Convention on Long-range Transboundary Air Pollution

emep

Co-operative programme for monitoring and evaluation of the long-range transmission of air pollutants in Europe

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Assessment of transboundary pollution by toxic substances: Heavy metals and POPs

Part II

SUPPLEMENTARY MATERIALS FOR POPs

Data Report 2/2020

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MSC-E Data Report 2/2020

July 2020

Assessment of transboundary pollution by toxic substances: Heavy metals and POPs

PART II

SUPPLEMENTARY MATERIALS FOR POPs

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Introduction

This report is a supplement to the EMEP Status Report 2/2020 and summarizes the main output modeling results for 2018 on polycyclic aromatic hydrocarbons (benzo[a]pyrene (B(a)P), benzo[b]fluoranthene (B(b)F), benzo[k]fluoranthene (B(k)F), indeno[1,2,3-cd]pyrene (IP)), polychlorinated dibenzo(p)dioxins and dibenzofurans (PCDD/Fs), hexachlorobenzene (HCB), polychlorinated biphenyls (PCB-153) presented in a form of maps, graphs and tables. Besides, the report contains evaluation of the calculated concentrations and deposition against measurements. The modelling results are based on meteorological data related to 2018, and emission data related to 2017 (the numerical data are available in the internet: http://en.msceast.org/index.php/pollution-assessment/emep-domain-menu/data-hm-pop-menu). The updated Information based on emissions for 2018 will be available on the internet (www.msceast.org).

In *Chapter 1* maps of annual mean air concentrations and total deposition of B(a)P, B(b)F, B(k)F, IP, PCDD/Fs, HCB, PCB-153 are presented. Spatial resolution of the maps is 0.1°x0.1°.

Chapter 2 is focused on transboundary aspects of atmospheric pollution in the EMEP region. It presents country-averaged deposition fluxes split in three components: contribution of EMEP anthropogenic emissions, secondary sources (wind re-suspension and natural emission) within the EMEP region and sources outside the EMEP countries (non-EMEP sources). Furthermore, for each EMEP country fraction of anthropogenic deposition caused by national and foreign sources is presented. Finally, export of emitted B(a)P, B(b)F, B(k)F, IP, PCDD/Fs, HCB, PCB-153 to other countries is characterized. Deposition to the EMEP region caused by sources of each EMEP country is presented as a sum of two parts. First part is a mass deposited within national's territory. The second part means mass of a pollutant emitted by a country and deposited to other EMEP countries.

Source-receptor tables are presented in *Chapter 3*. The tables give information about contribution of emission sources of each EMEP country to deposition in other EMEP counties. The columns of the table reveal deposition from a country to other countries. The rows contain deposition to a country from countries-contributors.

Chapter 4 is focused on the evaluation of modelling results against concentrations observed at the EMEP monitoring stations. The chapter contains tables with statistical indicators for each station, diagrams showing comparison of modelled and observed annual mean air concentrations or annual sums of wet deposition, and time series of modelled and measured monthly mean pollution levels. The possible reasons of the discrepancies between calculated and observed levels are discussed.

Statistical indicators used in the chapter for evaluation of the agreement between modelled (*M*) and observed (*O*) parameters include Mean Relative Bais (MRB), Pearson's correlation coefficient (Rc) and Normalized root mean square error (NRMSE), calculated by formulae (1), (2) and (3), respectively:

$$MNB = \frac{(\overline{M} - \overline{O})}{\overline{O}} \cdot 100\% \quad (1)$$

$$Rc = \frac{\sum_{1}^{N}(M - \overline{M}) \cdot (O - \overline{O})}{\sqrt{\sum_{1}^{N}(M - \overline{M})^2 \cdot \sum_{1}^{N}(O - \overline{O})^2}} \quad (2)$$

$$NRMSE = \frac{1}{\overline{O}} \cdot \sqrt{\frac{\sum_{i}^{N}(M_i - O_i)^2}{N}} \quad (3)$$

Besides, fraction of fitting modelled and observed values within two-fold or three-fold difference (F2, F3) was calculated.

Maps of deposition of B(a)P, B(b)F, B(k)F, IP, PCDD/Fs, HCB, PCB-153 to marginal seas (the Baltic, Black, Caspian, North and Mediterranean) of the EMEP region are presented in *Chapters 5*.

1. POPs POLLUTION OF THE EMEP DOMAIN IN 2018

1.1. Polycyclic aromatic hydrocarbons (PAHs)

1.1.1. Benzo[a]pyrene (B(a)P)

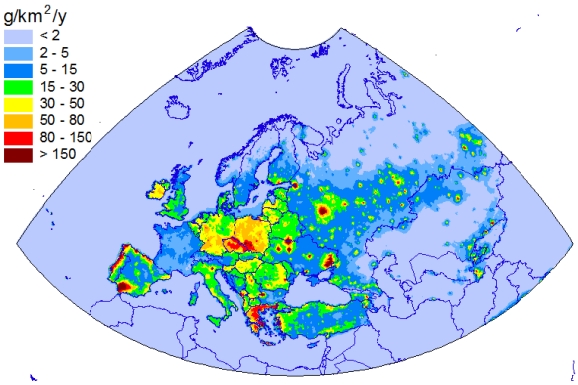


***Figure 1.1**. B(a)P total deposition, g/km^2/y*

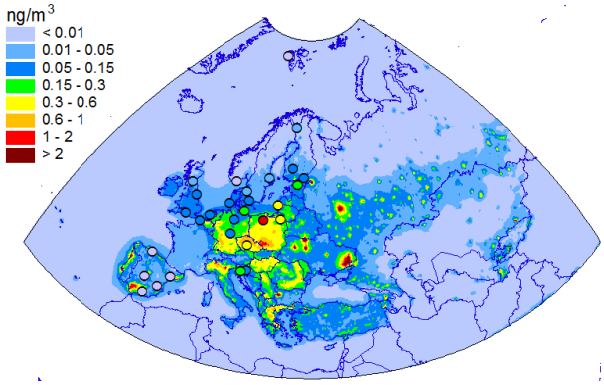


***Figure 1.2.** B(a)P concentrations in air, ng/m^3*

1.1.2. Benzo[b]fluoranthene (B(b)F)

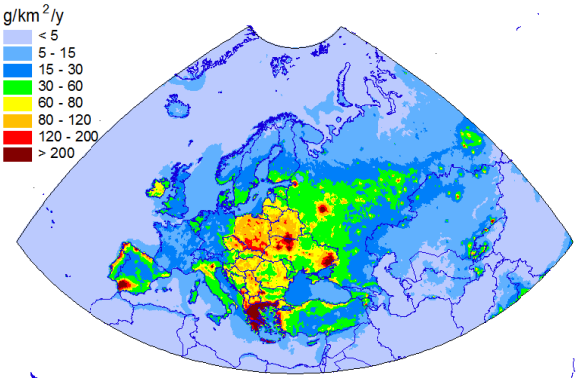


***Figure 1.3**. B(b)F total deposition, g/km^2/y*

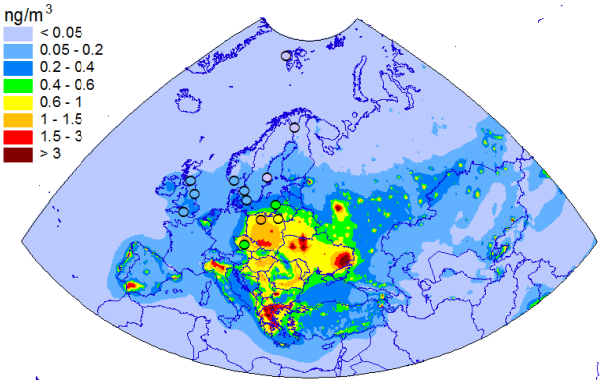


***Figure 1.4.** B(b)F concentrations in air, ng/m^3*

1.1.3. Benzo[k]fluoranthene (B(k)F)

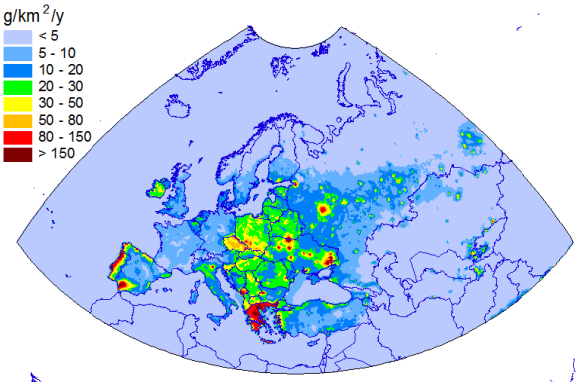


***Figure 1.5**. B(k)F total deposition, g/km^2/y*

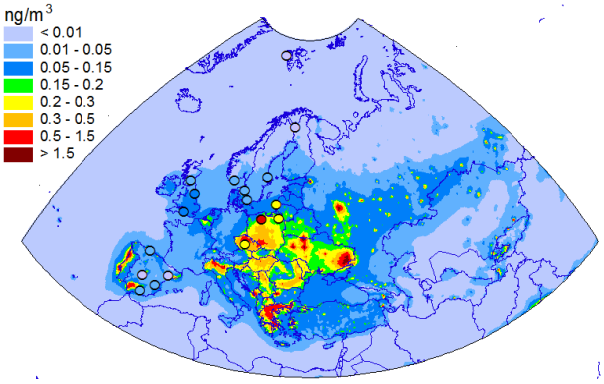


***Figure 1.6.** B(k)F concentrations in air, ng/m^3*

1.1.4. Indeno[1,2,3-cd]pyrene (IP)

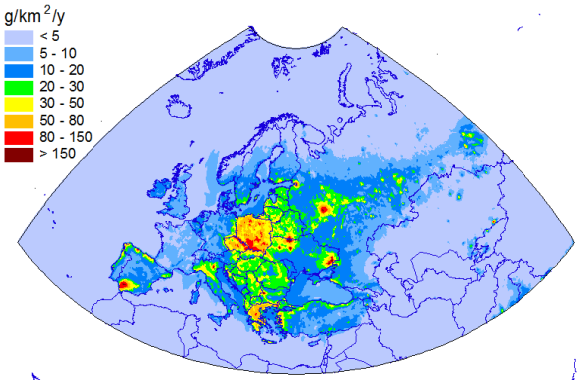


***Figure 1.7**. IP total deposition, g/km^2/y*

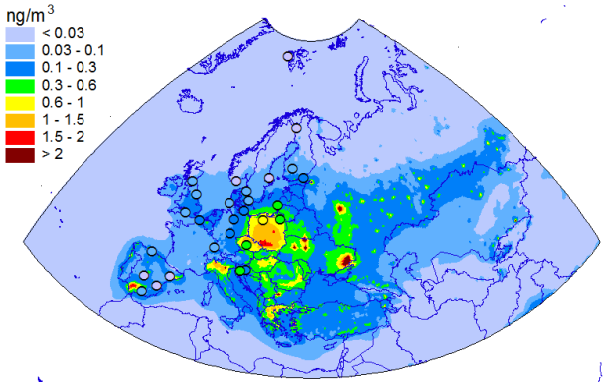


***Figure 1.8.** IP concentrations in air, ng/m^3*

1.2. Polychlorinated dibenzo(p)dioxins and dibenzofurans (PCDD/Fs)

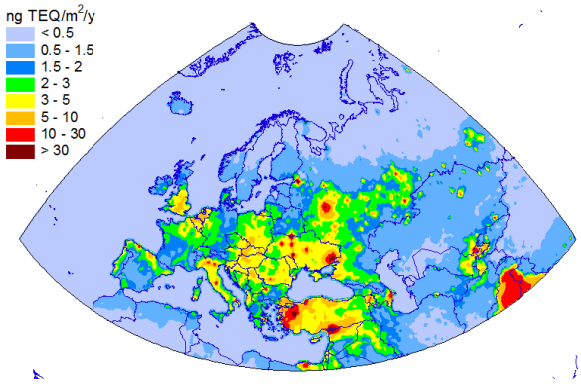


***Figure 1.9**. PCDD/F total deposition, ng TEQ/m^2/y*

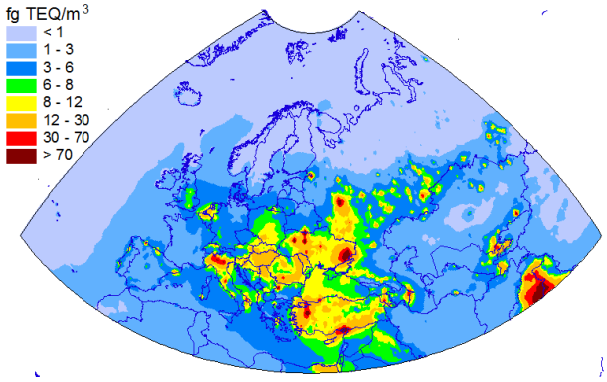


***Figure 1.10.** PCDD/F concentrations in air, fg TEQ/m^3*

1.3. Hexachlorobenzene (HCB)

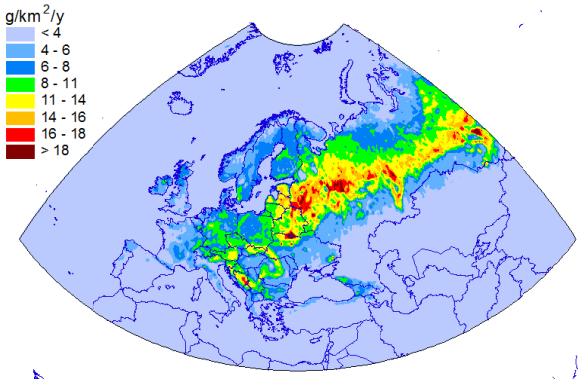


***Figure 1.11**. HCB total deposition, g/km^2/y*

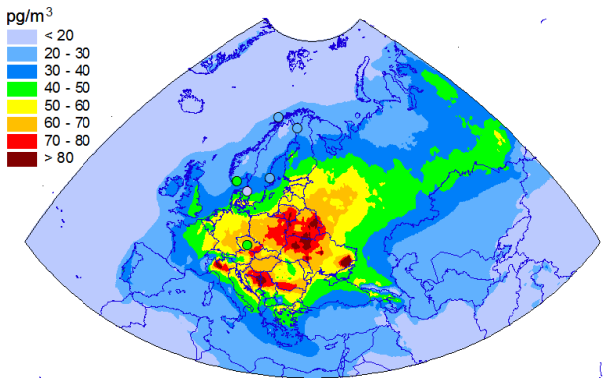


***Figure 1.12.** HCB concentrations in air, pg/m^3*

1.4. Polychlorinated biphenyls (PCB-153)

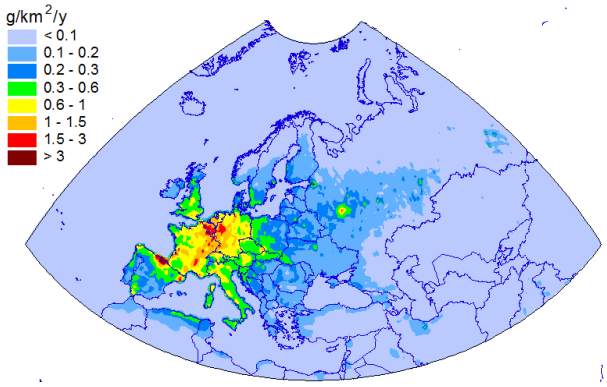


***Figure 1.13**. PCB-153 total deposition, g/km^2/y*

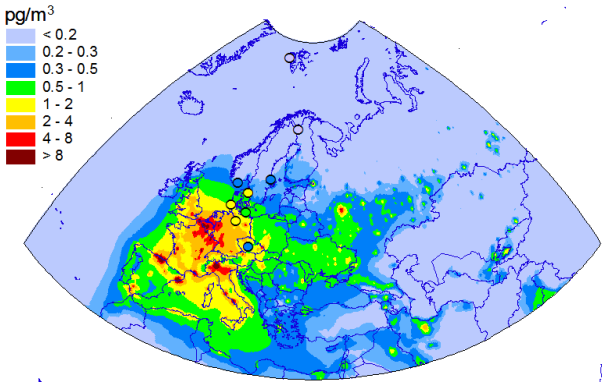


***Figure 1.8.** PCB-153 concentrations in air, pg/m^3*

2. TRANSBOUNDARY POLLUTION OF THE EMEP COUNTRIES

2.1. Polycyclic aromatic hydrocarbons (PAHs)

2.1.1. Benzo(a)pyrene (B(a)P)

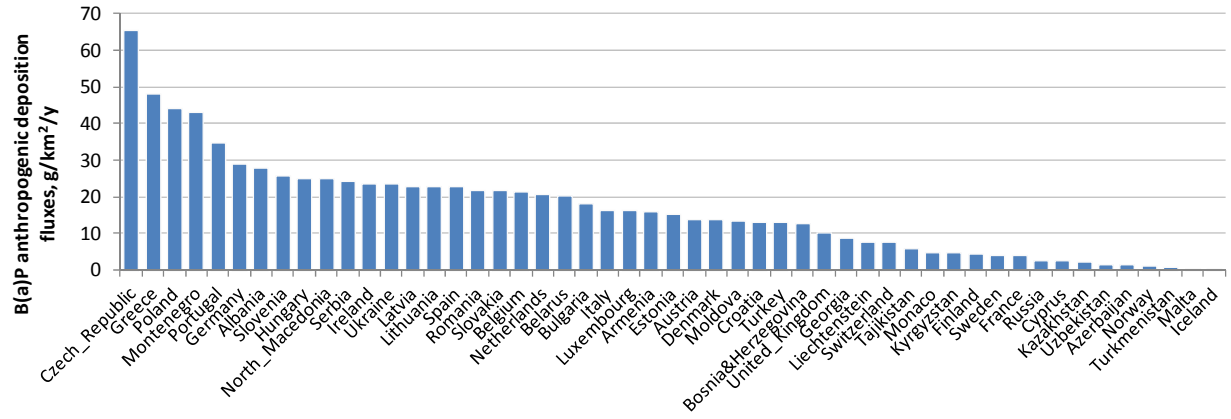


Fig. 2.1. *Country-average anthropogenic deposition fluxes of B(a)P to EMEP countries*

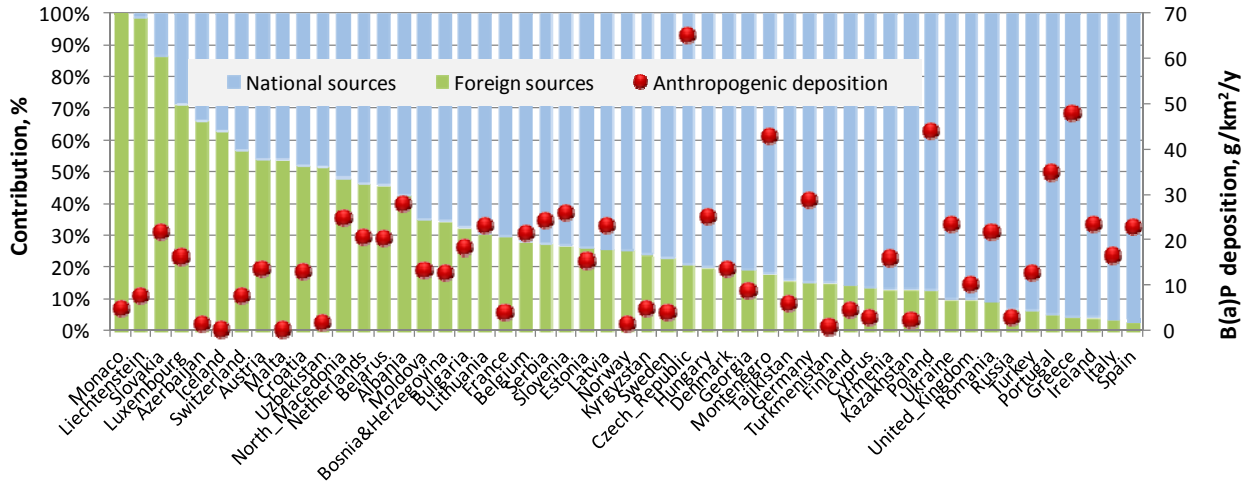


Fig. 2.2. *Relative contribution of national sources and transboundary transport to B(a)P deposition in the EMEP countries*

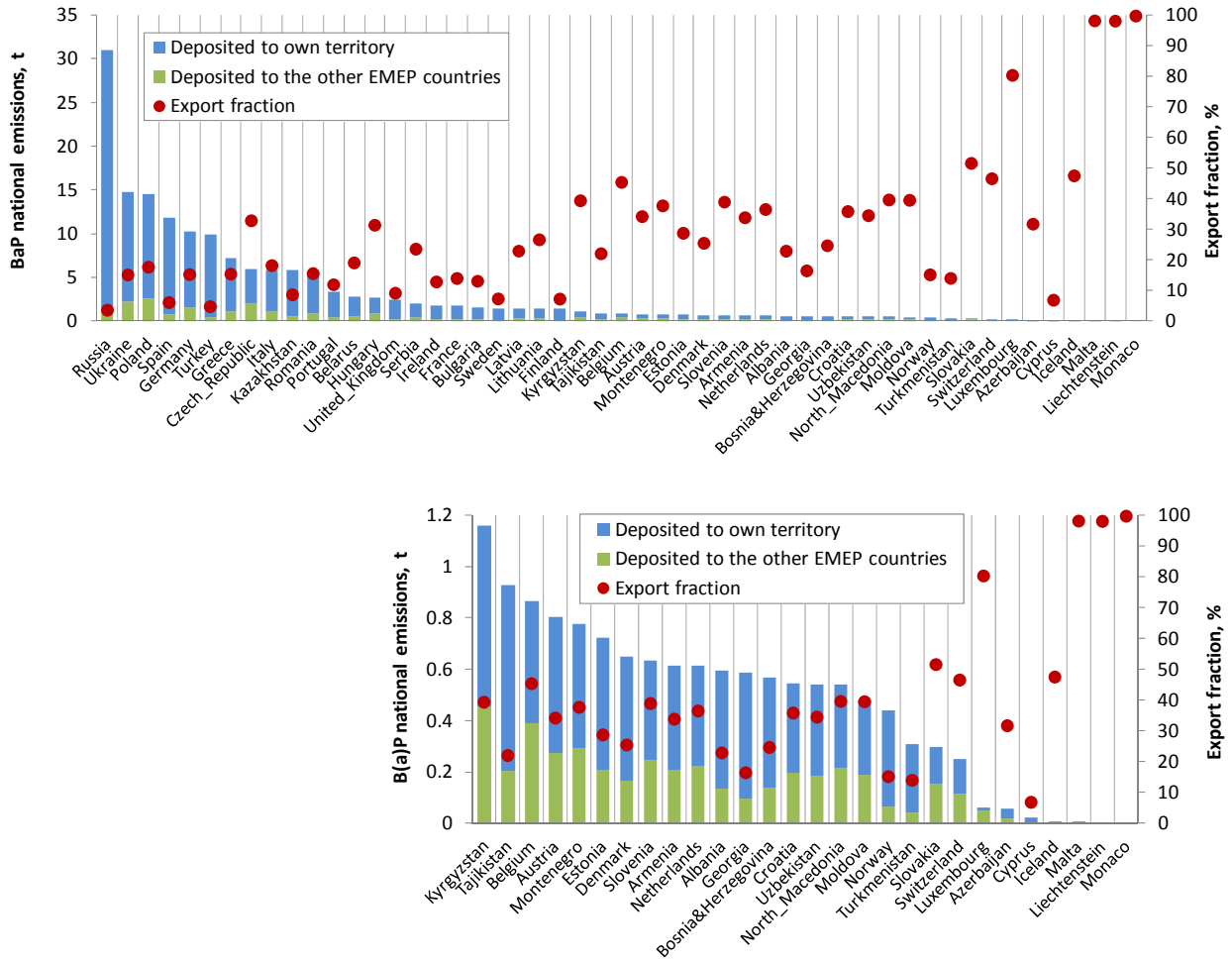


Fig. 2.3. *Contribution of EMEP countries to transboundary transport of B(a)P. Red circle - fraction of total anthropogenic deposition to the EMEP countries exported outside the country.*

2.1.2. Benzo(b)fluoranthene (B(b)F)

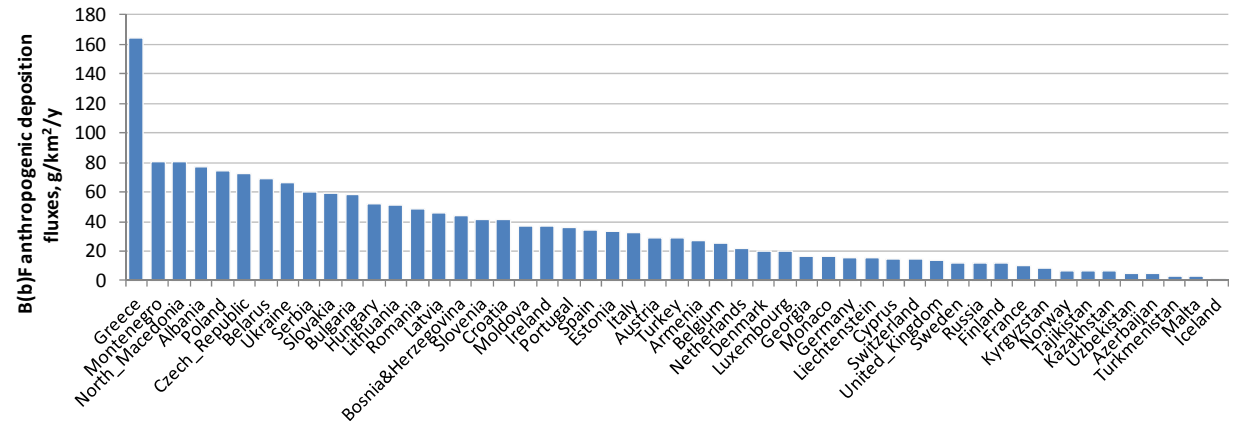


Fig. 2.4. *Country-average deposition fluxes of B(b)F to EMEP countries*

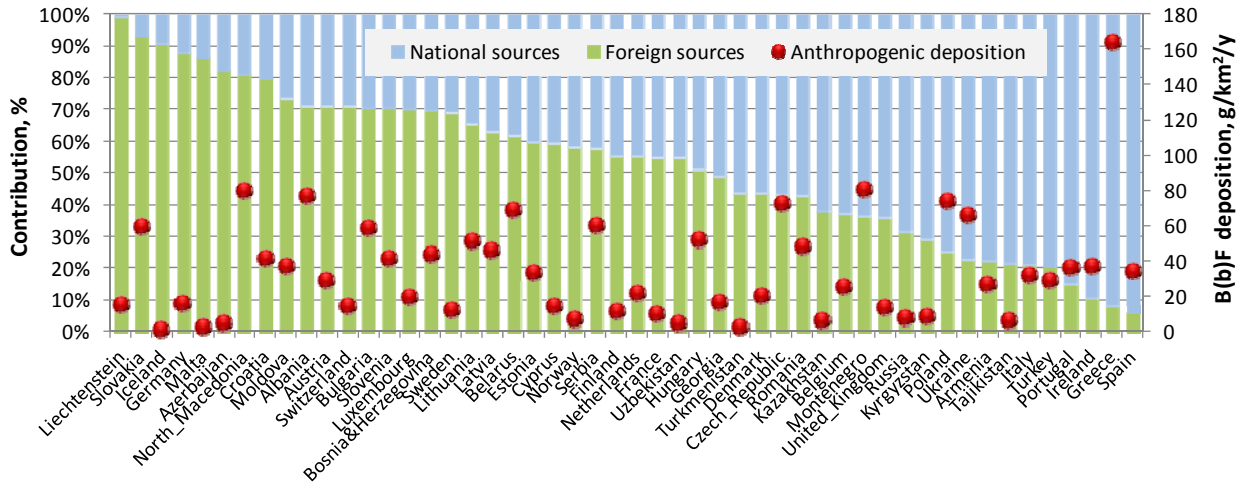


Fig. 2.5. *Relative contribution of national sources and transboundary transport to B(b)F deposition in the EMEP countries*

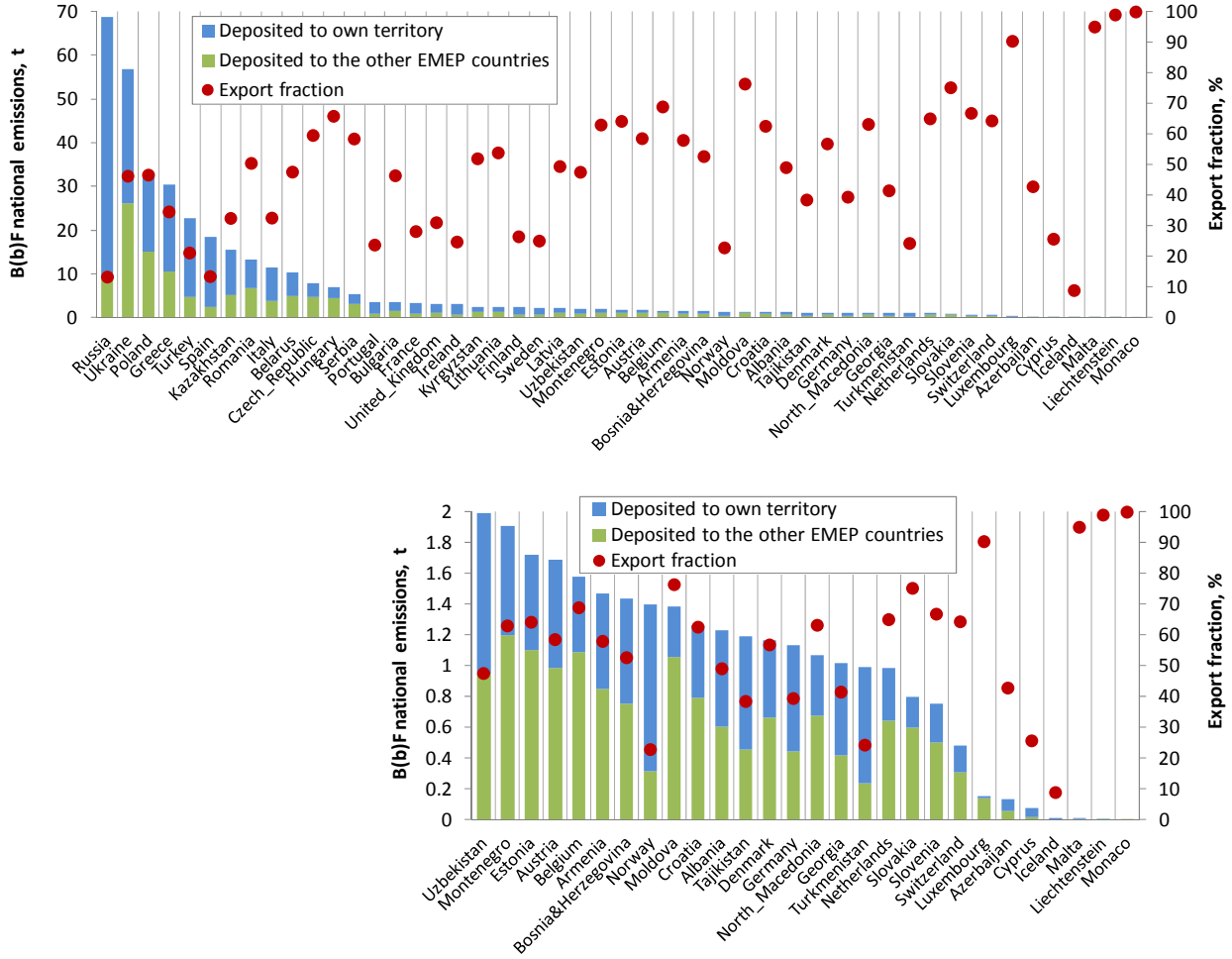


Fig. 2.6. *Contribution of EMEP countries to transboundary transport of B(b)F. Red circle - fraction of total anthropogenic deposition to the EMEP countries exported outside the country.*

