert estimates:

Zhang Y. and S.Tao [2008] Global atmospheric emission inventory of Polycyclic Aromatic Hydrocarbons (PAHs) for 2004.

Atmos. Environ., vol.43, pp.812-819

Expert estimates:

MEPA [2007] Interim report on the preliminary assessment of arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air in Malta. Malta Environment and Planning Authority Pollution Prevention and Control Unit