2.1.3. Benzo(k)fluoranthene (B(k)F)

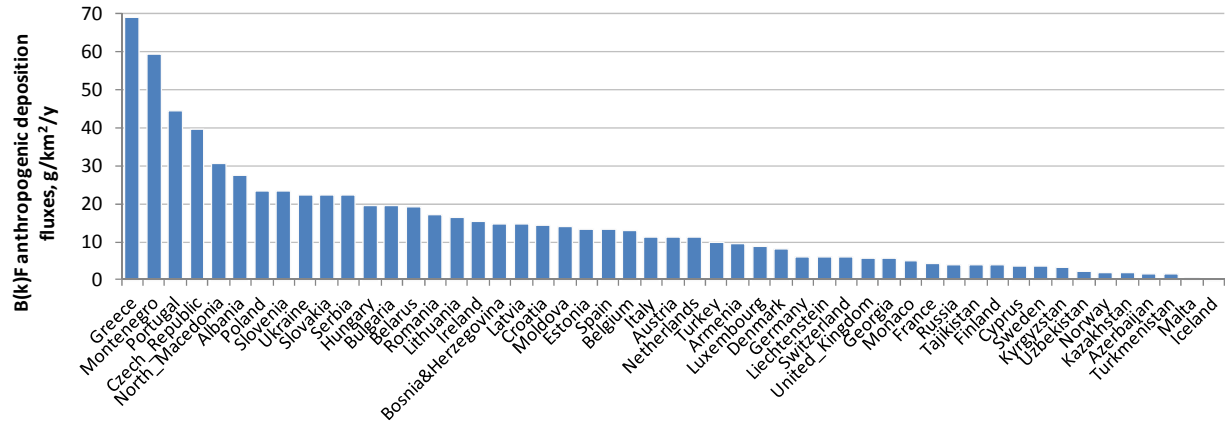


Fig. 2.7. *Country-average deposition fluxes of B(k)F to EMEP countries*

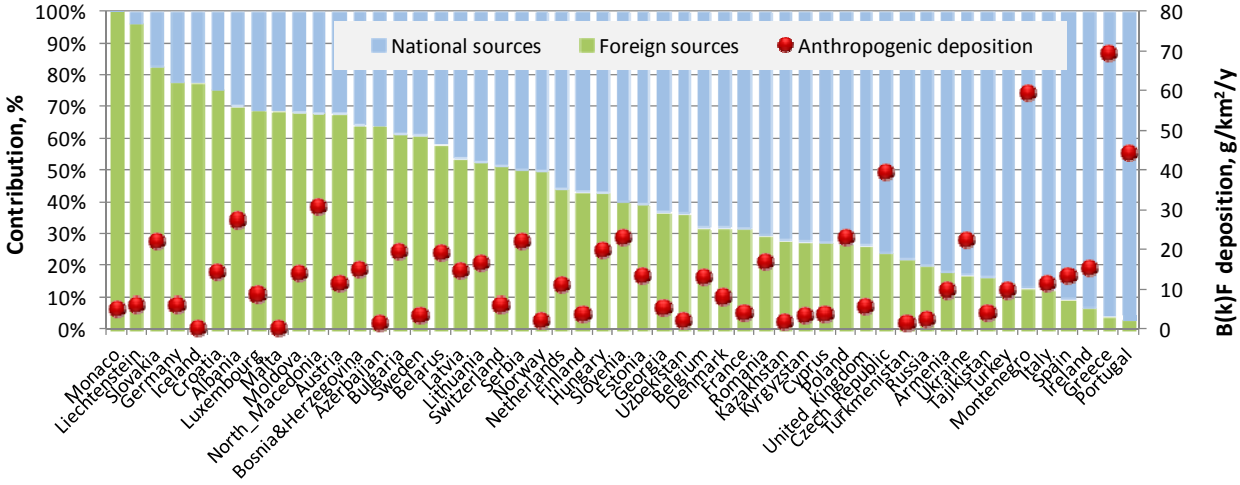


Fig. 2.8. *Relative contribution of national sources and transboundary transport to B(k)F deposition in the EMEP countries*

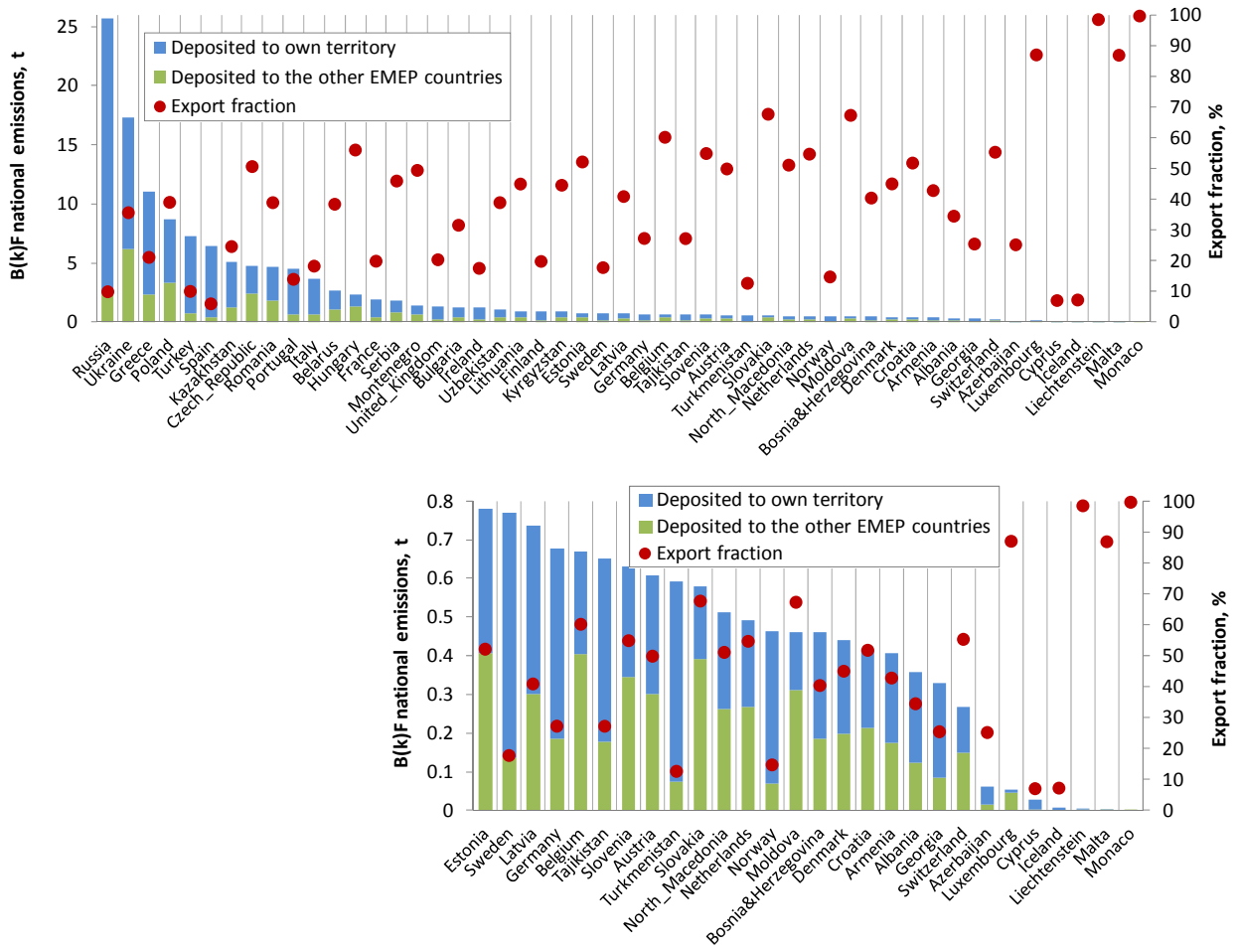


Fig. 2.9. *Contribution of EMEP countries to transboundary transport of B(k)F. Red circle - fraction of total anthropogenic deposition to the EMEP countries exported outside the country.*

2.1.4. Indeno(1,2,3-cd)pyrene (IP)

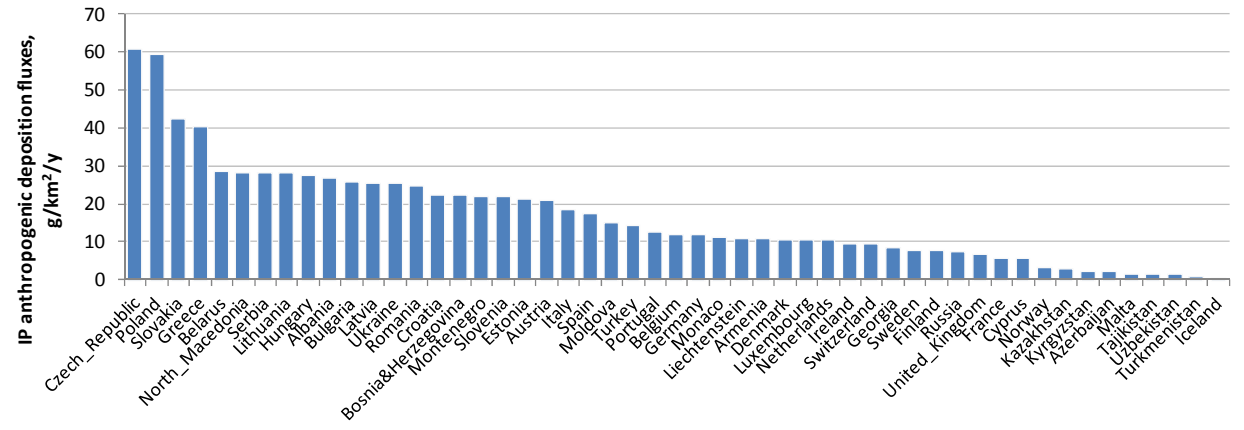


Fig. 2.10. *Country-average deposition fluxes of IP to EMEP countries*

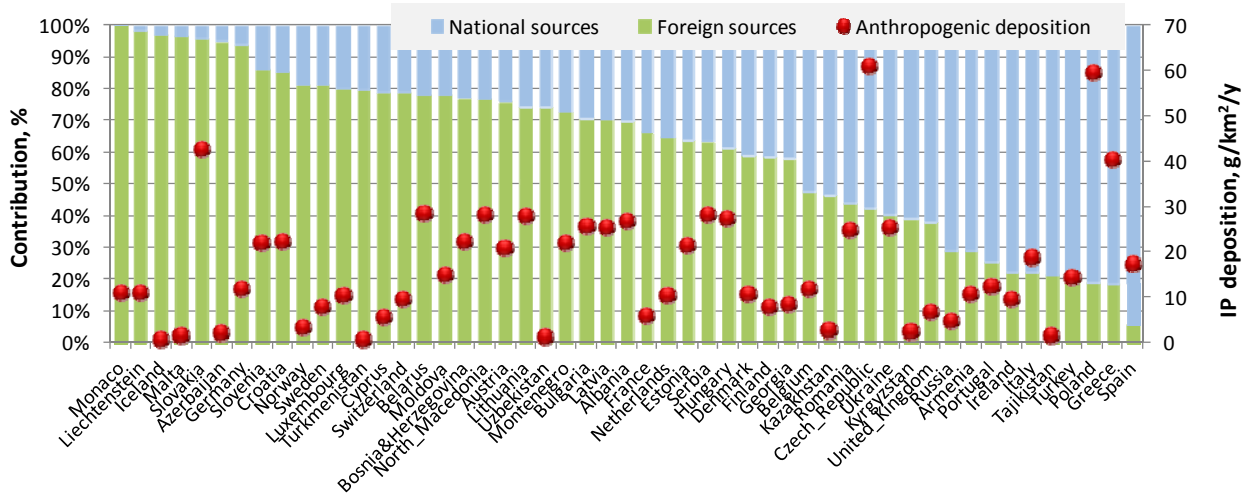


Fig. 2.11. *Relative contribution of national sources and transboundary transport to IP deposition in the EMEP countries*

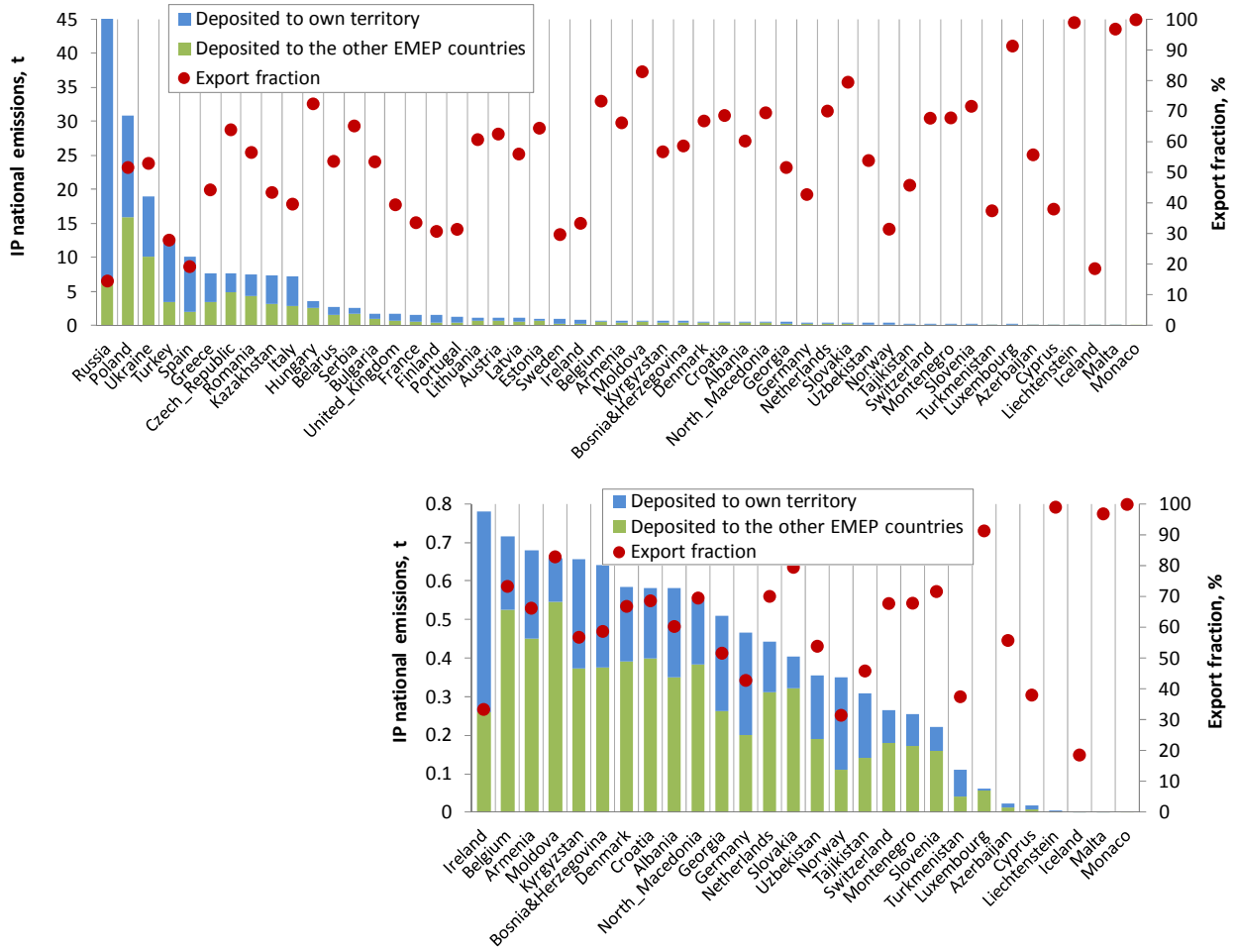


Fig. 2.12. *Contribution of EMEP countries to transboundary transport of IP. Red circle - fraction of total anthropogenic deposition to the EMEP countries exported outside the country.*

2.2. Polychlorinated dibenzo(p)dioxins and dibenzofurans (PCDD/Fs)

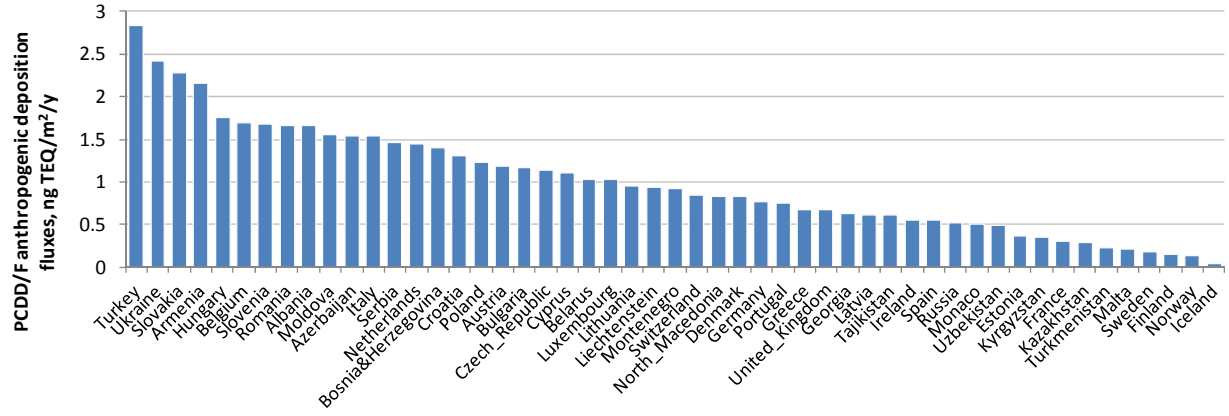


Fig. 2.13. *Country-average deposition fluxes of PCDD/F to EMEP countries*

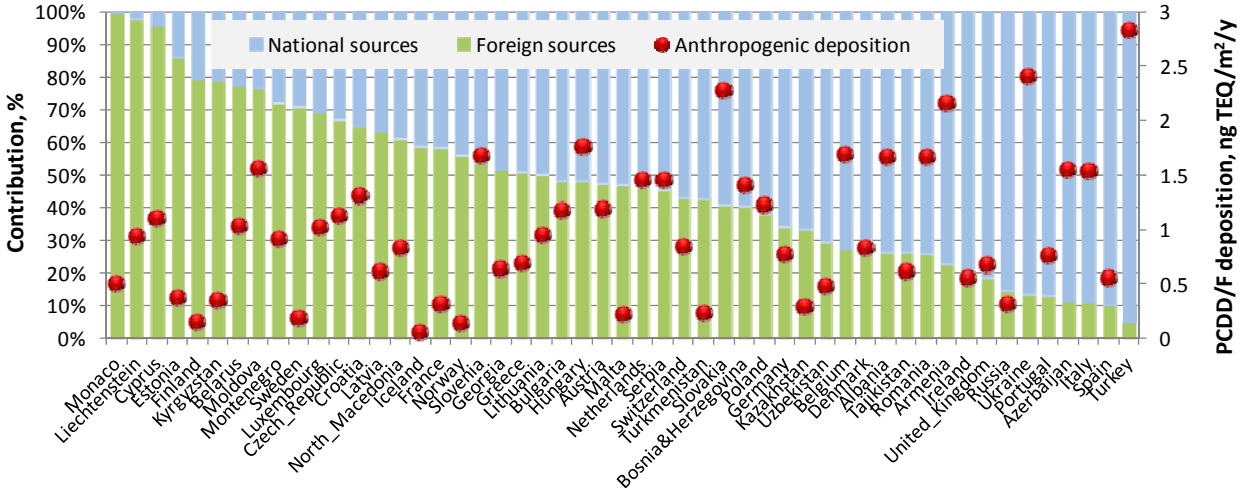


Fig. 2.14. *Relative contribution of national sources and transboundary transport to PCDD/F deposition in the EMEP countries*

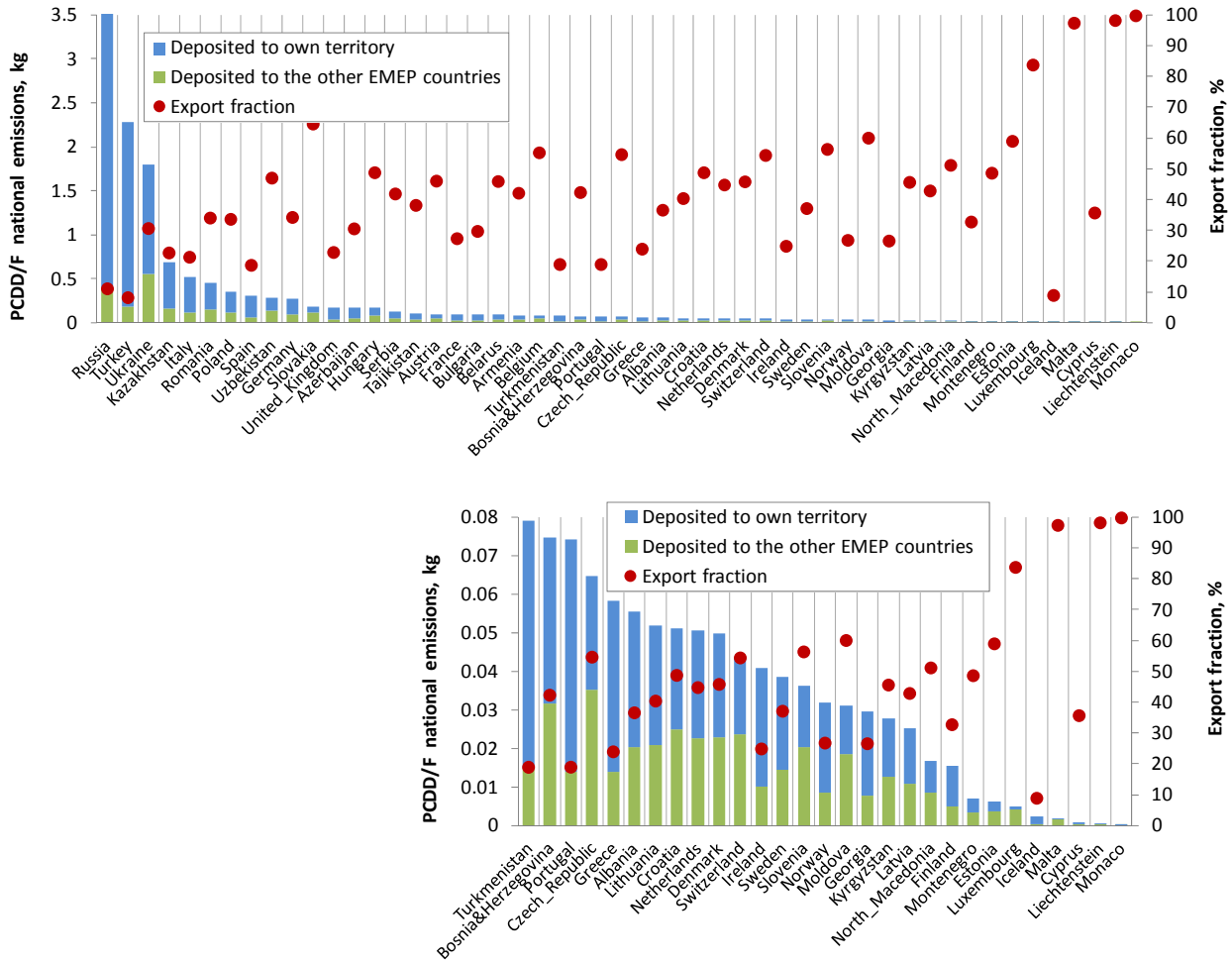


Fig. 2.15. *Contribution of EMEP countries to transboundary transport of PCDD/F. Red circle - fraction of total anthropogenic deposition to the EMEP countries exported outside the country.*

2.3. Hexachlorobenzene (HCB)

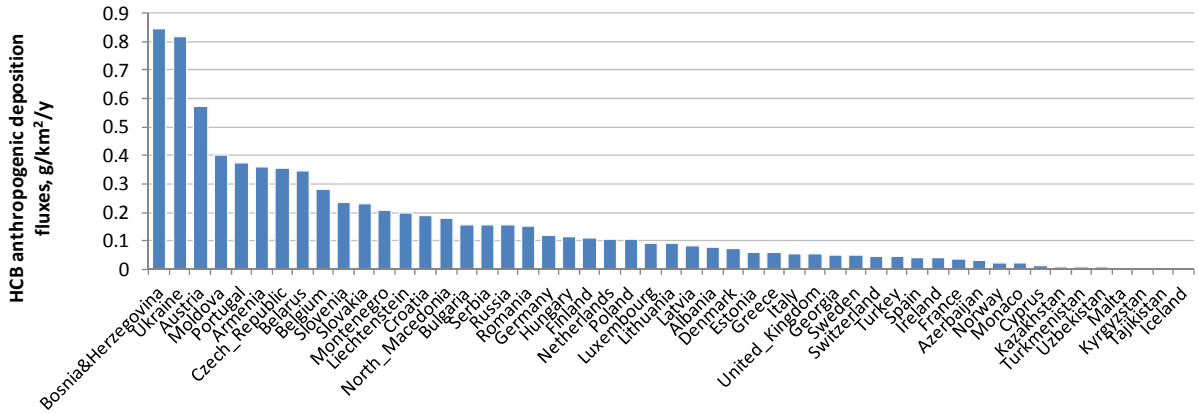


Fig. 2.16. *Country-average deposition fluxes of HCB to EMEP countries*

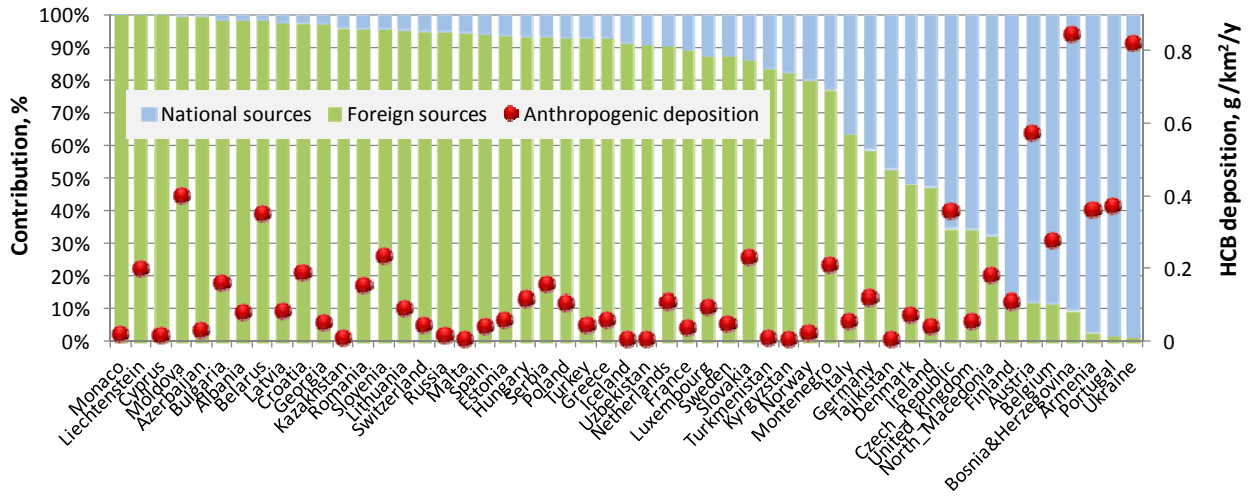


Fig. 2.17. *Relative contribution of national sources and transboundary transport to HCB deposition in the EMEP countries*

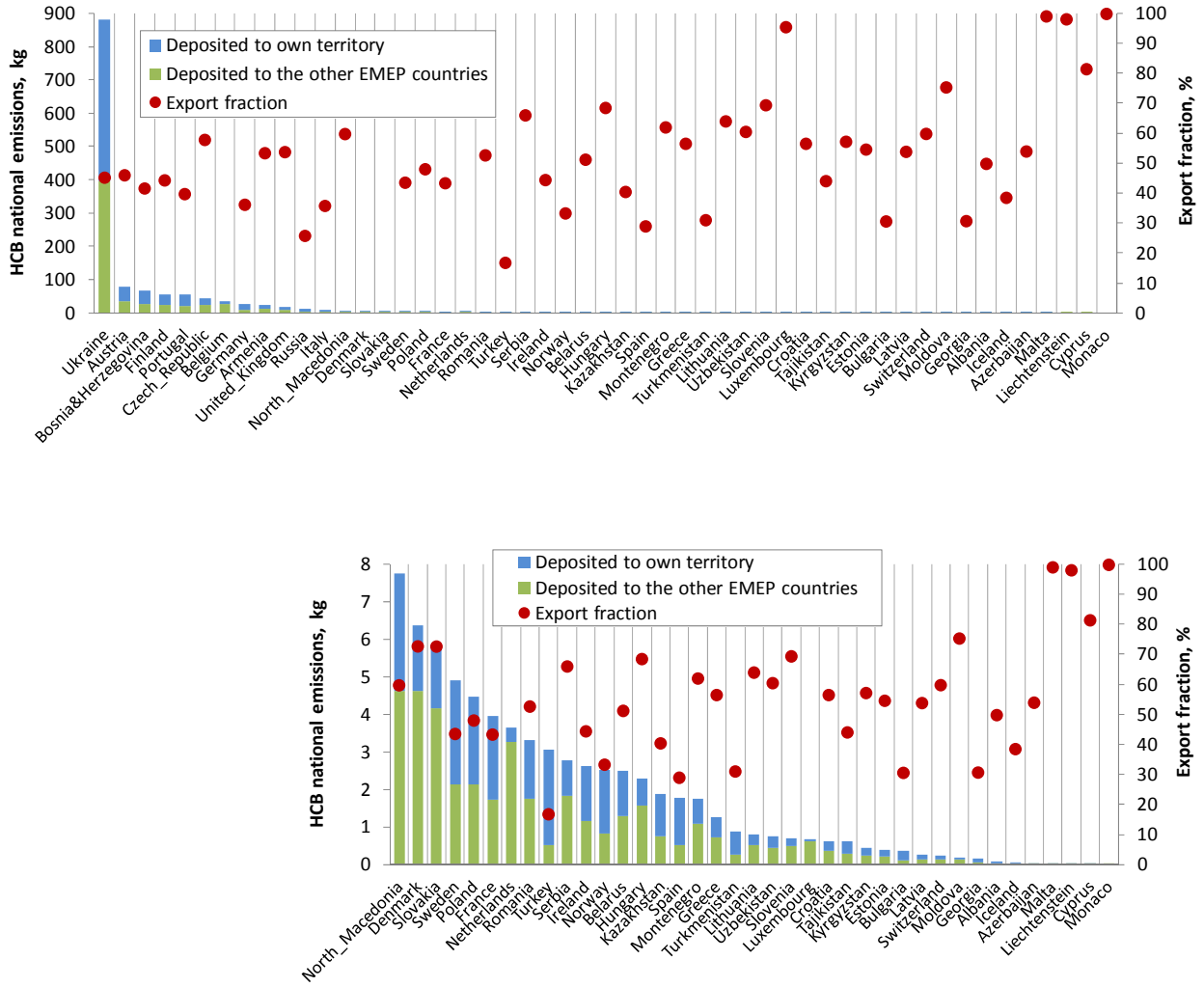


Fig. 2.18. *Contribution of EMEP countries to transboundary transport of HCB. Red circle - fraction of total anthropogenic deposition to the EMEP countries exported outside the country.*

2.4. Polychlorinated biphenyls (PCB-153)

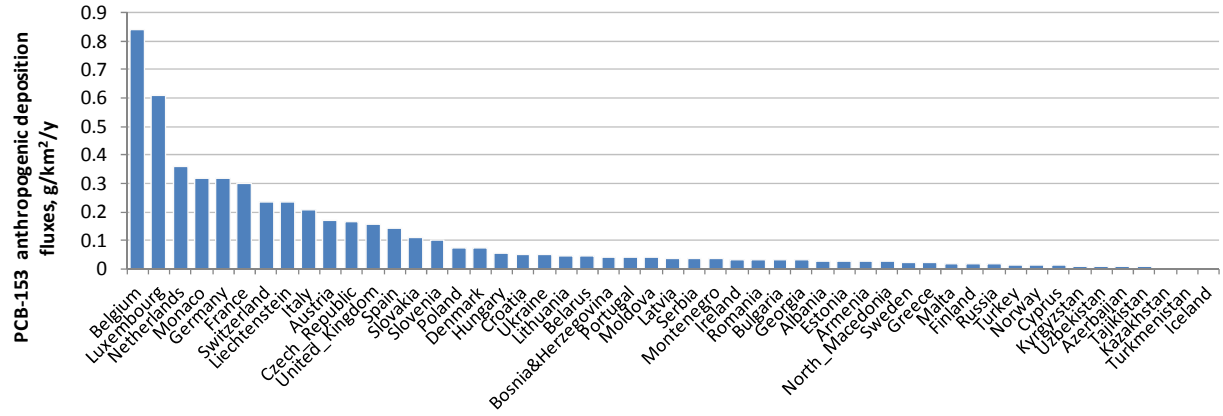


Fig. 2.19. *Country-average deposition fluxes of PCB-153 to EMEP countries*

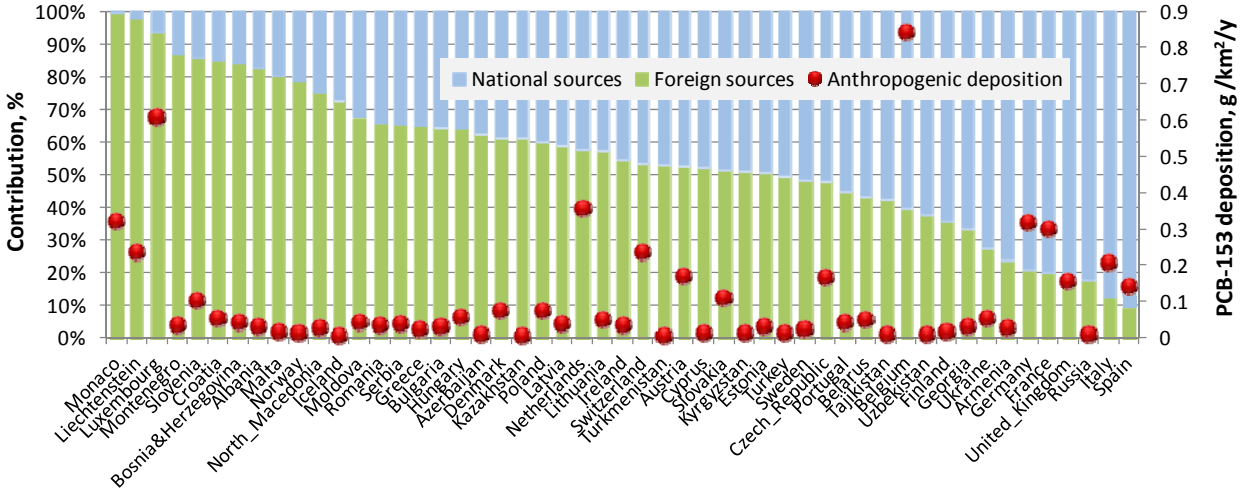


Fig. 2.20. *Relative contribution of national sources and transboundary transport to PCB-153 deposition in the EMEP countries*

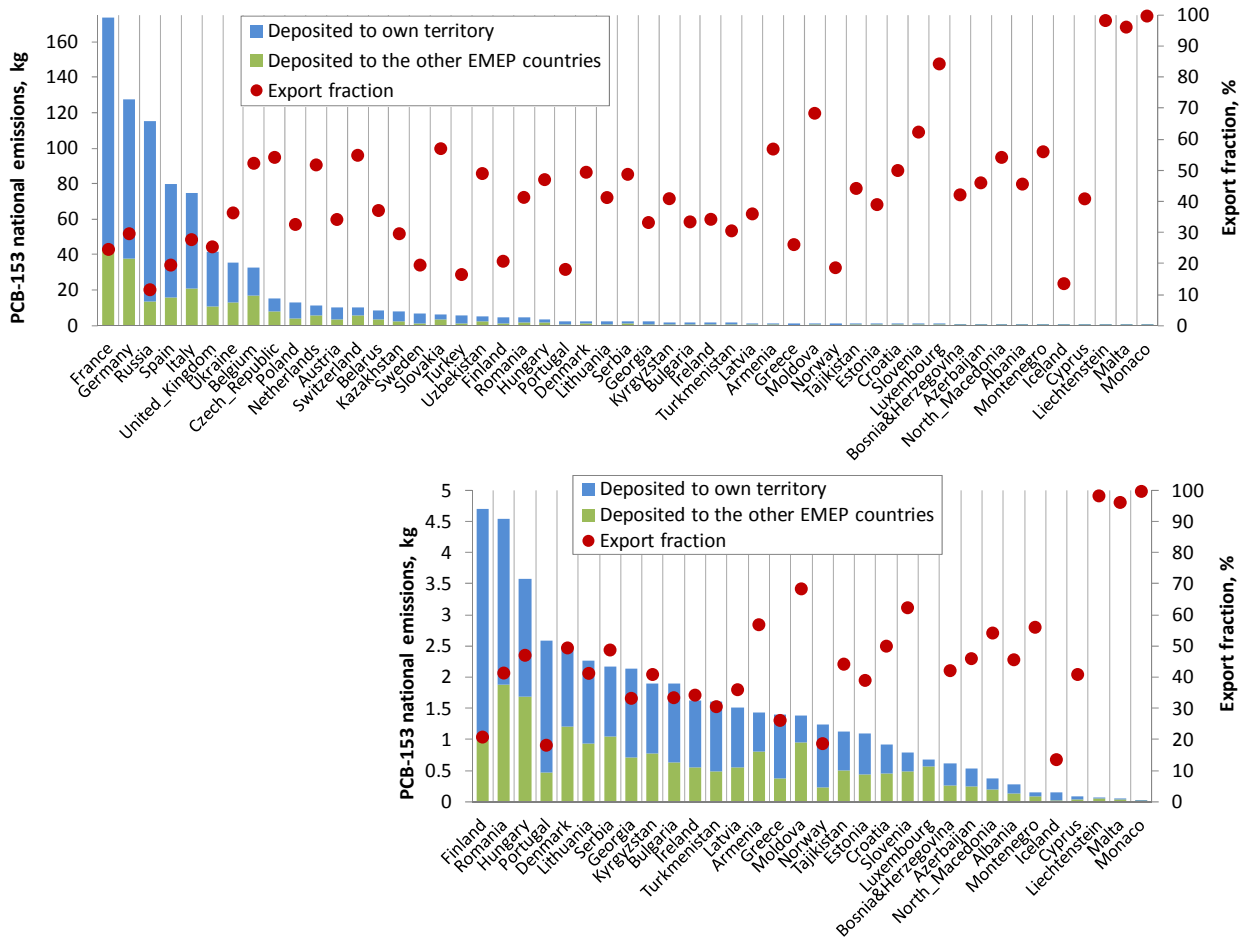


Fig. 2.21. *Contribution of EMEP countries to transboundary transport of PCB-153. Red circle - fraction of total anthropogenic deposition to the EMEP countries exported outside the country.*

3. SOURCE-RECEPTOR TABLES

Table 3.1. *Codes of countries, regions and seas*

Country/Region/Sea	Code	Country/Region/Sea	Code
Albania	AL	Monaco	MC
Armenia	AM	Montenegro	ME
Austria	AT	Netherlands	NL
Azerbaijan	AZ	Norway	NO
Belarus	BY	Poland	PL
Belgium	BE	Portugal	PT
Bosnia and Herzegovina	BA	Republic of Moldova	MD
Bulgaria	BG	Romania	RO
Croatia	HR	Russian Federation	RU
Cyprus	CY	Serbia	RS
Czech Republic	CZ	Slovakia	SK
Denmark	DK	Slovenia	SI
Estonia	EE	Spain	ES
Finland	FI	Sweden	SE
France	FR	Switzerland	CH
Georgia	GE	The Former Yugoslav Republic of Macedonia	MK
Germany	DE	Tajikistan	TJ
Greece	GR	Turkey	TR
Hungary	HU	Turkmenistan	TM
Iceland	IS	Ukraine	UA
Ireland	IE	United Kingdom	GB
Italy	IT	Uzbekistan	UZ
Kazakhstan	KZ		
Kyrgyzstan	KY	Baltic Sea	BAS
Latvia	LV	Black Sea	BLS
Lithuania	LT	Caspian Sea	CAS
Luxembourg	LU	North Sea	NOS
Malta	MT	Mediterranean Sea	MDT

***Table 3.2**. Matrix of B(a)P country-to-country deposition from anthropogenic sources in 2018, kg/y*

Receptors ↓ Emitters →

code	AL	AM	AT	AZ	BA	BE	BG	BY	CH	CY	CZ	DE	DK
AL	**457.7**	0.0	0.1	0.0	0.6	0.0	1.8	0.0	0.2	0.0	0.1	0.3	0.0
AM	0.2	**407.6**	0.0	1.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0
AT	0.1	0.0	**527.8**	0.0	0.7	0.2	0.1	0.0	5.8	0.0	178.2	171.8	0.0
AZ	0.0	42.2	0.0	**40.1**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BA	4.2	0.0	1.0	0.0	**428.1**	0.0	0.4	0.0	0.3	0.0	2.3	0.9	0.0
BE	0.0	0.0	0.1	0.0	0.0	**473.0**	0.0	0.0	0.3	0.0	0.7	79.1	0.1
BG	1.2	0.0	0.6	0.0	0.6	0.0	**1360.9**	0.0	0.3	0.0	0.6	0.9	0.0
BY	0.2	0.2	0.8	0.0	0.2	0.3	0.7	**2259.8**	0.5	0.0	6.9	5.8	0.8
CH	0.0	0.0	5.1	0.0	0.0	0.1	0.0	0.0	**134.0**	0.0	0.8	83.9	0.0
CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**21.0**	0.0	0.0	0.0
CZ	0.3	0.0	62.9	0.0	0.9	1.2	0.2	0.3	2.7	0.0	**4042.3**	294.2	0.2
DE	0.2	0.0	72.9	0.0	0.4	114.7	0.1	0.6	47.4	0.0	611.1	**8727.8**	21.7
DK	0.0	0.0	0.2	0.0	0.0	2.3	0.0	0.1	0.1	0.0	4.4	64.7	**485.1**
EE	0.0	0.0	0.1	0.0	0.0	0.1	0.0	6.6	0.1	0.0	1.0	2.1	0.4
ES	0.2	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.6	0.0	0.1	1.1	0.1
FI	0.0	0.0	0.2	0.0	0.0	0.4	0.2	3.2	0.2	0.0	1.3	4.2	1.0
FR	0.1	0.0	0.7	0.0	0.1	92.1	0.0	0.0	32.0	0.0	4.0	253.2	0.2
GB	0.1	0.0	0.1	0.0	0.1	11.5	0.0	0.0	0.3	0.0	0.4	15.5	2.4
GE	0.1	49.8	0.1	0.7	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.1	0.0
GR	24.9	0.1	0.7	0.0	0.9	0.0	9.8	0.0	0.6	0.0	0.3	1.1	0.0
HR	1.5	0.0	7.5	0.0	78.5	0.0	0.2	0.0	0.2	0.0	5.1	1.1	0.0
HU	0.7	0.1	26.4	0.0	6.3	0.0	0.9	0.1	0.7	0.0	24.4	5.1	0.0
IE	0.1	0.0	0.0	0.0	0.1	0.5	0.0	0.0	0.1	0.0	0.0	1.3	0.2
IS	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.2
IT	4.8	0.0	17.6	0.0	3.1	0.1	0.4	0.0	8.4	0.0	1.3	10.1	0.0
KY	0.1	7.1	0.1	2.6	0.0	0.1	0.3	0.1	0.1	0.0	0.1	0.4	0.1
KZ	1.4	12.4	0.4	4.4	0.5	0.4	4.1	0.2	0.5	0.1	0.5	2.6	0.6
LI	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.0
LT	0.1	0.0	0.3	0.0	0.1	0.2	0.1	119.2	0.1	0.0	4.2	4.1	1.2
LU	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	0.1	0.0	0.2	16.7	0.0
LV	0.1	0.0	0.2	0.0	0.1	0.2	0.2	51.2	0.1	0.0	2.9	4.2	0.9
MC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	0.1	0.0	0.1	0.0	0.0	0.0	0.4	0.2	0.1	0.0	0.3	0.4	0.0
ME	31.8	0.0	0.2	0.0	7.5	0.0	1.1	0.0	0.2	0.0	0.1	0.4	0.0
MK	32.4	0.0	0.1	0.0	0.3	0.0	9.2	0.0	0.1	0.0	0.1	0.3	0.0
MT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NL	0.0	0.0	0.1	0.0	0.0	145.6	0.0	0.0	0.2	0.0	0.6	159.1	0.7
NO	0.0	0.0	0.1	0.0	0.0	2.0	0.0	0.3	0.1	0.0	3.3	17.9	21.8
PL	0.5	0.3	13.6	0.0	1.1	3.5	1.1	81.8	3.0	0.0	873.7	250.7	8.8
PT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0
RO	1.5	0.2	2.4	0.0	2.5	0.1	21.8	0.3	1.2	0.0	5.5	4.6	0.1
RS	17.3	0.1	1.5	0.0	27.0	0.0	117.5	0.0	0.8	0.0	3.2	2.3	0.0
RU	5.4	10.9	5.4	4.2	4.2	3.2	14.5	161.5	4.4	0.3	12.6	30.8	4.9
SE	0.1	0.0	0.5	0.0	0.0	2.9	0.3	3.0	0.3	0.0	15.7	46.4	97.6
SI	0.1	0.0	36.9	0.0	0.6	0.0	0.0	0.0	0.1	0.0	2.4	1.0	0.0
SK	0.1	0.0	10.0	0.0	1.1	0.1	0.2	0.4	0.3	0.0	182.3	8.9	0.1
TJ	0.1	11.0	0.1	3.8	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.4	0.0
TM	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TR	3.7	69.4	1.9	0.1	0.7	0.2	11.1	0.1	1.2	0.8	0.8	3.0	0.2
UA	1.7	0.7	2.4	0.0	1.4	0.3	6.1	100.5	2.3	0.0	17.0	11.2	0.7
UZ	0.0	2.7	0.0	1.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
SUM	593.3	615.4	801.3	58.7	567.8	864.6	1564.5	2789.6	250.4	22.5	6010.7	10290.7	650.2
Emiss, 2017	2159.0	2550.1	2375.1	396.4	1844.6	2510.1	5437.3	6861.1	812.6	108.5	16248.6	28806.1	2159.6

***Table 3.2**. Matrix of B(a)P country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	EE	ES	FI	FR	GB	GE	GR	HR	HU	IE	IS	IT	KY	KZ
AL	0.0	10.0	0.0	0.6	0.1	0.0	137.4	0.2	0.2	0.1	0.0	15.5	0.0	0.0
AM	0.0	0.7	0.0	0.2	0.0	23.2	1.7	0.0	0.0	0.0	0.0	3.6	0.0	0.0
AT	0.0	3.6	0.0	1.7	0.3	0.0	0.2	8.4	75.0	0.1	0.0	55.7	0.0	0.0
AZ	0.0	0.1	0.0	0.0	0.0	19.5	0.2	0.0	0.0	0.0	0.0	0.4	0.0	0.1
BA	0.0	5.4	0.0	0.7	0.0	0.0	1.5	54.2	17.8	0.0	0.0	18.0	0.0	0.0
BE	0.0	1.6	0.0	34.2	8.5	0.0	0.0	0.0	0.0	0.3	0.0	0.8	0.0	0.0
BG	0.0	11.8	0.0	1.0	0.2	0.0	325.8	0.4	2.8	0.1	0.0	20.6	0.0	0.0
BY	3.3	5.7	0.3	1.6	2.3	0.4	2.5	0.2	4.1	2.1	0.0	16.6	0.0	0.4
CH	0.0	2.3	0.0	16.3	0.1	0.0	0.0	0.0	0.0	0.1	0.0	67.2	0.0	0.0
CY	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0
CZ	0.1	9.4	0.1	3.5	1.3	0.0	0.4	2.5	48.2	0.9	0.0	21.3	0.0	0.0
DE	0.1	18.0	0.1	71.3	31.1	0.0	0.3	0.5	3.6	5.1	0.0	32.2	0.0	0.1
DK	0.1	1.2	0.1	1.0	6.0	0.0	0.0	0.0	0.2	1.4	0.0	1.0	0.0	0.0
EE	**516.2**	0.8	14.4	0.2	0.4	0.0	0.3	0.0	0.2	0.2	0.0	1.1	0.1	0.1
ES	0.0	**11129.7**	0.0	19.0	1.0	0.0	0.3	0.1	0.0	0.9	0.1	6.1	0.0	0.0
FI	43.9	2.4	**1294.9**	0.9	2.2	0.0	0.4	0.1	0.2	1.4	0.1	3.8	0.2	0.2
FR	0.0	141.5	0.0	**1515.0**	23.5	0.0	0.1	0.1	0.1	1.4	0.0	58.2	0.0	0.0
GB	0.0	8.8	0.0	15.0	**2241.6**	0.0	0.1	0.0	0.0	169.7	0.0	2.7	0.0	0.0
GE	0.0	0.7	0.0	0.2	0.1	**491.1**	1.4	0.0	0.0	0.1	0.0	3.8	0.0	0.0
GR	0.0	29.0	0.0	2.2	1.2	0.1	**6059.2**	0.5	0.5	0.5	0.0	57.1	0.0	0.0
HR	0.0	4.6	0.0	0.7	0.1	0.0	0.6	**350.6**	101.8	0.1	0.0	21.2	0.0	0.0
HU	0.0	7.9	0.0	1.4	0.2	0.1	1.6	40.0	**1854.0**	0.1	0.0	28.2	0.0	0.0
IE	0.0	3.9	0.0	1.1	56.1	0.0	0.0	0.0	0.0	**1567.2**	0.0	1.5	0.0	0.0
IS	0.0	0.1	0.0	0.1	2.2	0.0	0.0	0.0	0.0	2.9	**4.0**	0.0	0.0	0.0
IT	0.0	44.9	0.0	11.7	0.9	0.0	3.4	8.5	2.2	1.2	0.0	**4764.7**	0.0	0.0
KY	0.1	1.0	0.1	0.2	0.6	3.5	1.2	0.0	0.1	0.2	0.0	3.3	**704.8**	62.2
KZ	0.5	16.4	0.3	1.8	4.0	6.5	11.9	0.4	0.5	3.8	0.1	26.5	265.0	**5299.9**
LI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
LT	2.9	3.9	0.4	0.7	1.4	0.0	0.5	0.1	1.3	1.2	0.0	3.6	0.1	0.1
LU	0.0	0.1	0.0	3.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
LV	43.6	2.7	1.9	0.6	0.9	0.0	0.6	0.0	0.5	0.7	0.0	2.7	0.1	0.2
MC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	0.0	0.9	0.0	0.2	0.0	0.0	1.4	0.0	0.3	0.0	0.0	3.2	0.0	0.0
ME	0.0	7.7	0.0	0.6	0.1	0.0	1.8	0.5	0.5	0.0	0.0	14.2	0.0	0.0
MK	0.0	6.1	0.0	0.4	0.1	0.0	186.6	0.1	0.3	0.0	0.0	9.2	0.0	0.0
MT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NL	0.0	1.4	0.0	9.9	18.6	0.0	0.0	0.0	0.0	1.0	0.0	0.9	0.0	0.0
NO	0.4	2.0	1.7	1.0	10.0	0.0	0.0	0.0	0.1	2.0	0.1	0.9	0.0	0.0
PL	0.6	15.3	0.3	5.0	6.8	0.2	1.9	2.6	75.6	4.4	0.0	36.7	0.2	0.6
PT	0.0	164.8	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.9	0.0	0.0
RO	0.0	17.7	0.1	2.5	0.4	0.2	12.0	2.4	116.3	0.1	0.0	46.1	0.0	0.2
RS	0.0	12.0	0.0	1.4	0.1	0.0	15.4	12.7	57.6	0.1	0.0	30.8	0.0	0.0
RU	106.0	73.0	52.8	15.5	28.3	19.2	41.7	2.9	4.6	21.0	2.7	173.6	5.0	351.4
SE	5.3	3.6	27.3	1.9	8.8	0.0	0.2	0.1	1.2	2.4	0.0	4.7	0.2	0.2
SI	0.0	3.0	0.0	0.6	0.1	0.0	0.1	53.0	15.1	0.0	0.0	24.9	0.0	0.0
SK	0.0	1.5	0.0	0.5	0.2	0.0	0.3	2.3	261.4	0.1	0.0	6.3	0.0	0.0
TJ	0.1	0.8	0.1	0.2	0.8	6.9	1.3	0.0	0.1	0.2	0.0	6.3	40.4	2.1
TM	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.4	0.0	1.6
TR	0.1	34.7	0.2	6.2	0.9	12.6	313.4	0.5	0.9	0.4	0.1	127.2	0.0	0.0
UA	0.3	35.8	0.1	7.6	3.8	2.3	29.2	1.5	50.6	3.6	0.1	93.2	1.9	6.3
UZ	0.0	0.3	0.0	0.1	0.1	1.1	0.4	0.0	0.0	0.0	0.0	1.7	142.6	71.4
SUM	723.7	11849.0	1395.2	1760.4	2465.7	587.5	7157.3	545.8	2698.2	1797.3	7.7	5819.0	1160.5	5797.2
Emiss, 2017	2242.2	41518.1	3078.2	5050.4	7669.5	2039.4	27168.3	1919.8	9848.7	3771.3	13.7	24249.0	5727.3	20088.9

***Table 3.2**. Matrix of B(a)P country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	LI	LT	LU	LV	MC	MD	ME	MK	MT	NL	NO	PL	PT
AL	0.0	0.0	0.0	0.0	0.0	0.0	88.4	39.7	0.1	0.0	0.0	0.1	1.6
AM	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.1
AT	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	22.8	1.4
AZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BA	0.0	0.0	0.0	0.0	0.0	0.0	61.5	0.4	0.0	0.0	0.0	2.1	1.1
BE	0.0	0.0	9.5	0.0	0.0	0.0	0.1	0.0	0.0	46.8	0.0	0.7	0.8
BG	0.0	0.0	0.0	0.0	0.0	2.4	0.9	10.7	0.1	0.0	0.0	0.7	1.6
BY	0.0	97.0	0.0	41.2	0.0	3.0	0.4	0.2	0.0	0.2	2.0	211.7	2.0
CH	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CZ	0.0	0.1	0.2	0.1	0.0	0.0	0.9	0.1	0.0	0.7	0.3	601.6	2.9
DE	0.2	0.6	21.7	0.4	0.0	0.0	0.7	0.1	0.0	132.2	0.6	400.3	7.7
DK	0.0	0.4	0.1	0.3	0.0	0.0	0.0	0.0	0.0	4.4	1.3	16.1	0.7
EE	0.0	10.9	0.0	91.8	0.0	0.0	0.0	0.0	0.0	0.1	0.3	10.5	0.3
ES	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.3	0.0	271.5
FI	0.0	5.1	0.0	13.0	0.0	0.0	0.1	0.0	0.0	0.4	2.8	12.8	1.2
FR	0.0	0.0	15.3	0.0	0.0	0.0	0.2	0.0	0.0	10.2	0.1	1.8	7.1
GB	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0	10.8	0.6	1.1	5.6
GE	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.2
GR	0.0	0.0	0.0	0.0	0.0	0.3	2.8	40.6	0.7	0.1	0.1	0.2	3.5
HR	0.0	0.0	0.0	0.0	0.0	0.0	13.7	0.2	0.0	0.0	0.0	4.4	0.5
HU	0.0	0.0	0.0	0.0	0.0	0.1	2.3	0.5	0.0	0.0	0.0	35.3	2.7
IE	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.4	0.1	0.1	2.6
IS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.5
IT	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.8	0.2	0.1	0.3	0.7	7.1
KY	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.4	0.3	0.1
KZ	0.0	0.1	0.0	0.1	0.0	0.2	1.9	2.3	0.0	0.4	2.5	2.7	3.6
LI	**0.02**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LT	0.0	**1035.6**	0.0	93.7	0.0	0.1	0.1	0.0	0.0	0.2	0.4	140.1	1.0
LU	0.0	0.0	**12.1**	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.1	0.1
LV	0.0	174.3	0.0	**1101.1**	0.0	0.1	0.1	0.0	0.0	0.2	0.5	43.1	0.8
MC	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	0.0	0.0	0.0	0.0	0.0	**289.9**	0.1	0.1	0.0	0.0	0.0	1.9	0.3
ME	0.0	0.0	0.0	0.0	0.0	0.0	**483.9**	1.7	0.0	0.0	0.0	0.1	1.4
MK	0.0	0.0	0.0	0.0	0.0	0.0	1.2	**327.5**	0.1	0.0	0.0	0.1	1.0
MT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.04**	0.0	0.0	0.0	0.0
NL	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	**389.9**	0.0	2.0	0.7
NO	0.0	0.6	0.1	0.7	0.0	0.0	0.0	0.0	0.0	3.1	**371.9**	12.7	1.6
PL	0.0	28.0	0.2	3.8	0.0	0.6	1.0	0.5	0.0	3.8	1.4	**11932.8**	4.3
PT	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	**3002.5**
RO	0.0	0.0	0.0	0.0	0.0	68.0	2.3	2.0	0.1	0.1	0.3	18.8	4.6
RS	0.0	0.0	0.0	0.0	0.0	0.1	87.3	95.1	0.0	0.0	0.0	2.5	2.2
RU	0.0	44.8	0.1	67.5	0.0	1.9	11.1	7.2	0.1	3.2	24.7	177.9	31.4
SE	0.0	8.6	0.1	12.0	0.0	0.0	0.1	0.0	0.0	4.2	24.5	120.6	2.1
SI	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.8	0.2
SK	0.0	0.1	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.1	0.1	399.8	0.7
TJ	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.0	0.1	0.4	0.2	0.1
TM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TR	0.0	0.1	0.0	0.1	0.0	1.6	2.9	8.0	0.1	0.2	0.1	1.5	14.1
UA	0.0	3.3	0.0	1.1	0.0	110.1	2.0	2.2	0.2	0.3	1.4	302.7	10.7
UZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0
SUM	1.0	1410.0	60.9	1427.3	0.0	478.6	775.9	541.7	1.9	613.4	438.2	14484.9	3407.1
Emiss, 2017	3.2	3249.3	163.9	3250.8	0.1	2011.1	3545.8	1889.7	7.7	1949.0	1126.0	42935.3	10800.5

***Table 3.2**. Matrix of B(a)P country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	RO	RS	RU	SE	SI	SK	TJ	TM	TR	UA	UZ	SUM
AL	0.3	46.4	0.1	0.0	0.1	0.0	0.0	0.0	0.6	0.0	0.0	802.5
AM	0.3	0.2	0.6	0.0	0.0	0.0	0.0	0.0	29.1	0.1	0.0	469.9
AT	0.9	1.4	0.2	0.0	78.2	13.9	0.0	0.0	0.3	0.3	0.0	1149.8
AZ	0.0	0.0	13.0	0.0	0.0	0.0	0.0	0.1	2.8	0.0	0.0	118.9
BA	2.4	49.3	0.1	0.0	1.2	0.6	0.0	0.0	0.3	0.1	0.0	654.1
BE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	656.9
BG	202.6	39.5	0.4	0.0	0.3	0.1	0.0	0.0	23.6	3.5	0.0	2014.6
BY	8.0	1.2	89.6	0.7	0.3	0.8	0.0	0.0	3.7	1404.7	0.0	4182.3
CH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	311.7
CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	24.4
CZ	1.5	3.1	0.9	0.2	3.4	18.5	0.0	0.0	0.6	2.1	0.0	5130.0
DE	0.5	0.8	1.6	2.6	1.1	0.8	0.0	0.0	0.2	0.8	0.0	10332.3
DK	0.0	0.0	0.6	15.8	0.0	0.0	0.0	0.0	0.1	0.1	0.0	608.0
EE	0.1	0.1	36.6	2.2	0.0	0.0	0.0	0.0	0.2	2.2	0.0	700.0
ES	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.9	0.0	0.0	11433.2
FI	0.2	0.2	91.6	23.3	0.1	0.1	0.0	0.0	0.9	2.0	0.0	1515.1
FR	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.0	2157.6
GB	0.0	0.0	0.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2487.8
GE	0.1	0.2	25.8	0.0	0.0	0.0	0.0	0.0	34.2	0.2	0.0	609.9
GR	2.5	6.9	0.2	0.0	0.7	0.0	0.0	0.0	85.3	0.6	0.0	6333.0
HR	3.1	39.1	0.0	0.0	94.5	1.5	0.0	0.0	0.2	0.2	0.0	731.1
HU	113.4	69.7	0.6	0.1	19.6	72.4	0.0	0.0	0.9	9.1	0.0	2325.0
IE	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1635.8
IS	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9
IT	0.4	2.0	0.2	0.0	32.1	0.1	0.0	0.0	0.5	0.1	0.0	4936.1
KY	0.4	0.2	16.3	0.1	0.0	0.0	57.9	6.3	11.5	0.7	44.9	928.2
KZ	6.2	2.5	267.5	0.7	0.3	0.1	15.3	9.6	53.9	5.1	66.7	6107.2
LI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
LT	0.9	0.2	49.3	1.5	0.1	0.3	0.0	0.0	0.7	21.1	0.0	1491.2
LU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.2
LV	0.5	0.2	31.4	2.8	0.1	0.1	0.0	0.0	0.5	10.7	0.0	1481.3
MC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
MD	100.1	0.1	0.4	0.0	0.0	0.0	0.0	0.0	1.0	45.5	0.0	447.1
ME	0.3	36.4	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0	591.2
MK	0.6	55.9	0.1	0.0	0.1	0.0	0.0	0.0	0.7	0.0	0.0	632.9
MT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
NL	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	732.2
NO	0.0	0.0	4.6	38.8	0.0	0.0	0.0	0.0	0.1	0.3	0.0	498.6
PL	20.1	6.2	192.2	4.5	3.3	31.7	0.1	0.0	2.8	98.6	0.0	13724.2
PT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	3169.6
RO	**4687.6**	79.2	2.0	0.1	1.1	3.0	0.0	0.0	6.5	55.0	0.0	5168.8
RS	94.0	**1553.2**	0.4	0.0	0.7	1.0	0.0	0.0	1.6	0.5	0.0	2138.8
RU	20.4	12.5	**29889.7**	9.9	2.6	0.7	2.5	2.1	125.7	540.6	2.5	32138.6
SE	0.4	0.3	10.8	**1355.1**	0.1	0.3	0.1	0.0	0.6	3.5	0.0	1766.2
SI	0.4	0.6	0.0	0.0	**386.4**	0.4	0.0	0.0	0.1	0.1	0.0	527.9
SK	14.8	8.2	0.4	0.1	2.1	**144.2**	0.0	0.0	0.3	14.8	0.0	1062.4
TJ	0.2	0.3	10.1	0.0	0.1	0.0	**724.2**	5.0	14.7	0.6	30.6	862.7
TM	0.0	0.0	0.4	0.0	0.0	0.0	2.2	**266.8**	0.7	0.0	41.7	314.9
TR	13.4	6.6	3.9	0.2	1.6	0.1	0.0	0.0	**9439.1**	8.5	0.0	10092.5
UA	250.8	6.9	255.7	0.7	1.0	6.2	0.2	0.0	54.2	**12567.1**	0.1	13957.7
UZ	0.0	0.1	3.8	0.0	0.0	0.0	125.9	20.1	4.0	0.1	**355.3**	731.7
SUM	5547.8	2030.1	31001.4	1460.7	631.8	297.1	928.5	310.1	9906.6	14799.0	541.9	0.0
Emiss, 2017	22219.7	7873.6	86900.0	3523.4	2097.7	1150.0	3721.2	967.2	41077.3	51950.0	2482.4	

***Table 3.3**. Matrix of B(b)F country-to-country deposition from anthropogenic sources in 2018, kg/y*

Receptors ↓ Emitters →

code	AL	AM	AT	AZ	BA	BE	BG	BY	CH	CY	CZ	DE	DK
AL	**628.9**	0.1	1.3	0.0	5.4	0.1	29.0	2.5	0.3	0.0	3.9	0.2	0.1
AM	0.1	**619.0**	0.0	3.7	0.1	0.0	0.3	0.1	0.0	0.1	0.1	0.0	0.0
AT	6.0	0.3	**700.8**	0.0	16.2	4.6	11.5	14.2	20.5	0.0	347.8	25.5	1.6
AZ	0.2	120.0	0.1	**75.5**	0.1	0.0	0.8	0.8	0.0	0.1	0.4	0.0	0.1
BA	39.1	0.2	14.1	0.0	**682.2**	0.8	26.5	12.1	0.8	0.0	40.6	1.4	0.6
BE	0.2	0.0	2.2	0.0	0.2	**492.9**	0.2	2.1	2.4	0.0	12.4	16.3	1.9
BG	19.8	0.9	7.7	0.1	15.3	0.9	**1911.0**	25.0	0.8	0.1	21.0	1.1	0.5
BY	4.3	2.5	14.3	0.2	14.1	8.2	16.1	**5442.3**	2.6	0.0	97.4	8.0	13.5
CH	0.9	0.1	13.0	0.0	0.7	2.9	0.5	1.0	**171.5**	0.0	14.8	12.3	0.3
CY	0.2	0.1	0.1	0.0	0.1	0.0	0.6	0.3	0.0	**54.6**	0.2	0.0	0.0
CZ	3.8	0.3	129.8	0.0	18.5	10.2	15.9	32.4	8.0	0.0	**3205.2**	35.7	4.4
DE	3.8	0.6	162.4	0.1	7.9	285.3	8.4	81.1	86.6	0.0	1012.4	**688.8**	59.9
DK	0.3	0.1	3.5	0.0	0.5	14.5	1.0	9.6	1.2	0.0	30.3	14.4	**505.7**
EE	0.4	0.4	3.1	0.0	1.6	2.5	2.0	87.9	0.6	0.0	21.2	2.4	5.8
ES	1.3	0.4	2.5	0.0	2.7	9.9	1.9	2.9	1.7	0.0	11.4	3.5	2.1
FI	1.4	2.3	6.9	0.2	4.3	7.9	6.4	137.2	1.5	0.0	48.4	5.8	15.4
FR	4.7	0.7	24.8	0.1	6.6	263.2	4.9	15.6	86.8	0.0	108.9	72.5	11.0
GB	0.7	0.4	7.6	0.0	1.1	73.7	1.1	19.6	3.8	0.0	38.8	17.7	29.5
GE	0.5	142.6	0.4	2.6	0.5	0.1	3.5	1.5	0.1	0.2	1.2	0.1	0.1
GR	79.3	1.1	4.5	0.1	9.7	0.6	104.2	11.7	1.0	0.2	12.7	0.7	0.3
HR	23.6	0.3	41.6	0.0	182.9	1.1	20.6	14.5	1.4	0.0	70.1	2.3	0.9
HU	12.9	0.4	72.3	0.0	47.1	2.1	53.8	29.3	2.2	0.0	138.2	4.5	1.4
IE	0.1	0.1	1.7	0.0	0.2	9.6	0.3	4.4	0.8	0.0	8.6	3.1	6.2
IS	0.3	0.2	1.1	0.0	0.4	3.8	0.6	1.6	0.4	0.0	5.4	1.4	3.6
IT	55.6	0.7	80.7	0.1	65.9	4.3	33.0	21.0	29.9	0.0	81.3	10.7	1.5
KY	0.2	5.0	0.1	0.5	0.1	0.1	0.6	0.2	0.1	0.0	0.3	0.1	0.0
KZ	5.6	82.8	5.5	11.9	6.0	2.8	25.8	82.4	1.6	0.5	23.2	2.7	5.5
LI	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.1	0.1	0.0
LT	0.8	0.5	7.3	0.0	3.7	4.6	3.8	486.7	1.3	0.0	48.7	4.9	12.6
LU	0.0	0.0	0.3	0.0	0.0	11.8	0.0	0.2	0.4	0.0	2.0	2.4	0.1
LV	0.7	0.5	5.9	0.0	3.0	4.4	3.0	313.1	1.1	0.0	40.6	4.5	11.3
MC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	0.9	0.4	1.0	0.0	1.1	0.4	7.4	16.0	0.1	0.0	5.0	0.4	0.3
ME	67.3	0.0	1.1	0.0	20.0	0.1	16.8	1.8	0.2	0.0	3.5	0.2	0.1
MK	70.4	0.1	1.0	0.0	3.0	0.1	64.7	2.0	0.2	0.0	3.3	0.2	0.1
MT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NL	0.2	0.0	1.9	0.0	0.3	195.5	0.3	4.3	1.6	0.0	11.8	25.2	4.2
NO	1.7	1.4	12.5	0.1	3.2	26.0	6.6	46.9	4.0	0.0	96.1	18.1	92.0
PL	9.9	1.2	80.9	0.1	35.7	40.7	39.9	571.6	11.5	0.0	1239.1	62.4	51.6
PT	0.0	0.0	0.2	0.0	0.1	0.7	0.1	0.3	0.2	0.0	1.1	0.3	0.3
RO	25.8	2.0	31.0	0.2	41.1	4.0	199.7	86.7	2.6	0.1	86.8	4.8	2.6
RS	68.2	0.4	15.0	0.0	91.6	1.2	452.5	17.6	1.2	0.0	44.6	1.8	0.8
RU	38.6	182.2	59.1	24.5	60.4	35.7	219.7	1715.1	13.1	1.7	283.9	32.0	63.8
SE	2.6	2.0	20.3	0.2	6.7	34.6	12.4	180.7	4.7	0.0	178.8	27.3	236.5
SI	3.9	0.1	66.4	0.0	10.3	0.4	3.9	4.4	0.7	0.0	29.6	1.3	0.3
SK	5.0	0.2	35.3	0.0	20.5	2.7	18.8	32.0	2.0	0.0	269.6	4.5	1.9
TJ	0.1	2.6	0.1	0.3	0.1	0.0	0.2	0.1	0.0	0.0	0.1	0.0	0.0
TM	0.4	23.1	0.4	4.9	0.4	0.2	2.0	3.1	0.1	0.1	1.5	0.2	0.3
TR	18.5	238.1	8.3	2.2	11.5	1.9	109.5	33.9	1.6	14.8	22.3	1.7	2.2
UA	22.6	15.3	34.7	1.5	34.0	10.6	115.7	792.5	5.1	0.5	174.0	11.2	14.1
UZ	0.5	16.9	0.6	2.2	0.5	0.3	2.6	6.4	0.2	0.1	2.3	0.2	0.6
SUM	1232.3	1468.6	1685.9	131.7	1437.8	1578.0	3559.9	10369.1	479.2	73.5	7901.1	1135.1	1167.5
Emiss, 2017	2825.0	3336.2	2580.5	420.1	2416.1	2753.1	5909.5	13457.2	858.2	280.0	11291.0	1908.7	2460.1

***Table 3.3**. Matrix of B(b)F country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	EE	ES	FI	FR	GB	GE	GR	HR	HU	IE	IS	IT	KY	KZ
AL	0.1	13.4	0.0	1.6	0.3	0.1	954.4	2.5	12.6	0.1	0.0	46.7	0.0	0.2
AM	0.0	0.5	0.0	0.1	0.0	49.2	1.9	0.0	0.2	0.0	0.0	0.9	0.0	0.5
AT	1.3	14.4	0.4	15.9	5.0	0.2	33.9	43.3	244.4	1.8	0.0	276.5	0.1	0.4
AZ	0.1	0.7	0.1	0.1	0.1	48.2	5.2	0.1	0.7	0.0	0.0	1.4	0.6	8.0
BA	0.7	18.9	0.2	3.7	1.3	0.2	134.1	119.9	186.8	0.5	0.0	120.2	0.0	0.4
BE	0.5	13.2	0.4	74.0	28.1	0.0	0.7	0.3	2.2	4.3	0.0	7.0	0.0	0.0
BG	1.4	15.7	0.6	2.9	1.5	1.4	2063.6	9.2	67.8	0.6	0.0	45.2	0.3	3.2
BY	38.9	10.2	10.3	10.3	14.9	2.4	87.5	12.6	107.4	5.3	0.0	73.5	1.2	11.4
CH	0.2	19.1	0.1	43.2	1.9	0.0	3.2	1.3	2.5	0.7	0.0	272.3	0.0	0.0
CY	0.0	0.9	0.0	0.1	0.0	0.1	11.2	0.1	0.3	0.0	0.0	2.4	0.0	0.1
CZ	2.6	10.8	1.0	18.5	9.5	0.3	31.3	26.0	269.0	2.9	0.0	61.1	0.1	0.5
DE	11.5	77.8	6.5	243.8	157.2	0.5	30.9	11.3	96.4	40.8	0.0	196.2	0.2	1.2
DK	2.8	5.9	1.8	9.5	33.0	0.1	2.6	0.6	7.2	9.3	0.0	4.6	0.0	0.3
EE	**618.4**	2.0	42.5	2.5	4.5	0.3	7.9	1.8	13.6	1.4	0.0	7.6	0.2	1.5
ES	0.7	**16043.1**	0.8	77.7	22.7	0.2	10.9	3.4	10.2	13.5	0.0	62.8	0.0	0.3
FI	167.1	8.0	**1727.5**	8.5	17.3	1.6	26.8	4.1	34.5	6.8	0.0	21.9	1.2	6.5
FR	3.4	992.2	3.0	**2443.9**	139.0	0.4	26.1	11.3	26.1	30.0	0.0	586.5	0.1	0.7
GB	5.4	78.2	4.4	93.2	**2199.2**	0.3	3.4	1.5	11.7	480.5	0.1	21.9	0.1	0.7
GE	0.1	1.7	0.1	0.3	0.2	**594.2**	17.5	0.4	2.1	0.1	0.0	4.1	0.1	1.5
GR	0.8	29.8	0.4	4.6	0.9	1.5	**19862.5**	6.2	34.8	0.4	0.0	101.2	0.1	2.1
HR	1.0	19.7	0.3	5.0	1.7	0.2	98.0	**474.3**	358.7	0.7	0.0	201.5	0.1	0.4
HU	1.7	11.2	0.5	5.9	2.7	0.3	169.3	87.2	**2366.6**	0.9	0.0	96.1	0.1	0.8
IE	1.4	23.2	1.1	11.9	112.9	0.1	0.8	0.3	2.5	**2297.6**	0.0	5.1	0.0	0.2
IS	0.6	4.9	0.7	3.2	15.0	0.1	1.7	0.4	2.2	14.0	**12.1**	4.7	0.0	0.2
IT	1.4	236.6	0.5	60.3	4.7	0.5	303.4	96.1	145.3	2.0	0.0	**7693.8**	0.1	0.8
KY	0.0	2.9	0.0	0.4	0.1	1.8	3.2	0.1	0.3	0.1	0.0	3.6	**1223.8**	170.8
KZ	14.4	27.4	9.0	6.2	6.3	40.6	150.0	4.5	29.2	2.9	0.0	62.0	770.8	**10567.5**
LI	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
LT	23.5	4.3	6.5	4.8	9.0	0.4	23.9	4.5	39.3	3.4	0.0	16.7	0.2	1.7
LU	0.0	1.5	0.0	7.7	1.1	0.0	0.1	0.0	0.3	0.2	0.0	1.0	0.0	0.0
LV	108.4	3.4	15.0	4.2	7.6	0.5	14.0	3.5	28.7	2.7	0.0	12.6	0.3	2.2
MC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
MD	0.7	1.6	0.2	0.7	0.6	0.4	53.8	0.8	8.8	0.2	0.0	7.4	0.1	1.3
ME	0.1	7.1	0.0	0.8	0.2	0.0	69.5	3.2	14.8	0.1	0.0	29.8	0.0	0.1
MK	0.1	5.3	0.0	0.7	0.2	0.1	1214.5	1.5	12.1	0.1	0.0	15.3	0.0	0.2
MT	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0
NL	0.8	9.7	0.6	35.0	49.9	0.0	0.9	0.4	2.5	9.2	0.0	5.3	0.0	0.1
NO	17.6	22.5	22.8	24.0	79.6	1.0	14.9	3.2	32.1	27.9	0.1	19.8	0.5	3.1
PL	24.2	28.6	9.2	40.7	57.5	1.0	131.6	42.3	479.4	17.9	0.0	130.9	0.6	4.4
PT	0.1	473.6	0.1	2.5	2.7	0.0	0.5	0.1	0.5	1.6	0.0	3.2	0.0	0.0
RO	3.7	26.3	1.6	10.0	6.2	2.4	682.6	33.3	493.5	2.0	0.0	142.9	0.7	6.7
RS	1.0	17.8	0.3	4.4	1.9	0.4	577.4	41.0	280.2	0.7	0.0	80.1	0.1	0.9
RU	557.6	109.7	332.0	52.2	75.2	176.8	1054.4	50.0	344.6	29.1	0.8	418.9	177.4	4277.9
SE	76.6	21.7	135.4	27.9	88.1	1.4	30.2	7.7	82.2	29.3	0.1	36.6	1.1	6.1
SI	0.3	5.4	0.1	1.9	0.6	0.1	16.5	94.2	80.2	0.2	0.0	113.9	0.0	0.1
SK	1.5	5.4	0.5	5.0	3.2	0.2	47.6	21.9	563.6	1.0	0.0	50.8	0.1	0.6
TJ	0.0	1.1	0.0	0.1	0.0	1.0	1.1	0.0	0.1	0.0	0.0	1.5	65.6	12.6
TM	0.6	1.8	0.3	0.4	0.4	8.6	10.8	0.3	2.0	0.2	0.0	4.0	10.6	94.0
TR	3.3	54.7	1.9	8.9	3.5	45.5	1676.5	8.8	47.9	1.4	0.0	126.7	1.1	12.7
UA	22.2	34.5	7.8	17.5	17.8	22.1	644.8	27.3	356.1	5.0	0.0	192.4	4.9	55.2
UZ	1.0	3.1	0.6	0.7	0.8	6.9	12.7	0.4	2.9	0.4	0.0	6.5	278.7	367.3
SUM	1719.8	18521.8	2347.2	3397.7	3186.1	1014.0	30320.4	1263.4	6907.2	3049.6	13.3	11398.8	2541.4	15627.5
Emiss, 2017	2618.2	45109.5	3344.4	6118.1	6921.1	1964.2	70335.0	2130.8	10115.6	5749.0	42.3	26346.6	8175.2	27104.7

***Table 3.3**. Matrix of B(b)F country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	LI	LT	LU	LV	MC	MD	ME	MK	MT	NL	NO	PL	PT	RO
AL	0.0	0.3	0.0	0.1	0.0	1.7	180.8	84.4	0.1	0.1	0.1	12.7	0.5	25.0
AM	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.6	0.0	1.2
AT	0.2	4.1	0.9	1.8	0.0	2.6	11.9	3.9	0.0	2.8	0.5	294.8	0.9	57.3
AZ	0.0	0.1	0.0	0.1	0.0	0.4	0.2	0.2	0.0	0.0	0.0	2.1	0.0	3.1
BA	0.0	2.2	0.1	1.0	0.0	3.9	191.2	10.9	0.1	0.6	0.2	122.9	0.8	103.3
BE	0.0	0.9	16.8	0.6	0.0	0.1	0.3	0.1	0.0	64.8	0.5	29.1	1.5	1.0
BG	0.0	3.1	0.1	1.8	0.0	47.0	24.9	46.4	0.0	0.6	0.3	61.4	0.6	794.7
BY	0.0	224.3	0.8	97.9	0.0	56.8	10.5	4.0	0.0	6.3	3.8	1181.9	1.5	256.1
CH	0.6	0.4	0.7	0.2	0.0	0.1	1.2	0.3	0.0	1.2	0.1	18.9	1.2	1.7
CY	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.0	0.0	0.0	0.8	0.0	1.2
CZ	0.0	8.3	2.0	3.8	0.0	2.8	10.4	4.5	0.0	6.4	1.0	1384.3	1.1	68.7
DE	0.4	28.3	49.3	17.0	0.0	3.3	7.5	2.9	0.0	231.8	6.1	1622.8	9.1	43.4
DK	0.0	6.4	0.8	4.7	0.0	0.6	0.6	0.4	0.0	17.3	8.1	125.2	1.0	6.2
EE	0.0	44.2	0.2	156.6	0.0	2.8	1.1	0.5	0.0	2.4	2.5	150.3	0.2	18.6
ES	0.0	1.5	0.9	1.0	0.0	0.3	3.0	0.8	0.0	5.3	1.0	34.8	703.9	7.9
FI	0.0	49.1	0.6	74.7	0.0	9.2	3.4	1.5	0.0	6.9	23.2	331.6	0.9	68.4
FR	0.1	6.7	44.2	4.5	0.0	1.3	7.0	2.1	0.1	70.4	3.1	223.6	71.5	20.5
GB	0.0	8.6	3.1	7.4	0.0	0.5	1.1	0.4	0.0	53.7	10.6	155.3	17.6	6.6
GE	0.0	0.2	0.0	0.1	0.0	1.9	0.7	0.7	0.0	0.1	0.1	5.5	0.1	12.2
GR	0.0	1.5	0.1	1.0	0.0	13.5	31.0	122.2	0.2	0.3	0.3	38.0	1.3	126.1
HR	0.0	3.2	0.2	1.5	0.0	4.5	64.6	7.9	0.1	0.8	0.3	170.8	0.8	104.9
HU	0.0	4.9	0.3	2.2	0.0	12.1	32.3	15.8	0.0	1.5	0.5	431.8	0.5	456.3
IE	0.0	2.2	0.5	2.0	0.0	0.1	0.2	0.1	0.0	7.6	1.7	34.7	7.6	1.4
IS	0.0	0.8	0.2	0.7	0.0	0.2	0.4	0.2	0.0	3.3	4.6	18.7	1.0	2.1
IT	0.1	4.1	0.7	2.0	0.0	5.7	105.1	19.6	1.2	2.3	0.7	195.1	9.6	91.1
KY	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.1	0.9	0.3	1.2
KZ	0.0	13.3	0.2	10.1	0.0	13.8	9.6	6.4	0.0	2.5	4.5	151.4	2.4	102.6
LI	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
LT	0.0	**1143.5**	0.4	148.5	0.0	8.1	1.9	1.0	0.0	4.1	2.4	653.4	0.7	46.8
LU	0.0	0.1	**15.2**	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	3.6	0.2	0.1
LV	0.0	309.2	0.3	**1098.1**	0.0	6.2	1.7	0.8	0.0	4.1	2.9	376.6	0.4	38.1
MC	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	0.0	1.6	0.0	0.9	0.0	**328.5**	1.5	1.2	0.0	0.3	0.1	35.7	0.1	222.0
ME	0.0	0.2	0.0	0.1	0.0	0.9	**707.8**	10.1	0.0	0.1	0.0	12.3	0.3	18.7
MK	0.0	0.2	0.0	0.1	0.0	1.7	14.0	**393.9**	0.0	0.1	0.0	11.2	0.2	30.0
MT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.1**	0.0	0.0	0.0	0.0	0.0
NL	0.0	1.6	3.5	1.1	0.0	0.1	0.3	0.1	0.0	**346.1**	0.9	44.0	1.1	1.2
NO	0.0	20.9	1.8	18.9	0.0	4.5	3.0	2.0	0.0	25.5	**1076.5**	406.9	4.2	37.4
PL	0.1	127.0	3.8	42.9	0.0	25.8	25.4	11.8	0.0	31.9	8.4	**17326.3**	4.0	304.2
PT	0.0	0.2	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.4	0.2	3.5	**2803.4**	0.3
RO	0.0	9.4	0.5	4.9	0.0	218.1	49.0	35.0	0.1	2.8	1.2	326.6	1.4	**6554.4**
RS	0.0	2.4	0.2	1.3	0.0	13.9	248.7	168.1	0.1	0.8	0.3	128.4	0.7	493.9
RU	0.1	274.3	2.9	327.0	0.0	150.7	66.9	47.8	0.1	32.2	63.6	2169.4	9.8	1135.1
SE	0.0	98.1	2.0	92.9	0.0	12.5	5.1	3.4	0.0	35.6	156.2	1267.8	3.5	99.6
SI	0.0	1.1	0.1	0.5	0.0	1.3	6.6	1.4	0.0	0.3	0.1	60.5	0.2	22.3
SK	0.0	5.2	0.4	2.2	0.0	5.8	14.0	5.6	0.0	1.9	0.6	1024.7	0.4	143.9
TJ	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.3	0.1	0.4
TM	0.0	0.6	0.0	0.5	0.0	1.0	0.6	0.5	0.0	0.1	0.2	8.3	0.1	7.5
TR	0.0	4.5	0.2	3.0	0.0	48.2	18.9	22.1	0.3	1.3	1.1	107.6	2.5	330.9
UA	0.0	54.2	1.0	28.4	0.0	368.6	40.5	24.2	0.1	8.1	4.8	1615.7	2.9	1319.3
UZ	0.0	1.2	0.0	0.9	0.0	1.5	0.8	0.7	0.0	0.2	0.3	14.0	0.2	9.8
SUM	1.9	2474.0	155.2	2165.4	0.0	1383.2	1906.3	1066.5	2.8	986.0	1393.9	32397.0	3672.5	13198.5
Emiss, 2017	3.3	3366.2	246.6	3051.1	0.1	2143.1	4438.5	2068.5	28.0	1882.5	2986.7	46704.0	8640.4	20552.0

***Table 3.3**. Matrix of B(b)F country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	RS	RU	SE	SI	SK	TJ	TM	TR	UA	UZ	SUM
AL	118.3	6.7	0.1	0.7	1.1	0.0	0.0	21.5	43.7	0.0	2202.0
AM	0.3	5.9	0.0	0.0	0.0	0.0	0.2	108.7	3.0	0.1	797.7
AT	56.6	12.4	1.2	97.6	33.2	0.0	0.1	4.4	73.2	0.0	2446.9
AZ	0.8	58.6	0.1	0.1	0.1	0.2	4.1	66.6	16.8	0.9	418.2
BA	276.3	11.6	0.5	8.6	12.5	0.0	0.0	11.1	85.4	0.0	2248.5
BE	0.7	2.1	0.9	0.3	0.4	0.0	0.0	0.2	4.6	0.0	786.6
BG	215.0	126.8	0.8	3.3	5.0	0.1	0.2	274.1	669.5	0.3	6493.6
BY	54.5	721.1	13.3	7.3	14.5	0.4	0.6	57.5	5503.9	0.6	14227.0
CH	1.5	1.2	0.2	1.2	0.4	0.0	0.0	0.7	3.2	0.0	597.7
CY	0.6	1.8	0.0	0.0	0.0	0.0	0.0	52.6	4.7	0.0	134.1
CZ	77.2	26.8	3.2	16.8	47.4	0.0	0.1	4.3	117.5	0.0	5684.2
DE	31.2	78.1	20.6	11.3	15.2	0.0	0.1	6.3	160.7	0.1	5616.6
DK	2.6	14.3	28.2	0.5	1.0	0.0	0.0	1.2	23.1	0.0	901.1
EE	5.7	159.2	15.5	1.1	1.8	0.1	0.1	6.1	132.0	0.1	1533.1
ES	5.6	4.4	1.6	1.9	0.9	0.0	0.0	2.2	13.2	0.0	17077.0
FI	17.3	568.0	100.9	2.5	4.8	0.3	0.6	24.6	315.7	0.6	3874.8
FR	13.0	18.1	6.2	9.0	3.6	0.0	0.1	6.0	46.5	0.1	5420.6
GB	3.4	24.0	16.0	1.3	1.8	0.0	0.1	3.2	40.2	0.1	3449.5
GE	2.8	87.4	0.1	0.2	0.2	0.0	0.3	236.5	44.1	0.1	1169.3
GR	96.5	75.5	0.5	2.3	2.8	0.1	0.1	516.3	370.5	0.1	21671.7
HR	207.4	13.3	0.8	95.4	18.6	0.0	0.0	8.6	104.9	0.0	2329.5
HU	296.4	28.1	1.2	30.6	143.9	0.0	0.1	14.2	284.8	0.1	4864.9
IE	0.6	5.9	3.2	0.3	0.4	0.0	0.0	1.0	9.0	0.0	2570.9
IS	1.3	4.8	2.4	0.2	0.3	0.0	0.0	1.6	7.9	0.0	129.4
IT	104.1	21.6	1.4	86.9	13.2	0.0	0.1	27.6	146.1	0.1	9768.7
KY	0.6	7.4	0.0	0.1	0.0	90.8	3.6	13.3	4.1	187.2	1724.7
KZ	30.8	2913.7	7.1	2.5	3.5	91.6	71.5	328.9	1005.2	367.6	17086.3
LI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
LT	13.5	183.0	12.6	2.8	5.5	0.1	0.1	11.8	385.5	0.1	3339.0
LU	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.6	0.0	51.1
LV	10.7	185.3	18.6	2.2	3.9	0.1	0.1	9.9	313.2	0.1	2973.1
MC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
MD	6.2	42.3	0.3	0.4	1.2	0.0	0.1	40.8	454.4	0.1	1247.5
ME	98.4	2.5	0.1	0.5	1.2	0.0	0.0	5.3	18.5	0.0	1113.6
MK	129.5	6.6	0.1	0.5	1.1	0.0	0.0	18.4	38.5	0.0	2041.3
MT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
NL	0.9	4.1	1.7	0.3	0.4	0.0	0.0	0.3	7.4	0.0	774.7
NO	14.2	93.1	120.1	2.2	4.3	0.2	0.3	13.3	150.9	0.3	2578.4
PL	155.1	493.8	32.3	25.7	99.5	0.2	0.3	22.0	1317.4	0.3	23170.9
PT	0.2	0.6	0.2	0.1	0.1	0.0	0.0	0.2	1.0	0.0	3299.0
RO	389.5	199.1	2.6	13.4	32.0	0.2	0.5	222.3	1498.6	0.5	11461.5
RS	**2237.9**	31.5	0.7	6.6	17.3	0.0	0.1	37.8	212.9	0.1	5304.9
RU	281.1	**59533.5**	128.3	28.9	39.6	44.8	58.6	1743.5	10528.0	88.5	87141.0
SE	31.4	265.2	**1683.1**	5.3	11.4	0.3	0.5	24.1	442.6	0.5	5492.2
SI	24.7	3.5	0.3	**250.1**	5.2	0.0	0.0	1.8	31.5	0.0	846.7
SK	102.5	22.4	1.5	10.7	**199.2**	0.0	0.0	5.1	247.7	0.0	2887.8
TJ	0.2	5.8	0.0	0.0	0.0	**732.7**	4.6	5.6	1.3	98.6	936.9
TM	2.1	74.4	0.3	0.2	0.2	29.8	**750.4**	53.5	46.0	193.5	1340.8
TR	76.0	413.2	2.5	4.1	3.5	0.4	1.1	**17893.5**	1196.2	0.8	22591.0
UA	168.1	1959.2	12.2	14.3	45.8	1.4	3.0	721.5	**30570.9**	2.8	39606.5
UZ	2.8	106.5	0.6	0.2	0.3	194.9	87.9	48.3	78.4	**1046.6**	2311.1
SUM	5366.1	68624.5	2244.1	750.5	798.3	1189.1	990.1	22678.1	56775.0	1991.0	
Emiss, 2017	8698.6	94416.9	3583.4	1243.2	1206.8	3056.7	2141.6	51621.9	83562.0	4856.9	

***Table 3.4**. Matrix of B(k)F country-to-country deposition from anthropogenic sources in 2018, kg/y*

Receptors ↓ Emitters →

code	AL	AM	AT	AZ	BA	BE	BG	BY	CH	CY	CZ	DE	DK
AL	**234.9**	0.0	0.2	0.0	1.0	0.0	6.4	0.2	0.1	0.0	1.0	0.0	0.0
AM	0.0	**232.8**	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AT	0.6	0.0	**304.2**	0.0	3.0	1.1	1.8	2.7	10.0	0.0	198.5	10.8	0.3
AZ	0.0	36.2	0.0	**46.9**	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0
BA	8.6	0.0	3.4	0.0	**274.6**	0.2	5.3	2.1	0.2	0.0	16.3	0.3	0.1
BE	0.0	0.0	0.6	0.0	0.0	**267.0**	0.0	0.4	1.1	0.0	5.8	8.8	0.5
BG	3.2	0.1	1.8	0.0	3.2	0.2	**842.5**	3.4	0.2	0.0	7.9	0.3	0.1
BY	0.4	0.3	3.1	0.1	2.5	1.9	2.1	**1661.0**	0.7	0.0	38.5	2.4	3.4
CH	0.1	0.0	4.6	0.0	0.0	0.6	0.0	0.1	**120.2**	0.0	7.4	5.7	0.1
CY	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	**25.1**	0.0	0.0	0.0
CZ	0.4	0.0	49.8	0.0	4.0	3.2	2.8	6.9	3.7	0.0	**2369.9**	18.3	1.0
DE	0.3	0.0	57.3	0.0	1.0	108.5	1.1	16.8	50.0	0.0	598.2	**492.7**	20.2
DK	0.0	0.0	0.9	0.0	0.1	4.4	0.1	2.0	0.5	0.0	15.0	7.5	**242.8**
EE	0.0	0.0	0.7	0.0	0.2	0.6	0.2	19.1	0.2	0.0	8.5	0.7	1.3
ES	0.0	0.0	0.2	0.0	0.1	1.5	0.1	0.2	0.2	0.0	1.9	0.6	0.3
FI	0.1	0.3	1.4	0.1	0.6	2.0	0.7	28.3	0.4	0.0	18.8	1.7	3.5
FR	0.3	0.0	6.0	0.0	0.5	102.1	0.3	2.2	47.9	0.0	50.2	31.5	2.6
GB	0.1	0.0	1.8	0.0	0.1	27.6	0.2	3.5	1.3	0.0	16.9	8.3	9.6
GE	0.0	43.9	0.0	0.8	0.1	0.0	0.5	0.2	0.0	0.0	0.3	0.0	0.0
GR	20.4	0.1	0.7	0.0	1.4	0.1	24.6	1.2	0.3	0.0	3.1	0.1	0.0
HR	4.0	0.0	13.2	0.0	65.6	0.2	4.1	2.8	0.4	0.0	32.4	0.6	0.2
HU	1.4	0.0	25.7	0.0	12.4	0.5	10.3	5.4	0.7	0.0	64.6	1.3	0.3
IE	0.0	0.0	0.3	0.0	0.0	2.7	0.0	0.6	0.3	0.0	2.9	1.2	1.8
IS	0.0	0.0	0.2	0.0	0.0	1.0	0.1	0.2	0.1	0.0	1.8	0.5	1.0
IT	8.3	0.1	22.6	0.0	11.8	0.6	5.2	2.9	13.2	0.0	28.1	2.5	0.2
KY	0.0	0.7	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
KZ	0.3	7.6	0.6	3.0	0.5	0.4	2.9	10.1	0.3	0.0	4.6	0.4	1.0
LI	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
LT	0.1	0.0	1.8	0.0	0.7	1.1	0.4	126.1	0.5	0.0	21.1	1.6	3.4
LU	0.0	0.0	0.1	0.0	0.0	5.7	0.0	0.0	0.2	0.0	0.9	1.4	0.0
LV	0.0	0.1	1.4	0.0	0.5	1.0	0.3	74.1	0.4	0.0	17.1	1.4	2.9
MC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	0.1	0.0	0.2	0.0	0.2	0.1	1.7	2.6	0.0	0.0	1.9	0.1	0.1
ME	22.3	0.0	0.2	0.0	6.5	0.0	3.8	0.3	0.1	0.0	1.1	0.0	0.0
MK	21.9	0.0	0.2	0.0	0.5	0.0	17.3	0.2	0.1	0.0	1.0	0.0	0.0
MT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NL	0.0	0.0	0.5	0.0	0.0	94.0	0.0	0.9	0.7	0.0	5.2	16.5	1.3
NO	0.1	0.2	3.0	0.0	0.4	7.8	0.8	9.5	1.4	0.0	44.0	7.2	29.7
PL	0.9	0.1	23.7	0.0	7.4	11.7	5.9	133.8	4.5	0.0	737.4	26.8	14.2
PT	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
RO	3.5	0.2	8.0	0.0	9.4	1.0	54.7	13.9	0.8	0.0	36.2	1.5	0.6
RS	17.6	0.0	3.7	0.0	28.6	0.3	148.5	2.7	0.3	0.0	17.9	0.5	0.1
RU	2.8	21.3	9.6	7.0	7.5	7.3	32.2	332.5	2.9	0.1	87.1	7.3	13.3
SE	0.2	0.2	4.9	0.0	1.0	9.5	1.5	37.1	1.7	0.0	82.1	10.3	80.6
SI	0.4	0.0	28.3	0.0	2.1	0.1	0.7	0.9	0.3	0.0	14.4	0.3	0.1
SK	0.5	0.0	11.9	0.0	4.7	0.8	3.2	6.7	0.7	0.0	159.9	1.6	0.5
TJ	0.0	0.6	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
TM	0.0	2.3	0.0	1.4	0.0	0.0	0.1	0.2	0.0	0.0	0.2	0.0	0.0
TR	1.9	55.9	1.5	0.5	1.6	0.3	25.3	4.7	0.3	1.8	6.7	0.4	0.5
UA	2.4	1.9	7.9	0.4	6.1	2.5	21.7	175.8	1.4	0.0	71.9	3.4	3.5
UZ	0.0	1.7	0.1	0.6	0.0	0.0	0.3	0.7	0.0	0.0	0.5	0.0	0.1
SUM	358.4	406.9	606.3	62.6	460.6	669.9	1230.5	2695.2	268.8	27.0	4799.9	676.9	441.2
Emiss, 2017	943.6	1138.0	1035.2	353.5	869.2	1233.9	2360.5	3768.8	561.4	119.1	7443.3	1243.4	988.2

***Table 3.4**. Matrix of B(k)F country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	EE	ES	FI	FR	GB	GE	GR	HR	HU	IE	IS	IT	KY	KZ
AL	0.0	0.7	0.0	0.3	0.0	0.0	299.6	0.4	2.4	0.0	0.0	8.0	0.0	0.0
AM	0.0	0.1	0.0	0.0	0.0	15.1	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0
AT	0.4	0.8	0.1	5.2	1.2	0.0	2.0	12.0	83.0	0.3	0.0	67.9	0.0	0.0
AZ	0.0	0.0	0.0	0.0	0.0	15.2	0.3	0.0	0.1	0.0	0.0	0.1	0.1	1.0
BA	0.2	0.9	0.0	0.8	0.2	0.0	13.3	41.2	53.7	0.1	0.0	21.5	0.0	0.0
BE	0.1	1.5	0.1	44.2	9.2	0.0	0.0	0.0	0.5	1.0	0.0	0.9	0.0	0.0
BG	0.3	0.8	0.1	0.6	0.3	0.2	667.9	2.0	16.5	0.1	0.0	6.3	0.0	0.3
BY	13.0	0.6	2.7	2.9	3.4	0.3	5.9	2.4	25.5	1.1	0.0	9.9	0.2	1.6
CH	0.0	1.5	0.0	21.8	0.4	0.0	0.1	0.1	0.4	0.1	0.0	77.0	0.0	0.0
CY	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.1	0.0	0.0
CZ	0.8	0.8	0.2	7.4	2.5	0.0	1.9	6.5	85.1	0.6	0.0	10.8	0.0	0.1
DE	3.5	7.5	1.7	118.5	47.8	0.0	1.3	1.9	23.7	9.7	0.0	38.0	0.0	0.1
DK	1.0	0.5	0.6	3.5	9.6	0.0	0.1	0.1	1.7	2.0	0.0	0.5	0.0	0.0
EE	**373.5**	0.1	16.0	0.8	0.9	0.0	0.3	0.3	3.1	0.2	0.0	0.9	0.0	0.2
ES	0.1	**6024.5**	0.1	25.1	3.3	0.0	0.2	0.2	0.8	2.1	0.0	4.2	0.0	0.0
FI	73.8	0.4	**728.8**	2.5	3.8	0.3	1.5	0.7	7.1	1.3	0.0	2.0	0.2	0.9
FR	0.9	176.4	0.7	**1550.7**	36.4	0.0	0.9	1.4	4.4	5.6	0.0	124.3	0.0	0.0
GB	1.9	7.3	1.3	40.1	**1048.5**	0.0	0.2	0.2	2.5	153.8	0.0	2.8	0.0	0.1
GE	0.0	0.1	0.0	0.1	0.0	**245.7**	1.6	0.0	0.3	0.0	0.0	0.5	0.0	0.1
GR	0.2	2.2	0.1	0.8	0.1	0.1	**8739.4**	0.8	6.3	0.1	0.0	14.4	0.0	0.2
HR	0.3	1.1	0.1	1.3	0.3	0.0	7.9	**199.4**	126.0	0.1	0.0	42.4	0.0	0.0
HU	0.4	0.6	0.1	1.6	0.6	0.0	16.4	31.3	**1044.0**	0.2	0.0	15.5	0.0	0.1
IE	0.5	1.5	0.3	3.8	38.5	0.0	0.1	0.0	0.5	**995.6**	0.0	0.6	0.0	0.0
IS	0.2	0.3	0.2	0.9	4.1	0.0	0.1	0.0	0.4	4.2	**7.6**	0.5	0.0	0.0
IT	0.3	18.3	0.1	17.4	0.7	0.0	24.2	20.8	32.1	0.3	0.0	**2991.6**	0.0	0.0
KY	0.0	0.5	0.0	0.1	0.1	0.3	0.4	0.0	0.1	0.0	0.0	1.3	**485.5**	45.1
KZ	3.0	2.2	1.7	1.1	1.1	4.5	7.9	0.5	3.5	0.6	0.0	8.5	237.0	**3863.9**
LI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
LT	8.7	0.3	1.9	1.5	2.1	0.1	1.1	0.9	10.2	0.7	0.0	2.2	0.0	0.2
LU	0.0	0.2	0.0	4.6	0.3	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0
LV	49.7	0.2	4.7	1.3	1.6	0.1	0.6	0.7	7.0	0.5	0.0	1.6	0.0	0.3
MC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	0.2	0.1	0.0	0.2	0.1	0.0	6.4	0.1	1.9	0.0	0.0	1.0	0.0	0.1
ME	0.0	0.4	0.0	0.2	0.0	0.0	9.0	0.7	3.5	0.0	0.0	5.8	0.0	0.0
MK	0.0	0.3	0.0	0.1	0.0	0.0	413.7	0.3	2.6	0.0	0.0	2.4	0.0	0.0
MT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
NL	0.3	1.0	0.2	17.7	17.0	0.0	0.0	0.0	0.6	2.3	0.0	0.5	0.0	0.0
NO	6.8	1.6	7.2	8.2	21.5	0.1	0.9	0.5	7.1	6.1	0.0	2.1	0.1	0.5
PL	7.2	2.2	2.1	14.3	15.1	0.1	7.8	10.0	141.9	3.9	0.0	20.3	0.1	0.6
PT	0.0	128.5	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0
RO	0.8	1.5	0.3	2.9	1.3	0.2	79.4	7.9	154.9	0.4	0.0	23.7	0.1	0.7
RS	0.2	0.9	0.1	1.2	0.4	0.0	102.2	12.4	84.1	0.1	0.0	13.5	0.0	0.1
RU	194.5	6.8	90.2	11.7	14.6	32.1	83.1	6.9	62.8	5.6	0.4	43.1	27.7	1095.0
SE	29.2	1.7	44.4	9.4	22.6	0.2	1.8	1.4	19.3	6.3	0.0	4.6	0.2	0.8
SI	0.1	0.3	0.0	0.6	0.1	0.0	1.0	36.9	27.6	0.0	0.0	32.2	0.0	0.0
SK	0.4	0.3	0.1	1.6	0.8	0.0	3.4	5.7	216.3	0.2	0.0	8.2	0.0	0.1
TJ	0.0	0.3	0.0	0.1	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.8	25.8	2.9
TM	0.1	0.1	0.0	0.0	0.0	1.0	0.3	0.0	0.1	0.0	0.0	0.3	1.2	12.0
TR	0.8	4.0	0.4	1.7	0.6	9.0	502.1	1.2	9.6	0.2	0.0	13.4	0.1	1.5
UA	6.4	2.4	1.7	4.6	3.9	3.5	63.6	5.1	98.8	1.0	0.0	29.1	0.6	8.5
UZ	0.2	0.3	0.1	0.2	0.1	0.8	0.6	0.0	0.3	0.1	0.0	1.2	96.4	86.7
SUM	779.9	6404.5	908.1	1934.1	1315.7	329.5	11071.9	413.2	2372.5	1206.8	8.2	3657.1	875.3	5123.9
Emiss, 2017	1277.7	18096.9	1341.7	3777.9	2877.0	758.0	30733.1	795.4	4061.2	2189.7	25.8	10569.6	3221.9	9780.1

***Table 3.4**. Matrix of B(k)F country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	LI	LT	LU	LV	MC	MD	ME	MK	MT	NL	NO	PL	PT	RO
AL	0.0	0.0	0.0	0.0	0.0	0.3	134.0	43.4	0.0	0.0	0.0	1.5	0.1	4.6
AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
AT	0.3	1.2	0.2	0.5	0.0	0.6	3.5	0.7	0.0	0.8	0.1	79.9	0.2	13.2
AZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4
BA	0.0	0.6	0.0	0.2	0.0	0.8	148.4	2.8	0.0	0.1	0.0	25.9	0.1	27.3
BE	0.0	0.2	7.0	0.1	0.0	0.0	0.1	0.0	0.0	34.2	0.1	6.4	0.5	0.2
BG	0.0	0.6	0.0	0.3	0.0	12.7	10.5	18.4	0.0	0.2	0.0	9.2	0.1	266.2
BY	0.0	77.9	0.2	30.3	0.0	15.0	3.3	0.6	0.0	1.8	0.5	251.8	0.3	63.7
CH	1.0	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.0	0.2	0.0	4.0	0.3	0.2
CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
CZ	0.0	2.5	0.6	1.0	0.0	0.7	3.5	1.0	0.0	2.3	0.2	413.3	0.3	14.8
DE	0.6	8.0	17.6	4.3	0.0	0.9	1.7	0.5	0.0	113.7	1.2	378.2	2.4	8.9
DK	0.0	2.0	0.2	1.3	0.0	0.2	0.2	0.1	0.0	7.0	2.2	27.8	0.2	1.5
EE	0.0	13.2	0.0	52.2	0.0	0.6	0.2	0.1	0.0	0.7	0.4	28.6	0.0	4.0
ES	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.0	1.0	0.1	2.6	586.5	0.7
FI	0.0	14.1	0.1	20.8	0.0	2.0	0.7	0.2	0.0	2.1	4.4	64.0	0.2	14.0
FR	0.1	1.6	15.0	1.0	0.0	0.2	1.0	0.1	0.0	24.4	0.5	44.4	24.1	2.9
GB	0.0	2.5	0.9	2.0	0.0	0.1	0.3	0.1	0.0	25.6	2.4	33.6	5.5	1.3
GE	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.0	0.0	0.0	0.8	0.0	2.3
GR	0.0	0.2	0.0	0.2	0.0	2.5	9.6	56.0	0.0	0.1	0.0	4.1	0.3	24.7
HR	0.0	0.9	0.0	0.4	0.0	1.1	41.3	1.8	0.0	0.2	0.0	43.0	0.1	29.5
HU	0.0	1.2	0.1	0.5	0.0	2.9	13.3	3.7	0.0	0.4	0.1	113.3	0.1	148.4
IE	0.0	0.6	0.1	0.5	0.0	0.0	0.1	0.0	0.0	2.9	0.3	6.1	1.7	0.2
IS	0.0	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	1.1	1.0	3.0	0.3	0.4
IT	0.1	0.8	0.1	0.4	0.0	1.0	44.2	3.9	0.2	0.4	0.1	34.9	1.1	18.0
KY	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2
KZ	0.0	2.1	0.0	1.5	0.0	1.9	1.8	0.7	0.0	0.5	0.6	16.4	0.7	13.8
LI	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LT	0.0	**503.3**	0.1	51.4	0.0	2.0	0.5	0.1	0.0	1.2	0.4	144.3	0.2	10.8
LU	0.0	0.0	**7.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.8	0.1	0.0
LV	0.0	113.7	0.1	**435.8**	0.0	1.5	0.4	0.1	0.0	1.2	0.5	75.9	0.1	8.7
MC	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	0.0	0.3	0.0	0.2	0.0	**151.0**	0.4	0.2	0.0	0.1	0.0	6.7	0.0	87.1
ME	0.0	0.0	0.0	0.0	0.0	0.1	**713.6**	3.8	0.0	0.0	0.0	2.1	0.0	4.2
MK	0.0	0.0	0.0	0.0	0.0	0.3	5.0	**251.0**	0.0	0.0	0.0	1.5	0.0	6.3
MT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0
NL	0.0	0.5	1.2	0.3	0.0	0.0	0.1	0.0	0.0	**222.9**	0.2	10.0	0.3	0.3
NO	0.0	6.1	0.4	5.4	0.0	1.1	0.7	0.3	0.0	9.8	**395.2**	85.8	1.3	8.3
PL	0.1	40.6	1.0	10.8	0.0	6.1	8.4	2.3	0.0	11.4	1.5	**5283.7**	0.9	70.8
PT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	**3915.3**	0.0
RO	0.0	1.8	0.1	0.9	0.0	74.4	22.2	9.6	0.0	0.8	0.2	63.6	0.2	**2839.7**
RS	0.0	0.5	0.0	0.2	0.0	3.2	196.9	92.3	0.0	0.2	0.0	24.6	0.1	161.4
RU	0.0	70.3	0.5	79.9	0.0	31.7	14.8	7.2	0.0	7.9	10.8	370.3	3.1	229.4
SE	0.0	29.6	0.5	26.6	0.0	2.9	1.3	0.5	0.0	12.5	39.3	276.6	0.9	21.8
SI	0.0	0.3	0.0	0.1	0.0	0.3	2.2	0.3	0.0	0.1	0.0	16.8	0.0	6.0
SK	0.0	1.4	0.1	0.5	0.0	1.5	5.3	1.2	0.0	0.6	0.1	316.2	0.1	40.7
TJ	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1
TM	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.5	0.0	0.7
TR	0.0	0.8	0.0	0.5	0.0	11.9	5.2	4.8	0.0	0.3	0.1	16.4	0.7	80.9
UA	0.0	13.9	0.2	6.5	0.0	128.8	13.9	4.7	0.0	2.4	0.7	366.0	0.6	406.5
UZ	0.0	0.2	0.0	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.0	1.3	0.1	1.1
SUM	2.5	914.2	53.8	737.0	0.0	461.3	1409.9	513.1	0.3	491.6	463.4	8656.6	4549.2	4646.5
Emiss, 2017	5.1	1303.5	90.3	1087.1	0.1	829.0	4153.5	1144.6	7.7	1006.7	978.5	14346.8	11782.4	8749.6

***Table 3.4**. Matrix of B(k)F country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	RS	RU	SE	SI	SK	TJ	TM	TR	UA	UZ	SUM
AL	40.2	0.9	0.0	0.2	0.4	0.0	0.0	2.2	5.8	0.0	789.1
AM	0.0	0.9	0.0	0.0	0.0	0.0	0.0	31.7	0.4	0.0	283.3
AT	12.0	2.7	0.2	81.4	25.8	0.0	0.0	0.3	15.3	0.0	944.9
AZ	0.1	14.6	0.0	0.0	0.0	0.0	1.0	10.9	2.0	0.1	129.5
BA	84.6	2.4	0.1	4.6	6.6	0.0	0.0	0.8	16.1	0.0	764.6
BE	0.1	0.5	0.2	0.1	0.2	0.0	0.0	0.0	0.9	0.0	393.0
BG	63.2	28.8	0.1	1.6	2.1	0.0	0.0	52.6	153.4	0.0	2178.6
BY	11.2	216.5	2.7	3.5	7.4	0.0	0.1	6.3	1501.8	0.1	3981.0
CH	0.1	0.2	0.0	0.4	0.2	0.0	0.0	0.0	0.4	0.0	247.9
CY	0.0	0.2	0.0	0.0	0.0	0.0	0.0	7.2	0.6	0.0	34.6
CZ	18.8	7.0	0.7	10.6	36.7	0.0	0.0	0.4	26.2	0.0	3117.0
DE	5.3	21.7	5.3	4.8	8.0	0.0	0.0	0.6	35.7	0.0	2219.4
DK	0.4	4.5	10.1	0.2	0.5	0.0	0.0	0.2	5.7	0.0	357.1
EE	1.0	50.6	3.6	0.5	0.9	0.0	0.0	0.6	28.8	0.0	614.2
ES	0.4	0.4	0.2	0.3	0.1	0.0	0.0	0.1	0.8	0.0	6659.8
FI	2.6	174.2	24.1	1.0	2.2	0.1	0.1	2.8	69.3	0.1	1280.3
FR	1.1	3.2	1.4	3.3	1.4	0.0	0.0	0.2	5.5	0.0	2277.1
GB	0.5	6.5	4.5	0.5	0.9	0.0	0.0	0.2	7.5	0.0	1423.0
GE	0.4	25.1	0.0	0.0	0.1	0.0	0.0	55.3	8.1	0.0	387.5
GR	21.7	12.8	0.1	0.7	0.9	0.0	0.0	112.1	59.0	0.0	9121.5
HR	64.4	2.9	0.1	87.4	11.6	0.0	0.0	0.6	22.0	0.0	810.0
HU	96.4	5.9	0.2	26.3	119.4	0.0	0.0	1.2	63.7	0.0	1830.5
IE	0.1	1.4	0.8	0.1	0.2	0.0	0.0	0.1	1.3	0.0	1067.8
IS	0.2	1.3	0.5	0.1	0.1	0.0	0.0	0.3	1.6	0.0	33.7
IT	18.1	2.8	0.2	57.4	5.7	0.0	0.0	1.5	19.8	0.0	3411.8
KY	0.1	1.2	0.0	0.0	0.0	43.9	0.5	1.5	0.5	87.8	670.8
KZ	3.3	762.9	1.0	0.6	0.8	19.3	15.6	29.2	159.8	155.9	5355.6
LI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
LT	2.8	60.4	2.9	1.5	3.1	0.0	0.0	1.2	91.7	0.0	1064.7
LU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	22.5
LV	2.0	55.9	4.2	1.1	2.1	0.0	0.0	0.9	70.2	0.0	941.9
MC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
MD	1.2	10.2	0.1	0.1	0.5	0.0	0.0	6.2	192.2	0.0	473.8
ME	35.4	0.5	0.0	0.2	0.5	0.0	0.0	0.4	3.0	0.0	817.9
MK	46.1	1.1	0.0	0.2	0.4	0.0	0.0	2.0	5.7	0.0	780.4
MT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
NL	0.1	1.2	0.5	0.1	0.2	0.0	0.0	0.0	1.7	0.0	398.4
NO	2.1	28.2	36.7	0.9	2.3	0.0	0.1	1.7	35.7	0.1	789.4
PL	35.4	171.2	7.4	15.8	70.6	0.0	0.0	2.0	303.9	0.0	7235.9
PT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	4045.6
RO	122.2	46.6	0.5	7.3	17.7	0.0	0.1	31.3	392.6	0.1	4035.6
RS	**972.4**	6.2	0.1	3.7	8.7	0.0	0.0	4.2	42.3	0.0	1952.7
RU	41.9	**23155.2**	24.1	10.4	15.4	7.2	10.8	228.3	2387.0	19.7	28931.0
SE	5.5	79.2	**632.4**	2.6	6.2	0.0	0.1	2.8	102.3	0.1	1614.7
SI	5.5	0.7	0.1	**284.4**	3.5	0.0	0.0	0.1	7.0	0.0	474.1
SK	28.2	5.5	0.3	7.1	**186.9**	0.0	0.0	0.4	61.0	0.0	1084.9
TJ	0.1	2.5	0.0	0.0	0.0	**474.3**	0.8	1.0	0.2	56.2	567.0
TM	0.1	10.8	0.0	0.0	0.0	5.8	**517.9**	4.4	4.0	99.5	663.5
TR	14.4	82.4	0.4	1.4	1.4	0.0	0.1	**6529.8**	245.9	0.1	7643.9
UA	35.2	600.9	2.4	6.7	26.2	0.2	0.4	115.2	**11159.5**	0.4	13419.4
UZ	0.2	19.5	0.1	0.1	0.1	100.5	44.8	4.1	9.7	**661.0**	1034.5
SUM	1797.3	25690.1	768.6	629.7	578.0	651.4	592.7	7255.1	17327.7	1081.4	
Emiss, 2017	3431.0	37877.9	1280.9	1169.1	1061.8	2126.4	1485.3	19637.2	30610.0	3777.6	

***Table 3.5**. Matrix of IP country-to-country deposition from anthropogenic sources in 2018, kg/y*

Receptors ↓ Emitters →

code	AL	AM	AT	AZ	BA	BE	BG	BY	CH	CY	CZ	DE	DK
AL	**231.4**	0.1	1.0	0.0	2.5	0.1	17.4	0.8	0.2	0.0	4.3	0.1	0.0
AM	0.1	**229.7**	0.0	1.0	0.0	0.0	0.2	0.1	0.0	0.0	0.2	0.0	0.0
AT	4.1	0.2	**420.2**	0.0	9.4	2.7	7.9	5.0	12.7	0.0	349.9	12.4	1.1
AZ	0.1	51.6	0.1	**10.3**	0.1	0.0	0.5	0.3	0.0	0.0	0.6	0.0	0.0
BA	22.3	0.1	10.5	0.0	**265.7**	0.4	16.6	3.9	0.5	0.0	43.8	0.7	0.4
BE	0.1	0.0	1.7	0.0	0.1	**191.4**	0.1	0.7	1.5	0.0	13.7	6.5	1.2
BG	12.6	0.6	5.8	0.0	8.2	0.5	**829.7**	8.6	0.5	0.1	23.2	0.5	0.4
BY	3.0	1.5	11.1	0.1	7.7	4.7	10.5	**1298.6**	1.7	0.0	107.7	3.8	8.6
CH	0.6	0.0	9.0	0.0	0.5	1.8	0.3	0.4	**85.4**	0.0	16.7	5.9	0.2
CY	0.1	0.1	0.1	0.0	0.1	0.0	0.3	0.1	0.0	**11.2**	0.2	0.0	0.0
CZ	2.8	0.2	88.1	0.0	10.6	5.6	10.9	11.0	5.1	0.0	**2743.0**	16.2	3.0
DE	2.9	0.4	110.6	0.0	5.1	141.5	6.0	25.8	49.0	0.0	1013.2	**267.1**	32.7
DK	0.2	0.1	2.7	0.0	0.3	7.6	0.7	2.7	0.8	0.0	31.9	5.9	**194.3**
EE	0.3	0.2	2.7	0.0	1.0	1.5	1.4	27.5	0.4	0.0	25.3	1.2	3.9
ES	0.8	0.3	1.9	0.0	1.6	5.0	1.3	0.9	1.1	0.0	11.7	1.5	1.1
FI	1.0	1.3	5.7	0.1	2.5	4.7	4.1	43.8	1.0	0.0	56.7	2.9	10.9
FR	3.3	0.5	18.6	0.0	4.1	115.9	3.5	4.8	46.0	0.0	114.2	30.0	6.8
GB	0.4	0.2	5.2	0.0	0.6	33.0	0.7	5.6	2.2	0.0	38.1	6.7	14.6
GE	0.4	62.0	0.3	0.6	0.3	0.1	2.2	0.5	0.1	0.1	1.4	0.1	0.1
GR	38.6	0.6	3.2	0.0	4.8	0.3	56.9	3.8	0.6	0.1	13.1	0.3	0.2
HR	13.8	0.2	28.0	0.0	73.6	0.6	12.8	4.6	0.8	0.0	71.9	1.1	0.5
HU	9.0	0.2	46.0	0.0	22.9	1.1	33.7	9.6	1.4	0.0	140.1	2.1	0.9
IE	0.1	0.1	1.0	0.0	0.1	4.0	0.1	1.1	0.4	0.0	7.5	1.1	2.7
IS	0.2	0.1	0.8	0.0	0.2	1.7	0.4	0.4	0.2	0.0	5.1	0.5	1.8
IT	33.2	0.5	57.0	0.0	34.8	2.5	20.5	6.9	16.9	0.0	87.6	5.7	1.0
KY	0.1	2.8	0.1	0.1	0.1	0.0	0.3	0.1	0.1	0.0	0.3	0.0	0.0
KZ	3.9	52.8	4.4	2.7	3.5	1.6	16.0	26.3	1.0	0.2	26.7	1.3	3.4
LI	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.1	0.0	0.0
LT	0.6	0.3	5.7	0.0	2.1	2.7	2.5	130.2	0.9	0.0	52.9	2.3	7.5
LU	0.0	0.0	0.2	0.0	0.0	5.0	0.0	0.1	0.3	0.0	2.2	1.0	0.1
LV	0.5	0.3	4.7	0.0	1.7	2.5	2.0	90.1	0.7	0.0	45.2	2.1	7.0
MC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	0.7	0.2	0.8	0.0	0.6	0.2	4.3	5.1	0.1	0.0	5.5	0.2	0.2
ME	33.0	0.0	0.8	0.0	9.3	0.1	9.8	0.6	0.1	0.0	4.0	0.1	0.0
MK	33.6	0.1	0.8	0.0	1.6	0.1	36.9	0.7	0.1	0.0	3.6	0.1	0.0
MT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NL	0.1	0.0	1.6	0.0	0.2	85.9	0.2	1.3	1.0	0.0	13.1	9.5	2.6
NO	1.1	0.7	9.2	0.0	1.7	13.9	3.9	12.2	2.5	0.0	100.6	7.9	52.0
PL	7.3	0.8	62.3	0.0	20.2	23.0	27.1	168.0	7.7	0.0	1222.8	27.9	32.8
PT	0.0	0.0	0.2	0.0	0.1	0.3	0.0	0.1	0.1	0.0	1.0	0.1	0.1
RO	17.2	1.2	23.7	0.1	21.8	2.2	109.9	28.4	1.7	0.1	95.8	2.4	1.7
RS	38.3	0.3	11.4	0.0	41.9	0.7	233.4	5.8	0.8	0.0	48.1	0.9	0.5
RU	27.7	113.2	49.0	5.7	35.2	21.7	139.6	556.1	8.9	0.8	339.7	16.5	44.7
SE	1.8	1.1	15.9	0.0	3.8	20.0	7.9	52.7	3.0	0.0	198.0	12.6	133.3
SI	2.7	0.1	40.4	0.0	5.6	0.2	2.6	1.4	0.5	0.0	31.1	0.6	0.2
SK	3.6	0.1	24.0	0.0	10.9	1.6	12.0	10.4	1.3	0.0	262.6	2.2	1.3
TJ	0.0	1.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
TM	0.3	11.9	0.3	0.8	0.2	0.1	1.1	1.0	0.1	0.0	1.6	0.1	0.2
TR	12.1	121.1	6.4	0.6	6.4	1.1	63.3	11.5	1.0	5.0	25.4	0.8	1.4
UA	15.4	9.6	27.0	0.4	18.4	6.0	70.0	229.0	3.3	0.2	193.0	5.4	8.9
UZ	0.4	10.2	0.4	0.5	0.3	0.1	1.5	1.7	0.1	0.0	2.2	0.1	0.3
SUM	581.9	679.1	1120.8	23.2	642.3	715.6	1783.1	2800.4	264.2	18.1	7596.5	466.7	585.0
Emiss, 2017	1532.4	1801.4	1837.7	80.1	1185.3	1401.5	3225.7	3937.2	504.0	89.0	11626.1	857.9	1377.4

***Table 3.5**. Matrix of IP country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	EE	ES	FI	FR	GB	GE	GR	HR	HU	IE	IS	IT	KY	KZ
AL	0.1	12.2	0.0	1.0	0.2	0.1	268.6	1.3	7.3	0.0	0.0	34.8	0.0	0.2
AM	0.0	0.4	0.0	0.0	0.0	21.5	0.7	0.0	0.1	0.0	0.0	0.7	0.0	0.5
AT	0.8	13.5	0.4	10.1	3.9	0.2	14.3	22.6	133.6	0.8	0.0	208.7	0.0	0.3
AZ	0.1	0.7	0.1	0.1	0.1	21.6	2.1	0.1	0.4	0.0	0.0	1.1	0.3	6.5
BA	0.4	17.6	0.2	2.2	0.9	0.1	53.4	54.3	107.7	0.2	0.0	91.4	0.0	0.3
BE	0.3	11.9	0.3	37.4	18.8	0.0	0.3	0.2	1.4	1.8	0.0	5.9	0.0	0.0
BG	0.9	14.7	0.6	1.8	1.0	1.0	578.5	5.1	40.9	0.2	0.0	36.2	0.1	2.7
BY	19.7	8.9	7.8	6.2	11.3	1.6	35.7	7.1	63.8	2.2	0.0	57.6	0.5	9.2
CH	0.1	17.6	0.1	24.4	1.5	0.0	1.4	0.8	1.8	0.3	0.0	197.2	0.0	0.0
CY	0.0	0.7	0.0	0.1	0.0	0.1	3.1	0.1	0.2	0.0	0.0	1.7	0.0	0.1
CZ	1.6	10.2	0.9	11.3	7.2	0.2	13.5	14.6	153.3	1.3	0.0	48.8	0.0	0.4
DE	7.2	71.5	5.6	137.9	109.3	0.3	13.8	7.2	62.5	16.8	0.0	153.6	0.1	0.9
DK	1.5	5.5	1.2	5.7	20.5	0.1	1.1	0.4	4.5	3.6	0.0	3.9	0.0	0.2
EE	**354.3**	1.9	29.4	1.6	3.5	0.2	3.4	1.1	9.0	0.6	0.0	6.8	0.1	1.2
ES	0.5	**8203.3**	0.6	41.2	14.3	0.2	4.4	2.0	6.7	4.5	0.0	49.3	0.0	0.2
FI	113.6	7.6	**1084.2**	5.5	13.2	1.0	10.6	2.5	22.1	2.9	0.0	18.8	0.5	5.0
FR	2.1	792.1	2.5	**1076.2**	90.8	0.4	11.2	6.7	16.7	11.8	0.0	449.4	0.0	0.6
GB	2.8	61.2	2.9	50.0	**1029.1**	0.2	1.3	0.8	6.4	150.8	0.0	16.2	0.0	0.5
GE	0.1	1.5	0.1	0.2	0.1	**246.4**	6.8	0.2	1.3	0.0	0.0	3.2	0.0	1.4
GR	0.4	22.9	0.3	2.5	0.6	0.9	**4303.2**	3.1	19.3	0.1	0.0	67.0	0.1	1.7
HR	0.6	18.4	0.2	3.0	1.2	0.1	39.8	**183.0**	186.1	0.3	0.0	147.0	0.0	0.4
HU	1.0	10.6	0.5	3.6	2.0	0.2	67.9	37.6	**985.1**	0.4	0.0	76.1	0.0	0.7
IE	0.6	14.8	0.7	6.1	59.1	0.1	0.3	0.2	1.3	**520.7**	0.0	3.3	0.0	0.1
IS	0.3	3.4	0.4	1.7	8.8	0.1	0.6	0.2	1.2	4.3	**2.1**	3.3	0.0	0.1
IT	0.9	190.6	0.5	34.4	3.6	0.4	118.7	48.8	86.3	0.8	0.0	**4344.8**	0.0	0.8
KY	0.0	2.1	0.0	0.2	0.1	1.1	1.2	0.1	0.2	0.0	0.0	2.2	**284.4**	90.2
KZ	8.0	27.0	7.4	3.9	4.6	28.8	58.1	2.7	18.2	1.2	0.0	47.5	210.6	**4172.7**
LI	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
LT	12.3	3.9	4.8	3.0	6.8	0.3	9.8	2.6	23.8	1.4	0.0	13.8	0.1	1.3
LU	0.0	1.4	0.0	4.0	0.8	0.0	0.0	0.0	0.2	0.1	0.0	0.9	0.0	0.0
LV	58.9	3.1	10.9	2.6	5.7	0.3	5.9	2.1	17.8	1.1	0.0	10.6	0.1	1.7
MC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
MD	0.4	1.6	0.2	0.4	0.4	0.3	20.6	0.5	5.2	0.1	0.0	6.1	0.1	1.1
ME	0.0	6.6	0.0	0.5	0.1	0.0	27.8	1.7	9.0	0.0	0.0	22.6	0.0	0.1
MK	0.1	4.8	0.0	0.4	0.1	0.1	319.3	0.8	7.0	0.0	0.0	11.7	0.0	0.2
MT	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
NL	0.5	8.8	0.5	19.2	32.1	0.0	0.4	0.3	1.7	3.7	0.0	4.5	0.0	0.0
NO	9.2	18.3	15.4	14.5	53.5	0.6	5.5	1.8	18.9	11.1	0.0	15.2	0.2	1.9
PL	14.1	26.7	7.7	25.6	43.0	0.7	56.8	23.9	279.7	7.7	0.0	107.2	0.2	3.3
PT	0.1	280.1	0.1	1.4	1.5	0.0	0.2	0.1	0.3	0.5	0.0	2.8	0.0	0.0
RO	2.3	25.1	1.4	5.9	4.6	1.6	264.1	18.5	275.2	0.9	0.0	113.1	0.3	5.2
RS	0.6	16.7	0.3	2.6	1.4	0.3	203.4	20.2	156.0	0.3	0.0	62.0	0.0	0.8
RU	317.3	104.2	268.1	33.5	59.4	121.2	415.7	30.0	220.7	12.7	0.4	349.4	72.8	2791.2
SE	45.8	19.5	99.9	17.7	63.4	0.9	12.0	4.5	50.6	12.2	0.0	29.8	0.4	4.1
SI	0.2	5.0	0.1	1.2	0.4	0.1	7.0	40.1	44.6	0.1	0.0	79.1	0.0	0.1
SK	0.9	5.1	0.4	3.2	2.5	0.1	19.6	11.6	282.0	0.4	0.0	39.5	0.0	0.4
TJ	0.0	0.6	0.0	0.1	0.0	0.5	0.4	0.0	0.1	0.0	0.0	0.8	13.7	5.3
TM	0.3	1.5	0.3	0.2	0.3	4.8	3.7	0.2	1.1	0.1	0.0	2.9	3.2	52.5
TR	2.1	45.3	1.7	5.0	2.6	29.6	476.9	5.0	29.1	0.6	0.0	97.9	0.5	11.2
UA	12.4	30.8	6.4	10.4	13.4	16.0	253.9	15.4	203.1	2.2	0.0	145.2	2.2	45.5
UZ	0.5	2.7	0.4	0.3	0.5	4.6	4.5	0.2	1.5	0.1	0.0	4.5	66.2	154.0
SUM	995.9	10154.7	1565.6	1619.8	1698.5	508.9	7721.5	582.1	3565.3	781.2	2.5	7197.5	657.2	7377.0
Emiss, 2017	1587.5	32125.2	2381.8	3369.2	4461.3	1164.3	21600.4	1068.2	5603.7	1873.1	9.8	18763.0	2716.0	14986.4

***Table 3.5**. Matrix of IP country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	LI	LT	LU	LV	MC	MD	ME	MK	MT	NL	NO	PL	PT
AL	0.0	0.2	0.0	0.1	0.0	1.0	19.7	42.1	0.0	0.0	0.0	13.8	0.4
AM	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.8	0.0
AT	0.3	2.5	0.5	1.2	0.0	1.6	2.1	2.9	0.0	1.7	0.2	331.8	0.6
AZ	0.0	0.1	0.0	0.1	0.0	0.2	0.0	0.1	0.0	0.0	0.0	2.8	0.0
BA	0.0	1.3	0.1	0.7	0.0	2.3	26.6	7.3	0.0	0.3	0.1	135.7	0.5
BE	0.0	0.5	6.6	0.4	0.0	0.1	0.0	0.1	0.0	27.1	0.2	31.5	0.9
BG	0.0	2.0	0.1	1.2	0.0	26.9	3.9	27.0	0.0	0.3	0.1	72.2	0.4
BY	0.0	109.4	0.4	50.2	0.0	30.3	2.0	2.9	0.0	3.5	1.4	1209.1	0.8
CH	0.8	0.3	0.3	0.2	0.0	0.1	0.2	0.2	0.0	0.7	0.0	22.0	0.8
CY	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.8	0.0
CZ	0.1	5.1	1.0	2.5	0.0	1.8	2.0	3.3	0.0	3.6	0.4	1405.8	0.7
DE	0.6	16.4	20.5	10.6	0.0	2.0	1.4	2.2	0.0	107.4	2.1	1667.0	5.4
DK	0.0	3.1	0.4	2.4	0.0	0.3	0.1	0.3	0.0	8.3	2.1	126.2	0.5
EE	0.0	25.8	0.1	85.4	0.0	1.6	0.2	0.4	0.0	1.4	1.0	174.8	0.1
ES	0.0	0.8	0.4	0.6	0.0	0.2	0.5	0.6	0.0	2.6	0.3	35.0	297.8
FI	0.0	29.2	0.3	46.4	0.0	5.6	0.6	1.1	0.0	4.0	9.2	382.5	0.5
FR	0.2	3.7	16.2	2.7	0.0	0.8	1.1	1.5	0.0	34.4	1.1	233.2	41.1
GB	0.0	4.2	1.3	3.8	0.0	0.3	0.2	0.2	0.0	22.5	3.0	146.7	7.8
GE	0.0	0.2	0.0	0.1	0.0	1.1	0.1	0.5	0.0	0.0	0.0	6.6	0.1
GR	0.0	0.9	0.0	0.6	0.0	7.3	3.7	59.7	0.0	0.2	0.1	41.3	0.7
HR	0.0	1.9	0.1	0.9	0.0	2.6	8.4	5.4	0.0	0.4	0.1	180.4	0.5
HU	0.0	3.0	0.2	1.4	0.0	7.1	5.2	10.9	0.0	0.8	0.2	431.2	0.4
IE	0.0	0.9	0.2	0.9	0.0	0.0	0.0	0.0	0.0	2.9	0.5	29.6	2.8
IS	0.0	0.4	0.1	0.4	0.0	0.1	0.1	0.1	0.0	1.4	1.1	17.4	0.4
IT	0.2	2.5	0.4	1.4	0.0	3.4	13.0	13.3	0.2	1.4	0.3	214.1	5.6
KY	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	1.1	0.1
KZ	0.0	7.9	0.1	6.3	0.0	8.2	1.6	4.4	0.0	1.4	1.6	168.2	1.4
LI	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
LT	0.0	**465.6**	0.2	70.6	0.0	4.3	0.4	0.7	0.0	2.3	0.9	652.6	0.4
LU	0.0	0.0	**5.5**	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	4.0	0.1
LV	0.0	149.9	0.2	**480.3**	0.0	3.5	0.3	0.6	0.0	2.3	1.1	402.9	0.2
MC	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	0.0	0.9	0.0	0.5	0.0	**113.2**	0.2	0.8	0.0	0.1	0.1	37.2	0.1
ME	0.0	0.1	0.0	0.1	0.0	0.5	**82.2**	5.9	0.0	0.0	0.0	13.7	0.2
MK	0.0	0.1	0.0	0.1	0.0	1.1	1.7	**168.1**	0.0	0.0	0.0	12.3	0.1
MT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0
NL	0.0	0.9	1.4	0.7	0.0	0.1	0.0	0.1	0.0	**133.0**	0.3	45.4	0.6
NO	0.0	10.5	0.8	10.0	0.0	2.3	0.5	1.3	0.0	13.1	**240.1**	414.8	1.8
PL	0.1	69.3	1.9	25.7	0.0	15.4	4.6	8.7	0.0	17.6	3.3	**14914.2**	2.3
PT	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	3.1	**847.3**
RO	0.0	6.0	0.2	3.3	0.0	108.0	7.7	22.7	0.0	1.6	0.4	357.3	0.9
RS	0.0	1.5	0.1	0.9	0.0	8.1	36.8	82.2	0.0	0.4	0.1	141.7	0.5
RU	0.1	165.0	1.5	203.7	0.0	91.7	12.5	33.6	0.0	19.3	25.2	2485.0	5.4
SE	0.0	53.0	1.0	52.7	0.0	7.0	0.9	2.4	0.0	19.7	50.9	1359.7	1.7
SI	0.0	0.6	0.0	0.3	0.0	0.8	1.1	1.0	0.0	0.2	0.0	66.2	0.1
SK	0.0	3.1	0.2	1.5	0.0	3.4	2.5	3.9	0.0	1.1	0.2	1011.0	0.3
TJ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
TM	0.0	0.4	0.0	0.3	0.0	0.5	0.1	0.3	0.0	0.1	0.1	8.7	0.1
TR	0.0	2.9	0.1	2.1	0.0	26.6	3.4	13.8	0.1	0.8	0.4	123.9	1.4
UA	0.0	31.2	0.5	17.4	0.0	166.8	7.0	16.6	0.0	4.5	1.8	1660.5	1.6
UZ	0.0	0.6	0.0	0.5	0.0	0.7	0.1	0.5	0.0	0.1	0.1	13.0	0.1
SUM	2.7	1184.1	62.7	1091.2	0.0	659.1	255.3	550.3	0.6	443.5	350.3	30809.4	1235.4
Emiss, 2017	5.0	1738.9	108.2	1640.5	0.1	1118.3	569.4	1205.2	7.1	944.3	862.9	47582.9	3632.9

***Table 3.5**. Matrix of IP country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	RO	RS	RU	SE	SI	SK	TJ	TM	TR	UA	UZ	SUM
AL	17.1	54.1	5.4	0.0	0.2	0.7	0.0	0.0	15.6	17.3	0.0	771.5
AM	0.8	0.2	5.1	0.0	0.0	0.0	0.0	0.1	60.3	1.4	0.0	324.2
AT	41.2	35.0	11.4	0.7	29.7	11.0	0.0	0.0	3.7	30.6	0.0	1743.4
AZ	2.2	0.5	43.3	0.0	0.0	0.0	0.1	0.8	44.0	7.8	0.3	199.5
BA	70.2	144.4	9.8	0.3	2.8	6.8	0.0	0.0	8.5	33.7	0.0	1145.4
BE	0.7	0.5	1.7	0.5	0.1	0.2	0.0	0.0	0.2	1.9	0.0	368.6
BG	478.2	114.2	101.7	0.4	1.1	3.3	0.1	0.1	192.6	257.9	0.1	2858.0
BY	167.6	31.9	536.1	6.7	2.5	9.6	0.2	0.1	44.1	2002.4	0.2	5902.3
CH	1.3	1.0	1.2	0.1	0.5	0.2	0.0	0.0	0.6	1.5	0.0	398.4
CY	0.8	0.3	1.3	0.0	0.0	0.0	0.0	0.0	29.6	1.7	0.0	53.0
CZ	50.1	47.2	23.5	1.8	5.8	14.8	0.0	0.0	3.5	51.9	0.0	4784.8
DE	32.8	21.6	63.3	10.1	4.4	6.9	0.0	0.0	4.9	67.3	0.0	4288.0
DK	4.3	1.8	10.0	10.3	0.2	0.5	0.0	0.0	0.8	8.3	0.0	475.3
EE	13.3	3.7	121.0	7.6	0.4	1.1	0.0	0.0	4.8	55.3	0.0	976.7
ES	5.6	3.5	3.8	0.7	0.7	0.5	0.0	0.0	1.9	5.6	0.0	8715.1
FI	48.2	10.7	446.0	51.4	0.9	3.1	0.2	0.1	18.1	129.8	0.2	2610.2
FR	14.9	8.6	15.2	3.1	3.3	1.8	0.0	0.0	5.0	19.3	0.0	3215.5
GB	4.0	1.9	16.8	6.4	0.4	0.8	0.0	0.0	2.2	14.4	0.0	1666.6
GE	8.3	1.6	63.4	0.1	0.1	0.1	0.0	0.1	156.2	18.2	0.0	586.3
GR	78.1	48.7	55.3	0.3	0.7	1.6	0.0	0.0	312.5	140.7	0.0	5297.1
HR	68.5	105.0	11.1	0.4	25.1	8.4	0.0	0.0	6.5	39.9	0.0	1253.8
HU	273.5	149.3	24.0	0.6	8.6	76.6	0.0	0.0	10.8	101.3	0.0	2557.9
IE	0.8	0.3	3.6	1.2	0.1	0.2	0.0	0.0	0.6	3.0	0.0	673.1
IS	1.2	0.7	3.1	1.0	0.1	0.1	0.0	0.0	0.9	2.6	0.0	69.1
IT	62.7	60.5	19.6	0.8	27.3	6.8	0.0	0.0	21.9	60.3	0.0	5612.9
KY	0.8	0.3	6.5	0.0	0.0	0.0	28.2	0.8	9.6	2.0	31.0	466.9
KZ	71.6	18.2	1995.5	3.9	0.9	2.2	37.1	13.7	259.5	390.7	71.0	7800.2
LI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
LT	31.0	8.3	126.6	5.9	1.0	3.4	0.0	0.0	8.9	145.5	0.0	1820.4
LU	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	27.4
LV	25.6	6.6	139.3	8.7	0.8	2.4	0.0	0.0	7.5	124.7	0.0	1634.6
MC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
MD	111.8	3.6	33.6	0.2	0.2	0.9	0.0	0.0	30.4	121.1	0.0	509.5
ME	12.8	46.1	2.1	0.0	0.2	0.8	0.0	0.0	4.2	7.6	0.0	302.9
MK	20.7	59.2	5.5	0.0	0.2	0.7	0.0	0.0	13.2	15.8	0.0	721.1
MT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
NL	0.8	0.6	3.1	0.8	0.1	0.2	0.0	0.0	0.2	2.8	0.0	378.4
NO	22.9	8.1	62.6	52.7	0.8	2.0	0.1	0.1	8.6	51.0	0.1	1275.9
PL	213.2	94.3	324.9	16.4	9.0	52.7	0.1	0.1	17.5	503.6	0.1	18491.5
PT	0.2	0.1	0.4	0.1	0.0	0.0	0.0	0.0	0.2	0.4	0.0	1141.5
RO	**3280.4**	207.0	160.2	1.5	4.7	21.5	0.1	0.1	164.5	521.0	0.2	5893.1
RS	300.0	**911.3**	26.4	0.4	2.3	11.5	0.0	0.0	28.3	82.3	0.0	2481.3
RU	808.4	170.0	**38644.9**	74.0	10.8	26.7	20.4	12.8	1351.1	4229.4	24.3	54571.1
SE	67.2	19.1	197.1	**659.5**	1.9	6.3	0.1	0.1	17.0	166.0	0.1	3494.4
SI	15.2	14.4	3.1	0.2	**62.9**	2.3	0.0	0.0	1.5	12.7	0.0	446.2
SK	94.0	58.0	19.2	0.9	3.5	**83.3**	0.0	0.0	3.8	92.4	0.0	2078.2
TJ	0.3	0.1	2.9	0.0	0.0	0.0	**167.4**	0.9	3.6	0.6	14.2	213.7
TM	4.6	1.1	52.5	0.2	0.1	0.1	8.4	**68.9**	35.3	18.2	47.5	336.2
TR	214.5	43.0	321.7	1.4	1.5	2.1	0.2	0.3	**9035.8**	463.5	0.3	11223.6
UA	792.0	96.4	1412.0	6.4	5.1	30.2	0.7	0.7	541.7	**8944.1**	0.9	15081.9
UZ	6.1	1.5	73.6	0.3	0.1	0.2	45.4	10.3	37.1	27.3	**163.5**	639.1
SUM	7540.7	2614.5	45210.7	938.1	221.3	404.5	308.9	110.2	12529.2	18996.8	354.2	
Emiss, 2017	12775.0	4604.7	67239.9	1624.7	400.4	666.7	1023.3	321.2	33087.3	30160.0	1106.3	

***Table 3.6**. Matrix of PCDD/Fs country-to-country deposition from anthropogenic sources in 2018, g TEQ/y*

Receptors ↓ Emitters →

code	AL	AM	AT	AZ	BA	BE	BG	BY	CH	CY	CZ	DE	DK
AL	**35.22**	0.02	0.07	0.02	0.31	0.01	0.45	0.01	0.03	0.00	0.03	0.07	0.00
AM	0.01	**49.71**	0.01	6.76	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00
AT	0.17	0.02	**52.71**	0.04	0.53	0.15	0.13	0.08	1.50	0.00	2.22	5.51	0.07
AZ	0.02	5.71	0.01	**117.85**	0.02	0.01	0.03	0.01	0.01	0.00	0.01	0.03	0.01
BA	1.02	0.02	0.62	0.03	**43.18**	0.04	0.32	0.07	0.07	0.00	0.32	0.33	0.03
BE	0.01	0.00	0.07	0.00	0.01	**37.58**	0.00	0.02	0.12	0.00	0.06	4.05	0.08
BG	0.45	0.10	0.33	0.18	0.67	0.05	**67.76**	0.16	0.07	0.00	0.14	0.32	0.03
BY	0.07	0.07	0.32	0.17	0.26	0.19	0.16	**48.36**	0.11	0.00	0.44	1.12	0.35
CH	0.03	0.01	0.78	0.01	0.04	0.08	0.01	0.01	**19.96**	0.00	0.06	2.63	0.01
CY	0.02	0.01	0.01	0.01	0.02	0.00	0.02	0.00	0.00	**0.46**	0.00	0.01	0.00
CZ	0.11	0.02	6.26	0.04	0.57	0.30	0.18	0.19	0.43	0.00	**29.42**	7.71	0.16
DE	0.12	0.04	8.72	0.09	0.28	10.45	0.11	0.55	6.95	0.00	4.90	**181.42**	2.65
DK	0.01	0.01	0.08	0.01	0.01	0.45	0.01	0.08	0.04	0.00	0.11	2.55	**27.08**
EE	0.01	0.01	0.06	0.02	0.03	0.06	0.02	0.55	0.02	0.00	0.07	0.31	0.15
ES	0.17	0.04	0.22	0.07	0.23	0.58	0.07	0.04	0.27	0.00	0.12	1.37	0.16
FI	0.04	0.07	0.18	0.16	0.11	0.20	0.08	0.84	0.07	0.00	0.21	0.88	0.39
FR	0.27	0.07	1.02	0.10	0.34	12.52	0.13	0.13	7.33	0.00	0.57	17.19	0.48
GB	0.04	0.03	0.29	0.05	0.05	3.20	0.03	0.16	0.22	0.00	0.20	4.04	1.43
GE	0.03	5.46	0.02	2.54	0.03	0.01	0.06	0.01	0.01	0.00	0.01	0.04	0.01
GR	2.88	0.09	0.22	0.13	0.50	0.03	2.30	0.07	0.09	0.00	0.09	0.23	0.02
HR	0.58	0.02	2.07	0.04	8.01	0.05	0.26	0.10	0.11	0.00	0.62	0.54	0.04
HU	0.21	0.03	4.10	0.07	1.68	0.10	0.51	0.19	0.14	0.00	1.57	1.04	0.08
IE	0.01	0.01	0.05	0.01	0.01	0.28	0.01	0.03	0.04	0.00	0.04	0.53	0.19
IS	0.01	0.01	0.04	0.02	0.02	0.13	0.01	0.02	0.03	0.00	0.03	0.30	0.12
IT	2.30	0.08	3.90	0.11	3.24	0.22	0.57	0.13	2.68	0.00	0.59	2.26	0.08
KY	0.02	0.27	0.02	0.54	0.02	0.01	0.02	0.01	0.02	0.00	0.01	0.04	0.00
KZ	0.30	2.35	0.40	7.72	0.42	0.26	0.51	0.73	0.24	0.01	0.29	1.28	0.30
LI	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.02	0.00
LT	0.02	0.02	0.14	0.04	0.06	0.10	0.04	4.61	0.04	0.00	0.20	0.69	0.40
LU	0.00	0.00	0.01	0.00	0.00	0.49	0.00	0.00	0.02	0.00	0.01	0.63	0.00
LV	0.01	0.02	0.12	0.04	0.05	0.10	0.03	2.00	0.04	0.00	0.15	0.60	0.33
MC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MD	0.02	0.03	0.05	0.06	0.05	0.02	0.13	0.16	0.02	0.00	0.04	0.10	0.02
ME	2.48	0.01	0.05	0.01	1.33	0.01	0.23	0.01	0.01	0.00	0.02	0.04	0.00
MK	2.91	0.01	0.06	0.02	0.18	0.01	1.30	0.01	0.02	0.00	0.03	0.06	0.00
MT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NL	0.01	0.00	0.06	0.01	0.01	11.27	0.01	0.04	0.08	0.00	0.06	6.74	0.19
NO	0.07	0.07	0.35	0.13	0.12	0.85	0.10	0.32	0.17	0.00	0.38	3.03	2.68
PL	0.20	0.07	2.24	0.15	0.89	0.92	0.39	5.85	0.43	0.00	13.01	11.47	1.83
PT	0.01	0.01	0.02	0.01	0.02	0.08	0.01	0.01	0.03	0.00	0.02	0.18	0.04
RO	0.55	0.19	1.11	0.37	1.49	0.16	4.81	0.61	0.20	0.00	0.55	1.02	0.10
RS	2.31	0.05	0.61	0.08	4.96	0.05	8.16	0.10	0.08	0.00	0.33	0.43	0.03
RU	1.12	5.19	2.08	17.89	1.98	1.36	2.63	14.23	0.93	0.02	1.68	6.43	1.95
SE	0.08	0.08	0.49	0.16	0.18	0.83	0.14	1.04	0.17	0.00	0.76	4.05	7.75
SI	0.09	0.01	4.02	0.01	0.33	0.02	0.05	0.03	0.06	0.00	0.23	0.29	0.01
SK	0.12	0.02	1.84	0.04	0.61	0.08	0.27	0.19	0.11	0.00	3.81	0.82	0.07
TJ	0.01	0.17	0.01	0.33	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.02	0.00
TM	0.05	1.25	0.06	6.25	0.07	0.03	0.08	0.05	0.04	0.00	0.03	0.16	0.03
TR	0.88	13.21	0.58	4.09	0.81	0.14	2.84	0.34	0.29	0.20	0.24	0.83	0.11
UA	0.39	0.46	0.97	1.30	0.96	0.33	1.26	7.09	0.29	0.00	1.03	1.95	0.40
UZ	0.05	0.63	0.06	1.66	0.06	0.03	0.07	0.07	0.04	0.00	0.03	0.16	0.04
SUM	55.47	85.74	97.53	169.44	74.77	83.82	96.29	89.29	43.71	0.71	64.74	275.52	49.91
Emiss, 2017	31.42	49.95	40.73	112.55	34.87	32.93	42.01	42.69	20.52	0.66	25.89	118.76	21.57

***Table 3.6**. Matrix of PCDD/Fs country-to-country deposition from anthropogenic sources in 2018, g TEQ/y (continued)*

Receptors ↓ Emitters →

code	EE	ES	FI	FR	GB	GE	GR	HR	HU	IE	IS	IT	KY	KZ
AL	0.00	0.22	0.00	0.04	0.02	0.00	1.04	0.07	0.22	0.00	0.00	2.46	0.00	0.01
AM	0.00	0.03	0.00	0.01	0.00	1.16	0.02	0.00	0.01	0.00	0.00	0.08	0.00	0.02
AT	0.00	0.41	0.01	0.34	0.20	0.01	0.07	1.19	4.64	0.02	0.00	6.87	0.00	0.02
AZ	0.00	0.05	0.00	0.01	0.01	1.30	0.03	0.01	0.02	0.00	0.00	0.15	0.00	0.52
BA	0.00	0.32	0.00	0.09	0.07	0.01	0.17	4.51	3.15	0.01	0.00	4.22	0.00	0.01
BE	0.00	0.25	0.00	2.61	1.23	0.00	0.00	0.01	0.03	0.05	0.00	0.18	0.00	0.00
BG	0.00	0.33	0.01	0.09	0.10	0.04	1.77	0.23	1.18	0.01	0.00	1.60	0.00	0.07
BY	0.09	0.25	0.09	0.15	0.38	0.03	0.07	0.15	0.93	0.04	0.00	1.10	0.01	0.23
CH	0.00	0.37	0.00	0.85	0.07	0.00	0.01	0.04	0.05	0.01	0.00	9.05	0.00	0.00
CY	0.00	0.04	0.00	0.01	0.00	0.00	0.09	0.01	0.01	0.00	0.00	0.19	0.00	0.00
CZ	0.01	0.31	0.01	0.36	0.30	0.01	0.05	0.54	4.76	0.03	0.00	1.51	0.00	0.02
DE	0.03	1.79	0.05	6.43	5.29	0.01	0.06	0.22	1.16	0.35	0.01	4.83	0.00	0.06
DK	0.01	0.12	0.02	0.20	1.49	0.00	0.01	0.01	0.07	0.11	0.00	0.10	0.00	0.01
EE	2.51	0.05	0.33	0.04	0.13	0.01	0.01	0.02	0.11	0.01	0.00	0.12	0.00	0.04
ES	0.01	248.51	0.01	2.74	1.90	0.01	0.12	0.12	0.19	0.33	0.01	3.68	0.00	0.02
FI	0.66	0.21	10.38	0.15	0.55	0.03	0.04	0.06	0.33	0.07	0.01	0.48	0.01	0.18
FR	0.01	23.42	0.03	70.61	7.00	0.02	0.12	0.28	0.42	0.51	0.01	15.29	0.00	0.04
GB	0.02	2.28	0.04	2.94	135.60	0.01	0.02	0.04	0.18	6.67	0.02	0.68	0.00	0.04
GE	0.00	0.07	0.00	0.02	0.01	21.63	0.05	0.01	0.04	0.00	0.00	0.23	0.00	0.04
GR	0.00	0.63	0.00	0.14	0.07	0.04	44.28	0.18	0.60	0.01	0.00	5.03	0.00	0.04
HR	0.00	0.34	0.00	0.11	0.09	0.01	0.12	26.26	7.70	0.01	0.00	6.48	0.00	0.02
HU	0.01	0.27	0.01	0.14	0.14	0.01	0.12	3.60	85.17	0.01	0.00	2.21	0.00	0.03
IE	0.00	0.74	0.01	0.29	4.11	0.00	0.01	0.01	0.03	30.80	0.01	0.15	0.00	0.01
IS	0.00	0.17	0.01	0.09	0.48	0.00	0.01	0.01	0.03	0.14	2.23	0.14	0.00	0.02
IT	0.00	5.30	0.01	1.87	0.34	0.02	0.75	3.01	2.42	0.05	0.00	410.80	0.00	0.03
KY	0.00	0.11	0.00	0.02	0.02	0.04	0.02	0.01	0.02	0.00	0.00	0.19	15.08	9.58
KZ	0.06	1.26	0.14	0.35	0.66	0.47	0.38	0.17	0.62	0.10	0.01	2.95	7.79	535.30
LI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
LT	0.07	0.10	0.06	0.07	0.24	0.01	0.02	0.05	0.33	0.03	0.00	0.26	0.00	0.05
LU	0.00	0.02	0.00	0.44	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
LV	0.33	0.08	0.12	0.06	0.21	0.01	0.01	0.04	0.24	0.02	0.00	0.21	0.00	0.05
MC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MD	0.00	0.05	0.00	0.02	0.03	0.01	0.03	0.02	0.16	0.00	0.00	0.24	0.00	0.03
ME	0.00	0.09	0.00	0.02	0.01	0.00	0.08	0.08	0.25	0.00	0.00	1.01	0.00	0.00
MK	0.00	0.12	0.00	0.03	0.02	0.00	1.48	0.05	0.24	0.00	0.00	0.80	0.00	0.01
MT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
NL	0.00	0.21	0.01	1.21	2.31	0.00	0.00	0.01	0.03	0.09	0.00	0.13	0.00	0.00
NO	0.05	0.66	0.18	0.53	2.80	0.02	0.06	0.06	0.37	0.28	0.03	0.63	0.01	0.13
PL	0.07	0.67	0.09	0.62	1.45	0.03	0.12	0.69	7.00	0.14	0.00	2.55	0.00	0.14
PT	0.00	6.91	0.00	0.20	0.42	0.00	0.01	0.01	0.02	0.09	0.00	0.21	0.00	0.01
RO	0.01	0.62	0.02	0.23	0.27	0.07	0.54	0.71	9.60	0.03	0.00	3.70	0.00	0.17
RS	0.00	0.33	0.00	0.10	0.09	0.02	0.62	1.64	6.09	0.01	0.00	2.44	0.00	0.03
RU	1.81	3.73	2.68	1.39	3.48	2.61	1.51	0.96	4.13	0.50	0.06	11.45	0.90	115.01
SE	0.21	0.54	0.97	0.48	2.77	0.03	0.08	0.12	0.78	0.27	0.02	0.82	0.01	0.19
SI	0.00	0.12	0.00	0.05	0.03	0.00	0.03	4.69	1.52	0.00	0.00	3.47	0.00	0.01
SK	0.00	0.16	0.01	0.10	0.11	0.01	0.06	0.48	14.67	0.01	0.00	1.22	0.00	0.02
TJ	0.00	0.06	0.00	0.01	0.01	0.02	0.01	0.00	0.01	0.00	0.00	0.11	0.79	1.55
TM	0.00	0.22	0.01	0.05	0.07	0.19	0.07	0.03	0.08	0.01	0.00	0.49	0.12	4.76
TR	0.01	1.77	0.02	0.38	0.30	1.20	3.40	0.33	1.14	0.04	0.00	6.46	0.01	0.39
UA	0.06	0.88	0.08	0.36	0.59	0.23	0.52	0.45	5.11	0.07	0.00	4.00	0.03	1.14
UZ	0.00	0.20	0.01	0.05	0.08	0.10	0.06	0.02	0.08	0.01	0.00	0.46	2.92	21.76
SUM	6.10	305.36	15.41	97.09	175.61	29.44	58.17	51.17	165.97	40.96	2.45	521.51	27.69	691.84
Emiss, 2017	4.32	167.82	13.40	101.94	178.53	14.22	39.52	16.23	66.69	20.19	1.94	287.67	20.23	321.94

***Table 3.6**. Matrix of PCDD/Fs country-to-country deposition from anthropogenic sources in 2017, g TEQ/y (continued)*

Receptors ↓ Emitters →

code	LI	LT	LU	LV	MC	MD	ME	MK	MT	NL	NO	PL	PT
AL	0.00	0.00	0.00	0.00	0.00	0.02	0.62	1.18	0.04	0.00	0.00	0.10	0.01
AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
AT	0.03	0.05	0.02	0.01	0.00	0.03	0.02	0.03	0.01	0.08	0.02	2.19	0.03
AZ	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.04	0.01
BA	0.00	0.02	0.00	0.01	0.00	0.04	0.73	0.08	0.03	0.02	0.01	0.86	0.02
BE	0.00	0.01	0.61	0.01	0.00	0.00	0.00	0.00	0.00	4.02	0.03	0.26	0.02
BG	0.00	0.04	0.00	0.02	0.00	0.62	0.04	0.55	0.02	0.03	0.01	0.51	0.03
BY	0.00	4.38	0.01	1.51	0.00	0.56	0.01	0.02	0.01	0.12	0.10	8.03	0.02
CH	0.11	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.14	0.02
CY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.00
CZ	0.00	0.10	0.04	0.03	0.00	0.03	0.01	0.03	0.01	0.15	0.03	14.06	0.02
DE	0.04	0.42	1.52	0.16	0.00	0.05	0.01	0.02	0.01	8.82	0.28	14.89	0.13
DK	0.00	0.11	0.01	0.05	0.00	0.01	0.00	0.00	0.00	0.44	0.30	0.97	0.02
EE	0.00	0.53	0.00	1.38	0.00	0.03	0.00	0.00	0.00	0.04	0.05	0.78	0.00
ES	0.00	0.04	0.03	0.02	0.00	0.01	0.01	0.02	0.04	0.28	0.07	0.53	10.92
FI	0.00	0.53	0.01	0.55	0.00	0.10	0.00	0.01	0.00	0.14	0.41	1.90	0.03
FR	0.01	0.11	1.53	0.05	0.00	0.02	0.02	0.04	0.06	2.28	0.16	2.01	0.79
GB	0.00	0.16	0.05	0.09	0.00	0.01	0.00	0.01	0.01	2.03	0.43	1.38	0.31
GE	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.06	0.01
GR	0.00	0.02	0.00	0.01	0.00	0.15	0.06	1.42	0.17	0.02	0.01	0.31	0.04
HR	0.00	0.04	0.00	0.01	0.00	0.06	0.14	0.06	0.02	0.03	0.01	1.44	0.02
HU	0.00	0.06	0.01	0.03	0.00	0.12	0.04	0.08	0.01	0.06	0.02	3.92	0.02
IE	0.00	0.03	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.18	0.04	0.22	0.13
IS	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.09	0.13	0.16	0.03
IT	0.01	0.05	0.02	0.02	0.00	0.08	0.19	0.21	0.56	0.10	0.04	1.52	0.23
KY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.03	0.01
KZ	0.00	0.22	0.01	0.13	0.00	0.19	0.03	0.09	0.04	0.16	0.25	1.79	0.12
LI	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT	0.00	**30.89**	0.00	2.10	0.00	0.08	0.00	0.01	0.00	0.08	0.06	4.59	0.01
LU	0.00	0.00	**0.82**	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.03	0.00
LV	0.00	5.10	0.00	**14.42**	0.00	0.06	0.00	0.00	0.00	0.08	0.07	2.15	0.01
MC	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MD	0.00	0.03	0.00	0.01	0.00	**12.45**	0.00	0.01	0.00	0.01	0.01	0.36	0.00
ME	0.00	0.00	0.00	0.00	0.00	0.01	**3.53**	0.11	0.01	0.00	0.00	0.09	0.01
MK	0.00	0.00	0.00	0.00	0.00	0.02	0.03	**8.24**	0.01	0.00	0.00	0.09	0.01
MT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.04**	0.00	0.00	0.00	0.00
NL	0.00	0.03	0.08	0.01	0.00	0.00	0.00	0.00	0.00	**27.98**	0.07	0.43	0.02
NO	0.00	0.25	0.03	0.15	0.00	0.06	0.01	0.02	0.01	0.63	**23.36**	2.50	0.10
PL	0.00	2.46	0.05	0.47	0.00	0.28	0.03	0.07	0.01	0.61	0.20	**236.34**	0.07
PT	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.09	**60.23**
RO	0.00	0.13	0.01	0.05	0.00	4.72	0.07	0.28	0.03	0.08	0.04	2.54	0.05
RS	0.00	0.03	0.00	0.01	0.00	0.16	0.98	3.30	0.03	0.03	0.01	0.96	0.02
RU	0.00	3.78	0.06	2.78	0.00	1.57	0.11	0.38	0.12	0.88	1.66	14.75	0.40
SE	0.00	1.10	0.02	0.69	0.00	0.13	0.01	0.02	0.01	0.67	3.71	7.94	0.07
SI	0.00	0.01	0.00	0.00	0.00	0.02	0.01	0.01	0.01	0.01	0.00	0.49	0.01
SK	0.00	0.06	0.01	0.02	0.00	0.08	0.02	0.04	0.01	0.04	0.02	9.49	0.01
TJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
TM	0.00	0.02	0.00	0.01	0.00	0.02	0.00	0.02	0.01	0.02	0.02	0.19	0.02
TR	0.00	0.08	0.01	0.04	0.00	0.83	0.06	0.29	0.19	0.07	0.05	1.22	0.13
UA	0.00	0.78	0.02	0.29	0.00	8.39	0.05	0.14	0.04	0.19	0.14	13.19	0.08
UZ	0.00	0.02	0.00	0.01	0.00	0.03	0.00	0.01	0.01	0.02	0.02	0.21	0.02
SUM	0.23	51.75	5.06	25.20	0.01	31.10	6.87	16.85	1.60	50.59	31.88	355.74	74.25
Emiss, 2017	0.10	20.19	2.02	18.15	0.01	12.96	3.32	7.99	3.30	23.03	18.54	259.02	44.12

***Table 3.6**. Matrix of PCDD/Fs country-to-country deposition from anthropogenic sources in 2018, g TEQ/y (continued)*

Receptors ↓ Emitters →

code	RO	RS	RU	SE	SI	SK	TJ	TM	TR	UA	UZ	Sum
AL	0.58	2.44	0.22	0.00	0.03	0.19	0.00	0.00	1.17	0.80	0.00	47.76
AM	0.06	0.01	0.20	0.00	0.00	0.01	0.00	0.03	5.81	0.11	0.01	64.14
AT	1.04	0.68	0.47	0.04	5.30	11.48	0.00	0.01	0.49	1.11	0.01	100.00
AZ	0.14	0.03	2.30	0.01	0.01	0.03	0.02	0.52	3.34	0.58	0.15	133.03
BA	2.07	4.67	0.41	0.02	0.32	2.21	0.00	0.00	0.81	1.39	0.00	72.34
BE	0.03	0.01	0.11	0.03	0.01	0.07	0.00	0.00	0.04	0.08	0.00	51.70
BG	22.40	3.71	3.46	0.03	0.12	0.88	0.01	0.02	8.78	13.42	0.03	130.43
BY	3.29	0.41	23.41	0.40	0.12	1.30	0.03	0.03	1.86	113.08	0.07	213.91
CH	0.06	0.03	0.07	0.01	0.04	0.08	0.00	0.00	0.15	0.09	0.00	34.95
CY	0.06	0.02	0.06	0.00	0.00	0.01	0.00	0.00	9.08	0.12	0.00	10.31
CZ	1.40	1.04	1.01	0.09	0.51	15.07	0.00	0.01	0.44	1.81	0.01	89.22
DE	0.85	0.33	3.89	0.58	0.32	2.58	0.01	0.01	0.76	2.72	0.02	275.02
DK	0.11	0.02	0.83	0.73	0.01	0.12	0.00	0.00	0.13	0.48	0.01	36.92
EE	0.26	0.04	6.80	0.42	0.02	0.16	0.00	0.00	0.25	1.81	0.01	17.25
ES	0.32	0.15	0.55	0.08	0.09	0.28	0.00	0.01	1.30	0.50	0.01	276.23
FI	1.08	0.16	19.89	2.33	0.05	0.48	0.03	0.03	1.19	4.91	0.08	50.29
FR	0.60	0.24	1.19	0.21	0.26	0.75	0.00	0.01	1.35	1.13	0.01	170.75
GB	0.21	0.06	1.34	0.43	0.04	0.36	0.00	0.01	0.48	0.81	0.01	166.52
GE	0.33	0.05	3.57	0.00	0.01	0.05	0.00	0.04	8.87	1.03	0.02	44.47
GR	2.86	1.32	1.99	0.02	0.09	0.51	0.00	0.01	17.53	6.01	0.01	90.24
HR	2.26	4.09	0.50	0.03	4.71	4.17	0.00	0.00	0.67	1.76	0.01	73.61
HU	10.79	6.30	1.04	0.06	1.71	32.26	0.00	0.01	0.78	4.60	0.01	163.40
IE	0.04	0.01	0.25	0.06	0.01	0.07	0.00	0.00	0.12	0.14	0.00	38.71
IS	0.08	0.02	0.27	0.05	0.01	0.06	0.00	0.00	0.20	0.24	0.01	5.44
IT	2.34	1.55	0.96	0.05	3.38	2.70	0.00	0.01	3.22	2.79	0.01	460.79
KY	0.06	0.02	0.34	0.00	0.01	0.02	8.41	0.27	1.06	0.16	34.56	71.03
KZ	2.92	0.55	133.08	0.39	0.14	0.91	6.44	3.70	14.64	20.12	53.39	804.33
LI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
LT	0.61	0.10	8.81	0.40	0.04	0.50	0.01	0.01	0.42	5.63	0.02	61.98
LU	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	2.65
LV	0.50	0.08	6.65	0.52	0.03	0.34	0.01	0.01	0.40	4.07	0.02	39.42
MC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
MD	6.60	0.09	1.49	0.02	0.02	0.22	0.00	0.01	1.06	28.83	0.01	52.49
ME	0.40	1.80	0.09	0.00	0.02	0.18	0.00	0.00	0.33	0.34	0.00	12.66
MK	0.71	2.67	0.22	0.00	0.02	0.19	0.00	0.00	0.98	0.77	0.00	21.33
MT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
NL	0.03	0.01	0.24	0.05	0.01	0.07	0.00	0.00	0.04	0.14	0.00	51.70
NO	0.83	0.17	4.15	2.06	0.06	0.63	0.02	0.03	1.21	2.98	0.06	53.40
PL	5.20	1.70	39.76	1.05	0.57	18.48	0.01	0.02	1.50	20.90	0.05	380.86
PT	0.03	0.01	0.11	0.02	0.01	0.03	0.00	0.00	0.13	0.09	0.00	69.16
RO	294.44	7.40	6.55	0.09	0.37	4.90	0.02	0.04	7.45	38.88	0.08	395.39
RS	13.87	70.31	0.99	0.03	0.22	2.81	0.00	0.01	1.85	4.11	0.01	128.28
RU	19.76	3.03	3186.84	3.41	0.75	5.08	2.47	2.64	55.24	213.61	8.70	3735.71
SE	1.67	0.29	9.78	24.34	0.11	1.28	0.03	0.03	1.60	6.87	0.08	83.48
SI	0.48	0.33	0.14	0.01	15.86	1.20	0.00	0.00	0.18	0.51	0.00	34.38
SK	3.34	1.58	0.82	0.05	0.31	66.16	0.00	0.01	0.45	4.20	0.01	111.55
TJ	0.04	0.01	0.17	0.00	0.00	0.01	64.46	0.41	0.62	0.08	18.08	87.06
TM	0.41	0.08	3.68	0.03	0.02	0.12	3.47	64.09	3.96	1.72	19.45	111.56
TR	11.04	1.44	18.29	0.09	0.23	1.13	0.03	0.14	2100.38	31.98	0.12	2207.89
UA	29.39	1.68	78.44	0.38	0.32	6.13	0.09	0.19	19.80	1249.18	0.32	1439.18
UZ	0.37	0.07	4.26	0.03	0.02	0.11	18.51	6.61	2.70	2.15	153.12	216.97
SUM	445.98	120.83	3579.73	38.66	36.29	186.39	104.13	79.00	2284.88	1798.83	288.60	
Emiss, 2017	189.76	51.37	1409.68	24.75	15.48	75.16	63.72	41.90	1225.73	731.13	161.40	

***Table 3.7**. Matrix of HCB country-to-country deposition from anthropogenic sources in 2018, kg/y*

Receptors ↓ Emitters →

code	AL	AM	AT	AZ	BA	BE	BG	BY	CH	CY	CZ	DE	DK
AL	**0.04**	0.01	0.05	0.00	0.29	0.01	0.00	0.00	0.00	0.00	0.03	0.01	0.00
AM	0.00	**10.46**	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AT	0.00	0.02	**42.22**	0.00	0.57	0.20	0.00	0.00	0.01	0.00	1.73	0.61	0.03
AZ	0.00	1.76	0.01	**0.01**	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.00
BA	0.00	0.02	0.63	0.00	**39.45**	0.06	0.00	0.00	0.00	0.00	0.37	0.06	0.01
BE	0.00	0.00	0.05	0.00	0.01	**7.56**	0.00	0.00	0.00	0.00	0.05	0.23	0.01
BG	0.00	0.06	0.32	0.00	0.75	0.06	**0.26**	0.01	0.00	0.00	0.16	0.05	0.02
BY	0.00	0.03	0.28	0.00	0.27	0.22	0.00	**1.22**	0.00	0.00	0.35	0.19	0.11
CH	0.00	0.01	0.69	0.00	0.06	0.12	0.00	0.00	**0.10**	0.00	0.06	0.21	0.01
CY	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00
CZ	0.00	0.01	5.06	0.00	0.49	0.30	0.00	0.01	0.00	0.00	**18.26**	0.80	0.05
DE	0.00	0.03	7.88	0.00	0.42	5.57	0.00	0.02	0.04	0.00	3.20	**17.61**	0.46
DK	0.00	0.00	0.07	0.00	0.02	0.27	0.00	0.00	0.00	0.00	0.08	0.30	**1.74**
EE	0.00	0.00	0.05	0.00	0.02	0.06	0.00	0.02	0.00	0.00	0.05	0.05	0.05
ES	0.00	0.03	0.18	0.00	0.25	0.74	0.00	0.00	0.00	0.00	0.10	0.16	0.04
FI	0.00	0.02	0.13	0.00	0.08	0.18	0.00	0.02	0.00	0.00	0.15	0.11	0.12
FR	0.00	0.04	0.76	0.00	0.45	9.69	0.00	0.01	0.04	0.00	0.44	1.13	0.12
GB	0.00	0.01	0.16	0.00	0.06	1.50	0.00	0.00	0.00	0.00	0.12	0.37	0.19
GE	0.00	1.60	0.03	0.00	0.06	0.01	0.00	0.00	0.00	0.00	0.02	0.01	0.00
GR	0.01	0.04	0.14	0.00	0.49	0.04	0.01	0.00	0.00	0.00	0.08	0.03	0.01
HR	0.00	0.01	1.40	0.00	6.04	0.06	0.00	0.00	0.00	0.00	0.45	0.07	0.01
HU	0.00	0.02	2.86	0.00	1.38	0.09	0.00	0.01	0.00	0.00	0.99	0.11	0.02
IE	0.00	0.00	0.04	0.00	0.01	0.16	0.00	0.00	0.00	0.00	0.03	0.06	0.03
IS	0.00	0.00	0.02	0.00	0.01	0.05	0.00	0.00	0.00	0.00	0.01	0.01	0.01
IT	0.00	0.05	2.91	0.00	2.75	0.27	0.00	0.01	0.02	0.00	0.43	0.23	0.03
KY	0.00	0.11	0.02	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.00
KZ	0.00	0.59	0.36	0.00	0.46	0.29	0.00	0.03	0.00	0.00	0.25	0.19	0.09
LI	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT	0.00	0.01	0.11	0.00	0.06	0.11	0.00	0.09	0.00	0.00	0.16	0.11	0.10
LU	0.00	0.00	0.01	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.01	0.04	0.00
LV	0.00	0.01	0.10	0.00	0.06	0.12	0.00	0.06	0.00	0.00	0.13	0.11	0.11
MC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MD	0.00	0.01	0.04	0.00	0.04	0.01	0.00	0.01	0.00	0.00	0.03	0.01	0.01
ME	0.00	0.01	0.05	0.00	1.38	0.01	0.00	0.00	0.00	0.00	0.03	0.01	0.00
MK	0.01	0.01	0.05	0.00	0.18	0.01	0.01	0.00	0.00	0.00	0.03	0.01	0.00
MT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NL	0.00	0.00	0.04	0.00	0.01	2.16	0.00	0.00	0.00	0.00	0.04	0.68	0.03
NO	0.00	0.03	0.22	0.00	0.11	0.54	0.00	0.01	0.00	0.00	0.24	0.29	0.41
PL	0.00	0.04	1.77	0.00	0.85	0.85	0.00	0.14	0.00	0.00	7.32	1.36	0.42
PT	0.00	0.00	0.02	0.00	0.03	0.10	0.00	0.00	0.00	0.00	0.01	0.02	0.01
RO	0.00	0.09	0.93	0.00	1.34	0.15	0.02	0.03	0.00	0.00	0.47	0.14	0.04
RS	0.00	0.03	0.58	0.00	4.44	0.06	0.04	0.01	0.00	0.00	0.33	0.07	0.02
RU	0.00	1.72	1.62	0.01	1.66	1.49	0.01	0.49	0.01	0.00	1.33	0.98	0.66
SE	0.00	0.04	0.38	0.00	0.18	0.70	0.00	0.03	0.00	0.00	0.57	0.51	1.16
SI	0.00	0.00	3.17	0.00	0.35	0.03	0.00	0.00	0.00	0.00	0.18	0.04	0.01
SK	0.00	0.01	1.30	0.00	0.56	0.09	0.00	0.01	0.00	0.00	3.88	0.12	0.03
TJ	0.00	0.07	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TM	0.00	0.27	0.05	0.00	0.07	0.03	0.00	0.00	0.00	0.00	0.03	0.02	0.01
TR	0.00	4.84	0.39	0.00	0.72	0.14	0.01	0.02	0.00	0.00	0.19	0.10	0.04
UA	0.00	0.14	0.83	0.00	0.85	0.31	0.00	0.23	0.00	0.00	0.76	0.28	0.12
UZ	0.00	0.14	0.04	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.03	0.02	0.01
SUM	0.08	22.39	78.05	0.03	67.45	34.59	0.37	2.50	0.24	0.00	43.21	27.55	6.36
Emiss, 2017	0.08	28.00	40.21	0.04	45.62	35.09	0.22	1.41	0.35	0.01	21.89	15.07	2.29

***Table 3.7**. Matrix of HCB country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	EE	ES	FI	FR	GB	GE	GR	HR	HU	IE	IS	IT	KY	KZ
AL	0.00	0.00	0.00	0.00	0.01	0.00	0.07	0.00	0.01	0.00	0.00	0.07	0.00	0.00
AM	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AT	0.00	0.00	0.04	0.04	0.09	0.00	0.01	0.02	0.08	0.01	0.00	0.26	0.00	0.00
AZ	0.00	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
BA	0.00	0.00	0.02	0.01	0.03	0.00	0.01	0.07	0.08	0.00	0.00	0.16	0.00	0.00
BE	0.00	0.00	0.02	0.10	0.18	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00
BG	0.00	0.00	0.05	0.01	0.04	0.00	0.06	0.00	0.03	0.00	0.00	0.06	0.00	0.00
BY	0.01	0.00	0.39	0.02	0.15	0.00	0.00	0.00	0.03	0.01	0.00	0.03	0.00	0.00
CH	0.00	0.00	0.01	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00
CY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CZ	0.00	0.00	0.05	0.04	0.12	0.00	0.00	0.01	0.08	0.01	0.00	0.05	0.00	0.00
DE	0.00	0.02	0.28	0.40	1.31	0.00	0.01	0.01	0.04	0.07	0.00	0.20	0.00	0.00
DK	0.00	0.00	0.06	0.01	0.27	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
EE	**0.18**	0.00	0.58	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ES	0.00	**1.26**	0.07	0.16	0.47	0.00	0.01	0.00	0.01	0.05	0.00	0.14	0.00	0.00
FI	0.03	0.00	**31.46**	0.01	0.24	0.00	0.00	0.00	0.01	0.02	0.00	0.01	0.00	0.00
FR	0.00	0.18	0.16	**2.25**	1.28	0.00	0.01	0.01	0.01	0.10	0.00	0.51	0.00	0.00
GB	0.00	0.02	0.15	0.12	**8.94**	0.00	0.00	0.00	0.00	0.50	0.00	0.02	0.00	0.00
GE	0.00	0.00	0.01	0.00	0.01	**0.10**	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
GR	0.00	0.01	0.02	0.01	0.02	0.00	**0.55**	0.00	0.01	0.00	0.00	0.14	0.00	0.00
HR	0.00	0.00	0.02	0.01	0.03	0.00	0.01	**0.28**	0.10	0.00	0.00	0.19	0.00	0.00
HU	0.00	0.00	0.04	0.01	0.04	0.00	0.01	0.04	**0.73**	0.00	0.00	0.06	0.00	0.00
IE	0.00	0.01	0.03	0.02	0.51	0.00	0.00	0.00	0.00	**1.46**	0.00	0.01	0.00	0.00
IS	0.00	0.00	0.02	0.00	0.06	0.00	0.00	0.00	0.00	0.01	**0.03**	0.00	0.00	0.00
IT	0.00	0.04	0.05	0.13	0.12	0.00	0.04	0.04	0.05	0.01	0.00	**6.32**	0.00	0.00
KY	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	**0.19**	0.02
KZ	0.00	0.02	0.71	0.04	0.28	0.00	0.03	0.00	0.02	0.02	0.00	0.11	0.20	**1.12**
LI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT	0.00	0.00	0.19	0.01	0.10	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.00	0.00
LU	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LV	0.03	0.00	0.43	0.01	0.12	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.00	0.00
MC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MD	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
ME	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.04	0.00	0.00
MK	0.00	0.00	0.01	0.00	0.01	0.00	0.06	0.00	0.01	0.00	0.00	0.03	0.00	0.00
MT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NL	0.00	0.00	0.02	0.04	0.27	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
NO	0.00	0.01	1.10	0.04	0.77	0.00	0.00	0.00	0.01	0.05	0.00	0.02	0.00	0.00
PL	0.00	0.01	0.39	0.06	0.46	0.00	0.01	0.01	0.16	0.03	0.00	0.09	0.00	0.00
PT	0.00	0.08	0.01	0.02	0.10	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00
RO	0.00	0.01	0.13	0.02	0.09	0.00	0.03	0.01	0.15	0.01	0.00	0.10	0.00	0.00
RS	0.00	0.00	0.03	0.01	0.04	0.00	0.04	0.02	0.11	0.00	0.00	0.08	0.00	0.00
RU	0.10	0.04	10.94	0.14	1.66	0.02	0.08	0.01	0.10	0.13	0.01	0.32	0.03	0.66
SE	0.02	0.01	8.09	0.04	0.91	0.00	0.01	0.00	0.02	0.05	0.00	0.03	0.00	0.00
SI	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.05	0.02	0.00	0.00	0.10	0.00	0.00
SK	0.00	0.00	0.04	0.01	0.04	0.00	0.00	0.01	0.24	0.00	0.00	0.04	0.00	0.00
TJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TM	0.00	0.00	0.06	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.01
TR	0.00	0.02	0.12	0.03	0.09	0.01	0.14	0.01	0.03	0.01	0.00	0.17	0.00	0.00
UA	0.00	0.01	0.46	0.03	0.20	0.00	0.02	0.01	0.11	0.01	0.00	0.10	0.00	0.01
UZ	0.00	0.00	0.06	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.03
SUM	0.39	1.78	56.40	3.96	19.29	0.15	1.27	0.63	2.30	2.62	0.06	9.83	0.44	1.87
Emiss, 2017	0.31	1.93	33.56	6.50	36.05	0.11	2.54	0.28	1.44	2.00	0.09	11.10	0.67	1.40

***Table 3.7**. Matrix of HCB country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	LI	LT	LU	LV	MC	MD	ME	MK	MT	NL	NO	PL	PT	RO
AL	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.55	0.00	0.00	0.00	0.00	0.03	0.01
AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
AT	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.03	0.00	0.03	0.00	0.05	0.07	0.02
AZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
BA	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.08	0.00	0.01	0.00	0.03	0.05	0.05
BE	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.04	0.00
BG	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.33	0.00	0.01	0.00	0.02	0.06	0.23
BY	0.00	0.09	0.00	0.01	0.00	0.01	0.01	0.02	0.00	0.04	0.01	0.13	0.05	0.04
CH	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.06	0.00
CY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CZ	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.03	0.00	0.05	0.00	0.18	0.05	0.03
DE	0.00	0.01	0.19	0.00	0.00	0.00	0.01	0.03	0.00	0.84	0.02	0.20	0.30	0.02
DK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.01	0.02	0.00
EE	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.01	0.00
ES	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.02	0.00	0.08	0.01	0.01	16.00	0.01
FI	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.04	0.05	0.03	0.05	0.01
FR	0.00	0.00	0.23	0.00	0.00	0.00	0.01	0.04	0.00	0.48	0.01	0.03	1.48	0.01
GB	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.23	0.02	0.02	0.41	0.00
GE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.01
GR	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.71	0.00	0.01	0.00	0.01	0.08	0.03
HR	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.01	0.00	0.03	0.04	0.04
HU	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.05	0.00	0.02	0.00	0.08	0.03	0.11
IE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.15	0.00
IS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02	0.00
IT	0.00	0.00	0.01	0.00	0.00	0.00	0.09	0.14	0.00	0.04	0.00	0.03	0.43	0.04
KY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.03	0.00
KZ	0.00	0.01	0.01	0.00	0.00	0.00	0.02	0.07	0.00	0.06	0.03	0.04	0.27	0.04
LI	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT	0.00	**0.29**	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.03	0.01	0.06	0.02	0.01
LU	0.00	0.00	**0.03**	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
LV	0.00	0.09	0.00	**0.13**	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.04	0.02	0.01
MC	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MD	0.00	0.00	0.00	0.00	0.00	**0.05**	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.04
ME	0.00	0.00	0.00	0.00	0.00	0.00	**0.66**	0.07	0.00	0.00	0.00	0.00	0.01	0.01
MK	0.00	0.00	0.00	0.00	0.00	0.00	0.02	**3.13**	0.00	0.00	0.00	0.00	0.02	0.01
MT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	0.00
NL	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	**0.38**	0.00	0.01	0.02	0.00
NO	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.12	**1.68**	0.03	0.15	0.01
PL	0.00	0.05	0.02	0.01	0.00	0.00	0.02	0.06	0.00	0.18	0.02	**2.32**	0.13	0.08
PT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	**33.20**	0.00
RO	0.00	0.01	0.00	0.00	0.00	0.03	0.03	0.16	0.00	0.03	0.01	0.07	0.09	**1.57**
RS	0.00	0.00	0.00	0.00	0.00	0.00	0.27	1.56	0.00	0.01	0.00	0.03	0.05	0.23
RU	0.00	0.13	0.02	0.05	0.00	0.02	0.05	0.22	0.00	0.32	0.20	0.29	0.79	0.19
SE	0.00	0.03	0.01	0.01	0.00	0.00	0.00	0.02	0.00	0.18	0.32	0.12	0.14	0.02
SI	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.02	0.01
SK	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.00	0.02	0.00	0.20	0.03	0.05
TJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
TM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.04	0.01
TR	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.16	0.00	0.02	0.01	0.03	0.24	0.10
UA	0.00	0.03	0.01	0.01	0.00	0.05	0.02	0.08	0.00	0.06	0.02	0.26	0.14	0.23
UZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.04	0.01
SUM	0.00	0.81	0.66	0.27	0.00	0.18	1.74	7.77	0.01	3.65	2.51	4.46	54.98	3.31
Emiss, 2017	0.00	0.43	0.44	0.31	0.00	0.12	1.63	6.67	0.06	3.33	1.61	4.03	58.97	2.36

***Table 3.7**. Matrix of HCB country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	RS	RU	SE	SI	SK	TJ	TM	TR	UA	UZ	SUM
AL	0.04	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.90	0.00	2.29
AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.22	0.00	10.75
AT	0.04	0.01	0.01	0.10	0.33	0.00	0.00	0.00	1.32	0.00	47.96
AZ	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.74	0.00	2.67
BA	0.23	0.01	0.00	0.01	0.14	0.00	0.00	0.00	1.77	0.00	43.59
BE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	8.56
BG	0.17	0.03	0.01	0.00	0.05	0.00	0.00	0.03	14.63	0.00	17.56
BY	0.02	0.25	0.05	0.00	0.06	0.00	0.00	0.01	68.04	0.00	72.17
CH	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.17	0.00	1.91
CY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10	0.00	0.14
CZ	0.05	0.03	0.01	0.02	0.47	0.00	0.00	0.00	1.66	0.00	27.95
DE	0.03	0.11	0.06	0.02	0.15	0.00	0.00	0.00	2.78	0.00	42.35
DK	0.00	0.01	0.04	0.00	0.01	0.00	0.00	0.00	0.32	0.00	3.35
EE	0.00	0.04	0.05	0.00	0.01	0.00	0.00	0.00	1.37	0.00	2.71
ES	0.01	0.01	0.01	0.00	0.02	0.00	0.00	0.01	0.78	0.00	20.67
FI	0.01	0.11	0.39	0.00	0.02	0.00	0.00	0.00	3.21	0.00	36.56
FR	0.02	0.03	0.03	0.01	0.04	0.00	0.00	0.01	1.37	0.00	21.01
GB	0.00	0.02	0.04	0.00	0.01	0.00	0.00	0.00	0.66	0.00	13.62
GE	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.03	1.63	0.00	3.64
GR	0.05	0.01	0.00	0.00	0.03	0.00	0.00	0.04	5.03	0.00	7.66
HR	0.12	0.01	0.00	0.06	0.16	0.00	0.00	0.00	1.31	0.00	10.58
HU	0.13	0.02	0.01	0.03	0.72	0.00	0.00	0.00	3.15	0.00	10.79
IE	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.17	0.00	2.76
IS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.39
IT	0.07	0.02	0.01	0.10	0.11	0.00	0.00	0.01	2.55	0.00	17.16
KY	0.00	0.00	0.00	0.00	0.00	0.06	0.01	0.01	0.37	0.13	1.05
KZ	0.04	0.56	0.07	0.01	0.05	0.05	0.07	0.05	20.19	0.17	26.63
LI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
LT	0.01	0.19	0.03	0.00	0.02	0.00	0.00	0.00	4.14	0.00	5.90
LU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.24
LV	0.00	0.11	0.06	0.00	0.02	0.00	0.00	0.00	3.60	0.00	5.42
MC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MD	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	13.18	0.00	13.51
ME	0.05	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.49	0.00	2.89
MK	0.05	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.97	0.00	4.63
MT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	3.86
NO	0.01	0.04	0.32	0.00	0.02	0.00	0.00	0.00	2.01	0.00	8.30
PL	0.09	0.83	0.09	0.02	0.64	0.00	0.00	0.01	14.28	0.00	32.82
PT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	33.77
RO	0.20	0.06	0.02	0.01	0.21	0.00	0.00	0.02	29.84	0.00	36.12
RS	**0.95**	0.02	0.01	0.01	0.14	0.00	0.00	0.01	4.54	0.00	13.74
RU	0.14	**9.50**	0.71	0.03	0.25	0.02	0.06	0.14	151.16	0.04	188.55
SE	0.02	0.17	**2.77**	0.00	0.06	0.00	0.00	0.01	5.11	0.00	21.77
SI	0.02	0.00	0.00	**0.22**	0.05	0.00	0.00	0.00	0.42	0.00	4.77
SK	0.06	0.02	0.01	0.01	**1.58**	0.00	0.00	0.00	2.88	0.00	11.30
TJ	0.00	0.00	0.00	0.00	0.00	**0.35**	0.01	0.00	0.18	0.05	0.74
TM	0.01	0.02	0.01	0.00	0.01	0.02	**0.61**	0.01	2.20	0.05	3.65
TR	0.06	0.08	0.02	0.01	0.06	0.00	0.01	**2.54**	24.94	0.00	35.38
UA	0.08	0.37	0.06	0.01	0.23	0.00	0.01	0.04	**482.79**	0.00	488.98
UZ	0.00	0.03	0.01	0.00	0.01	0.12	0.09	0.01	2.07	**0.29**	3.20
SUM	2.79	12.79	4.90	0.70	5.74	0.63	0.89	3.05	879.70	0.74	0.00
Emiss, 2017	2.24	6.67	3.02	0.54	3.42	0.84	1.06	3.60	514.48	1.03	

***Table 3.8**. Matrix of PCB-153 country-to-country deposition from anthropogenic sources in 2018, kg/y*

Receptors ↓ Emitters →

code	AL	AM	AT	AZ	BA	BE	BG	BY	CH	CY	CZ	DE	DK
AL	**0.15**	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.02	0.00
AM	0.00	**0.62**	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AT	0.00	0.00	**6.73**	0.00	0.00	0.08	0.00	0.01	0.33	0.00	0.42	3.09	0.00
AZ	0.00	0.12	0.00	**0.29**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
BA	0.01	0.00	0.05	0.00	**0.35**	0.01	0.01	0.01	0.01	0.00	0.08	0.14	0.00
BE	0.00	0.00	0.01	0.00	0.00	**15.55**	0.00	0.00	0.03	0.00	0.01	1.67	0.00
BG	0.00	0.00	0.03	0.00	0.00	0.02	**1.26**	0.02	0.01	0.00	0.03	0.12	0.00
BY	0.00	0.00	0.03	0.00	0.00	0.08	0.01	**5.49**	0.02	0.00	0.11	0.45	0.02
CH	0.00	0.00	0.05	0.00	0.00	0.07	0.00	0.00	**4.58**	0.00	0.02	1.34	0.00
CY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.05**	0.00	0.00	0.00
CZ	0.00	0.00	0.41	0.00	0.00	0.11	0.00	0.02	0.07	0.00	**6.91**	3.35	0.01
DE	0.00	0.00	0.84	0.00	0.00	3.57	0.00	0.05	1.27	0.00	1.52	**89.88**	0.14
DK	0.00	0.00	0.01	0.00	0.00	0.13	0.00	0.00	0.01	0.00	0.02	0.81	**1.23**
EE	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.03	0.00	0.00	0.01	0.10	0.01
ES	0.00	0.00	0.02	0.00	0.00	0.31	0.00	0.00	0.05	0.00	0.03	0.52	0.01
FI	0.00	0.00	0.02	0.00	0.00	0.07	0.00	0.04	0.01	0.00	0.04	0.31	0.02
FR	0.00	0.00	0.13	0.00	0.00	7.31	0.00	0.01	2.51	0.00	0.15	7.84	0.02
GB	0.00	0.00	0.02	0.00	0.00	0.75	0.00	0.01	0.03	0.00	0.03	1.05	0.05
GE	0.00	0.15	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
GR	0.02	0.00	0.02	0.00	0.00	0.01	0.08	0.01	0.01	0.00	0.02	0.08	0.00
HR	0.00	0.00	0.12	0.00	0.10	0.02	0.01	0.01	0.02	0.00	0.13	0.21	0.00
HU	0.00	0.00	0.20	0.00	0.01	0.03	0.01	0.02	0.02	0.00	0.29	0.35	0.00
IE	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.12	0.01
IS	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.05	0.00
IT	0.01	0.00	0.28	0.00	0.03	0.12	0.01	0.01	0.61	0.00	0.16	1.03	0.00
KY	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
KZ	0.00	0.08	0.04	0.04	0.00	0.10	0.01	0.05	0.04	0.00	0.06	0.43	0.01
LI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.00
LT	0.00	0.00	0.01	0.00	0.00	0.03	0.00	0.52	0.01	0.00	0.04	0.23	0.02
LU	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.01	0.00	0.00	0.40	0.00
LV	0.00	0.00	0.01	0.00	0.00	0.03	0.00	0.18	0.01	0.00	0.03	0.20	0.02
MC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MD	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.01	0.03	0.00
ME	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00
MK	0.02	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.01	0.02	0.00
MT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NL	0.00	0.00	0.01	0.00	0.00	2.24	0.00	0.00	0.01	0.00	0.01	2.64	0.01
NO	0.00	0.00	0.02	0.00	0.00	0.24	0.00	0.01	0.02	0.00	0.05	0.79	0.09
PL	0.00	0.00	0.18	0.00	0.01	0.32	0.01	0.52	0.07	0.00	2.93	4.42	0.11
PT	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.06	0.00
RO	0.00	0.00	0.09	0.00	0.01	0.05	0.07	0.05	0.03	0.00	0.12	0.35	0.01
RS	0.01	0.00	0.05	0.00	0.03	0.02	0.13	0.01	0.01	0.00	0.08	0.17	0.00
RU	0.01	0.15	0.22	0.08	0.01	0.55	0.08	0.96	0.16	0.00	0.41	2.54	0.11
SE	0.00	0.00	0.03	0.00	0.00	0.26	0.00	0.05	0.02	0.00	0.12	1.27	0.46
SI	0.00	0.00	0.29	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.05	0.13	0.00
SK	0.00	0.00	0.10	0.00	0.00	0.03	0.01	0.02	0.02	0.00	0.85	0.30	0.00
TJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
TM	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.04	0.00
TR	0.00	0.23	0.04	0.02	0.00	0.04	0.07	0.02	0.03	0.03	0.04	0.23	0.00
UA	0.00	0.01	0.10	0.01	0.01	0.11	0.04	0.57	0.05	0.00	0.23	0.73	0.02
UZ	0.00	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.05	0.00
SUM	0.28	1.43	10.22	0.53	0.61	32.57	1.89	8.73	10.14	0.09	15.07	127.67	2.43

***Table 3.8**. Matrix of PCB-153 country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	EE	ES	FI	FR	GB	GE	GR	HR	HU	IE	IS	IT	KY	KZ
AL	0.00	0.06	0.00	0.07	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.32	0.00	0.00
AM	0.00	0.00	0.00	0.01	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
AT	0.00	0.15	0.00	0.69	0.05	0.00	0.00	0.02	0.08	0.00	0.00	1.60	0.00	0.00
AZ	0.00	0.01	0.00	0.01	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.01
BA	0.00	0.12	0.00	0.18	0.02	0.00	0.01	0.08	0.08	0.00	0.00	0.73	0.00	0.00
BE	0.00	0.07	0.00	6.68	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
BG	0.00	0.09	0.00	0.15	0.02	0.01	0.04	0.00	0.03	0.00	0.00	0.30	0.00	0.00
BY	0.01	0.06	0.01	0.27	0.11	0.00	0.00	0.00	0.02	0.00	0.00	0.22	0.00	0.00
CH	0.00	0.15	0.00	1.54	0.03	0.00	0.00	0.00	0.00	0.00	0.00	1.91	0.00	0.00
CY	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
CZ	0.00	0.08	0.00	0.56	0.08	0.00	0.00	0.01	0.11	0.00	0.00	0.26	0.00	0.00
DE	0.00	0.50	0.01	9.97	1.46	0.00	0.00	0.01	0.04	0.02	0.00	1.00	0.00	0.00
DK	0.00	0.03	0.00	0.30	0.33	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.00	0.00
EE	**0.67**	0.01	0.04	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
ES	0.00	**64.37**	0.00	3.99	0.56	0.00	0.00	0.00	0.01	0.02	0.00	0.62	0.00	0.00
FI	0.10	0.06	**3.73**	0.23	0.19	0.00	0.00	0.00	0.01	0.01	0.00	0.08	0.00	0.00
FR	0.00	7.76	0.00	**130.96**	2.03	0.00	0.00	0.01	0.01	0.03	0.00	3.49	0.00	0.00
GB	0.00	0.52	0.00	3.30	**31.10**	0.00	0.00	0.00	0.00	0.36	0.00	0.09	0.00	0.00
GE	0.00	0.01	0.00	0.02	0.00	**1.43**	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
GR	0.00	0.16	0.00	0.21	0.02	0.00	**1.04**	0.00	0.02	0.00	0.00	0.73	0.00	0.00
HR	0.00	0.11	0.00	0.21	0.02	0.00	0.00	**0.46**	0.13	0.00	0.00	1.04	0.00	0.00
HU	0.00	0.08	0.00	0.22	0.03	0.00	0.00	0.05	**1.90**	0.00	0.00	0.45	0.00	0.00
IE	0.00	0.12	0.00	0.23	0.65	0.00	0.00	0.00	0.00	**1.07**	0.00	0.02	0.00	0.00
IS	0.00	0.03	0.00	0.08	0.08	0.00	0.00	0.00	0.00	0.00	**0.12**	0.01	0.00	0.00
IT	0.00	1.49	0.00	3.21	0.10	0.00	0.03	0.07	0.07	0.00	0.00	**54.04**	0.00	0.00
KY	0.00	0.02	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.03	**1.12**	0.25
KZ	0.00	0.25	0.02	0.48	0.17	0.06	0.01	0.00	0.02	0.00	0.00	0.46	0.43	**5.78**
LI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
LT	0.01	0.02	0.01	0.11	0.07	0.00	0.00	0.00	0.01	0.00	0.00	0.05	0.00	0.00
LU	0.00	0.01	0.00	0.89	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
LV	0.09	0.02	0.02	0.10	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
MC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MD	0.00	0.01	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
ME	0.00	0.03	0.00	0.04	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.18	0.00	0.00
MK	0.00	0.03	0.00	0.04	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.13	0.00	0.00
MT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NL	0.00	0.05	0.00	1.79	0.54	0.00	0.00	0.00	0.00	0.01	0.00	0.03	0.00	0.00
NO	0.00	0.15	0.17	0.73	0.75	0.00	0.00	0.00	0.00	0.02	0.00	0.06	0.00	0.00
PL	0.01	0.16	0.02	1.01	0.40	0.00	0.01	0.01	0.13	0.01	0.00	0.46	0.00	0.00
PT	0.00	1.20	0.00	0.24	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
RO	0.00	0.15	0.00	0.32	0.05	0.01	0.02	0.01	0.16	0.00	0.00	0.63	0.00	0.00
RS	0.00	0.10	0.00	0.17	0.02	0.00	0.02	0.03	0.16	0.00	0.00	0.44	0.00	0.00
RU	0.16	0.88	0.37	2.29	1.12	0.27	0.05	0.02	0.10	0.03	0.01	2.12	0.08	1.62
SE	0.02	0.13	0.27	0.74	0.85	0.00	0.00	0.00	0.01	0.02	0.00	0.09	0.00	0.00
SI	0.00	0.04	0.00	0.10	0.01	0.00	0.00	0.08	0.03	0.00	0.00	0.93	0.00	0.00
SK	0.00	0.04	0.00	0.15	0.02	0.00	0.00	0.01	0.28	0.00	0.00	0.20	0.00	0.00
TJ	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.04
TM	0.00	0.03	0.00	0.05	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.08
TR	0.00	0.34	0.00	0.44	0.05	0.12	0.09	0.01	0.03	0.00	0.00	0.87	0.00	0.01
UA	0.01	0.20	0.01	0.56	0.13	0.03	0.02	0.01	0.09	0.00	0.00	0.74	0.00	0.02
UZ	0.00	0.03	0.00	0.06	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.05	0.20	0.37
SUM	1.10	79.93	4.71	173.50	41.67	2.14	1.41	0.91	3.58	1.62	0.14	74.74	1.89	8.21

***Table 3.8**. Matrix of PCB-153 country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	LI	LT	LU	LV	MC	MD	ME	MK	MT	NL	NO	PL	PT
AL	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00
AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AT	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.09	0.00
AZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BA	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.00	0.04	0.00
BE	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	1.21	0.00	0.01	0.00
BG	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.01	0.00	0.01	0.00	0.02	0.00
BY	0.00	0.21	0.00	0.06	0.00	0.03	0.00	0.00	0.00	0.03	0.00	0.30	0.00
CH	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.00
CY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CZ	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.57	0.00
DE	0.01	0.02	0.19	0.01	0.00	0.00	0.00	0.00	0.00	1.91	0.01	0.61	0.00
DK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.01	0.03	0.00
EE	0.00	0.02	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.00
ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.02	0.36
FI	0.00	0.02	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.06	0.00
FR	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.83	0.00	0.08	0.04
GB	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.01	0.03	0.01
GE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GR	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.03	0.00	0.00	0.00	0.01	0.00
HR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.05	0.00
HU	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.13	0.00
IE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.01	0.00
IS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
IT	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.03	0.00	0.06	0.01
KY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KZ	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.04	0.01	0.06	0.00
LI	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT	0.00	**1.33**	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.14	0.00
LU	0.00	0.00	**0.11**	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
LV	0.00	0.18	0.00	**0.97**	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.06	0.00
MC	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MD	0.00	0.00	0.00	0.00	0.00	**0.44**	0.00	0.00	0.00	0.00	0.00	0.01	0.00
ME	0.00	0.00	0.00	0.00	0.00	0.00	**0.06**	0.00	0.00	0.00	0.00	0.00	0.00
MK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.17**	0.00	0.00	0.00	0.00	0.00
MT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00
NL	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	**5.42**	0.00	0.01	0.00
NO	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.14	**1.00**	0.05	0.00
PL	0.00	0.15	0.01	0.03	0.00	0.02	0.00	0.00	0.00	0.15	0.01	**8.95**	0.00
PT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	**2.12**
RO	0.00	0.01	0.00	0.00	0.00	0.28	0.00	0.01	0.00	0.02	0.00	0.10	0.00
RS	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.08	0.00	0.01	0.00	0.04	0.00
RU	0.00	0.19	0.01	0.15	0.00	0.09	0.00	0.01	0.00	0.27	0.05	0.57	0.01
SE	0.00	0.04	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.17	0.10	0.19	0.00
SI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
SK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.00
TJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
TR	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.01	0.00	0.01	0.00	0.04	0.00
UA	0.00	0.04	0.00	0.01	0.00	0.35	0.00	0.01	0.00	0.05	0.00	0.48	0.00
UZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
SUM	0.06	2.27	0.68	1.51	0.01	1.38	0.15	0.37	0.03	11.22	1.23	13.27	2.59

***Table 3.8**. Matrix of PCB-153 country-to-country deposition from anthropogenic sources in 2018, kg/y (continued)*

Receptors ↓ Emitters →

code	RO	RS	RU	SE	SI	SK	TJ	TM	TR	UA	UZ	SUM
AL	0.01	0.06	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.02	0.00	0.85
AM	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.81
AT	0.01	0.01	0.02	0.00	0.26	0.37	0.00	0.00	0.00	0.05	0.00	14.16
AZ	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.01	0.02	0.01	0.00	0.76
BA	0.02	0.08	0.02	0.00	0.00	0.06	0.00	0.00	0.00	0.05	0.00	2.20
BE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.72
BG	0.40	0.12	0.21	0.00	0.00	0.03	0.00	0.00	0.06	0.47	0.00	3.53
BY	0.04	0.01	0.87	0.04	0.00	0.04	0.00	0.00	0.01	1.13	0.00	9.70
CH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.77
CY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.11
CZ	0.01	0.02	0.03	0.01	0.01	0.46	0.00	0.00	0.00	0.06	0.00	13.24
DE	0.01	0.01	0.08	0.07	0.01	0.09	0.00	0.00	0.00	0.08	0.00	113.40
DK	0.00	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.00	0.01	0.00	3.19
EE	0.00	0.00	0.13	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.00	1.36
ES	0.00	0.00	0.02	0.01	0.00	0.01	0.00	0.00	0.00	0.01	0.00	71.08
FI	0.01	0.00	0.45	0.18	0.00	0.01	0.00	0.00	0.00	0.07	0.00	5.79
FR	0.01	0.01	0.04	0.02	0.01	0.03	0.00	0.00	0.00	0.03	0.00	163.63
GB	0.00	0.00	0.02	0.04	0.00	0.01	0.00	0.00	0.00	0.01	0.00	37.92
GE	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.06	0.04	0.00	2.15
GR	0.04	0.03	0.10	0.00	0.00	0.01	0.00	0.00	0.09	0.16	0.00	2.94
HR	0.02	0.05	0.02	0.00	0.06	0.10	0.00	0.00	0.00	0.06	0.00	2.97
HU	0.08	0.10	0.05	0.00	0.01	0.79	0.00	0.00	0.00	0.35	0.00	5.24
IE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.34
IS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
IT	0.03	0.04	0.05	0.00	0.07	0.09	0.00	0.00	0.02	0.09	0.00	61.81
KY	0.00	0.00	0.04	0.00	0.00	0.00	0.14	0.02	0.01	0.01	0.56	2.28
KZ	0.04	0.01	4.53	0.03	0.00	0.03	0.11	0.15	0.08	0.47	0.76	14.89
LI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
LT	0.01	0.00	0.23	0.04	0.00	0.01	0.00	0.00	0.00	0.10	0.00	3.13
LU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
LV	0.00	0.00	0.16	0.05	0.00	0.01	0.00	0.00	0.00	0.07	0.00	2.34
MC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MD	0.09	0.00	0.07	0.00	0.00	0.01	0.00	0.00	0.01	0.53	0.00	1.33
ME	0.01	0.05	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.48
MK	0.01	0.11	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.68
MT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
NL	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.80
NO	0.00	0.00	0.06	0.21	0.00	0.01	0.00	0.00	0.00	0.03	0.00	4.67
PL	0.05	0.03	0.53	0.11	0.01	0.61	0.00	0.00	0.01	1.00	0.00	22.42
PT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.84
RO	**2.67**	0.15	0.32	0.01	0.01	0.13	0.00	0.00	0.04	1.84	0.00	7.73
RS	0.14	**1.11**	0.06	0.00	0.00	0.08	0.00	0.00	0.01	0.15	0.00	3.18
RU	0.25	0.07	**102.05**	0.29	0.02	0.16	0.03	0.09	0.31	4.58	0.20	123.81
SE	0.01	0.00	0.16	**5.61**	0.00	0.03	0.00	0.00	0.00	0.09	0.00	10.80
SI	0.00	0.01	0.01	0.00	**0.30**	0.03	0.00	0.00	0.00	0.02	0.00	2.07
SK	0.03	0.02	0.03	0.00	0.00	**2.61**	0.00	0.00	0.00	0.26	0.00	5.38
TJ	0.00	0.00	0.01	0.00	0.00	0.00	**0.63**	0.02	0.00	0.00	0.28	1.10
TM	0.00	0.00	0.21	0.00	0.00	0.00	0.03	**1.11**	0.02	0.04	0.57	2.37
TR	0.15	0.03	0.81	0.01	0.00	0.03	0.00	0.01	**4.92**	0.89	0.00	9.67
UA	0.37	0.03	3.18	0.03	0.01	0.17	0.00	0.01	0.12	**22.71**	0.01	31.31
UZ	0.00	0.00	0.22	0.00	0.00	0.00	0.19	0.18	0.01	0.04	**2.51**	4.02
SUM	4.54	2.16	115.37	6.96	0.79	6.07	1.13	1.60	5.89	35.65	4.91	0.00

4. EVALUATION OF MODELLING RESULTS VS. OBSERVATIONS

4.1. Polycyclic aromatic hydrocarbons (PAHs)

4.1.1. Benzo[a]pyrene (B(a)P)

Table 4.1. *Annual mean modelled and observed B(a)P air concentrations, ng/m^3, temporal correlation coefficient (Rc and relative bias (Bias) at EMEP stations in 2018*

Station name	Code	Type	Longitude	Latitude	Observed	Modelled	R	Bias
Houtem	BE0013R	pm10	2.582	51.016	0.12	0.09	0.83	-25.9
Kosetice (NOAK)	CZ0003R	air+pm10	15.08	49.573	0.41	0.62	0.76	50.1
Westerland	DE0001R	air+pm10	8.31	54.926	0.06	0.05	0.73	-7.4
Waldhof	DE0002R	air+pm10	10.759	52.802	0.15	0.14	0.73	-11.1
Schauinsland	DE0003R	air+pm10	7.909	47.915	0.05	0.33	0.68	639.6
Schmujcke	DE0008R	air+pm10	10.767	50.65	0.11	0.18	0.82	68.9
Zingst	DE0009R	air+pm10	12.725	54.437	0.24	0.08	0.79	-66.0
Lahemaa	EE0009R	pm10	25.9	59.5	0.21	0.04	0.92	-81.4
San Pablo de los Montes	ES0001R	pm10	-4.351	39.547	0.00	0.01	0.48	371.6
Viznar	ES0007R	pm10	-3.534	37.237	0.01	0.08	0.50	598.3
Niembro	ES0008R	pm10	-4.85	43.439	0.01	0.06	0.26	514.8
Zarra	ES0012R	pm10	-1.101	39.083	0.00	0.05	0.03	2615.2
Els Torms	ES0014R	pm10	0.735	41.394	0.01	0.04	0.70	627.7
Virolahti III	FI0018R	pm10	27.668	60.53	0.14	0.04	0.87	-74.7
Pallas (Matorova)	FI0036R	air+aerosol	24.237	68	0.02	0.00	0.68	-93.0
HyytiГ¤lГ¤	FI0050R	pm10	24.283	61.85	0.11	0.02	0.72	-80.1
High Muffles	GB0014R	aerosol	-0.807	54.334	0.07	0.05	0.69	-22.8
Auchencorth Moss	GB0048R	pm10	-3.243	55.792	0.03	0.02	0.84	-36.6
Chilbolton Observatory	GB1055R	pm10	-1.438	51.15	0.07	0.07	0.78	-4.3
Puntijarka	HR0002R	aerosol	15.967	45.9	0.14	0.24	0.34	73.4
Rucava	LV0010R	pm10	21.173	56.162	0.32	0.10	0.99	-70.0
De Zilk	NL0091R	pm10	4.5	52.3	0.08	0.17	0.88	114.6
Birkenes II	NO0002R	air+aerosol	8.252	58.389	0.01	0.02	0.64	28.2
Zeppelin mountain (Ny-Alesund)	NO0042G	air+aerosol	11.887	78.907	0.00	0.00	0.66	-97.6
Diabla Gora	PL0005R	pm10	22.067	54.15	0.52	0.19	0.98	-62.6
Zielonka	PL0009R	pm10	17.934	53.662	1.03	0.31	0.89	-70.1
Rao	SE0014R	air+aerosol	11.914	57.394	0.04	0.07	0.96	74.0
Hallahus	SE0020R	air+aerosol	13.148	56.043	0.07	0.08	0.90	17.2
Norunda Stenen	SE0022R	air+aerosol	17.505	60.086	0.03	0.03	0.70	7.0
Iskrba	SI0008R	pm10	14.867	45.567	0.28	0.10	0.92	-62.3

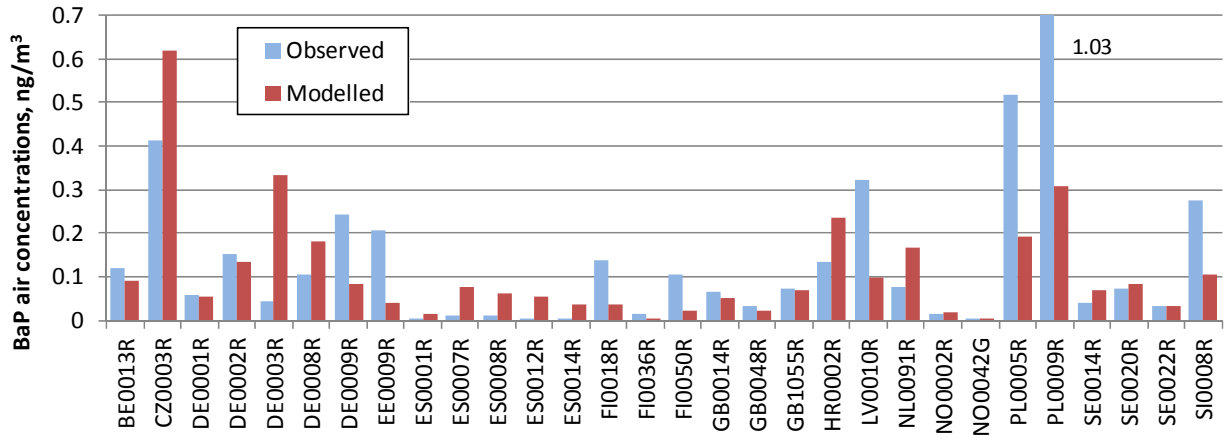
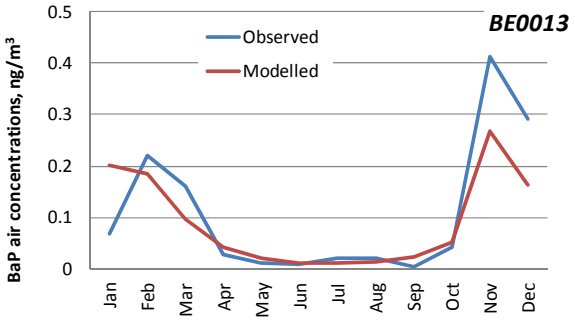
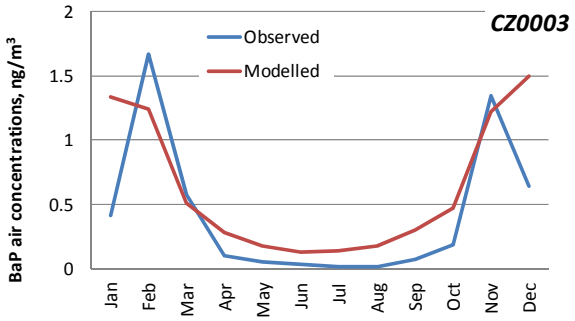
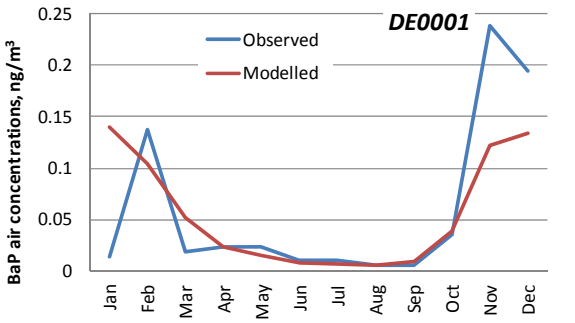
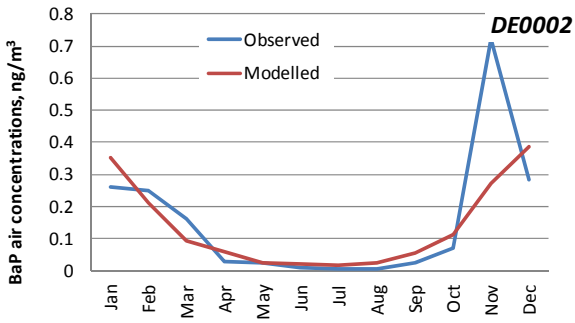


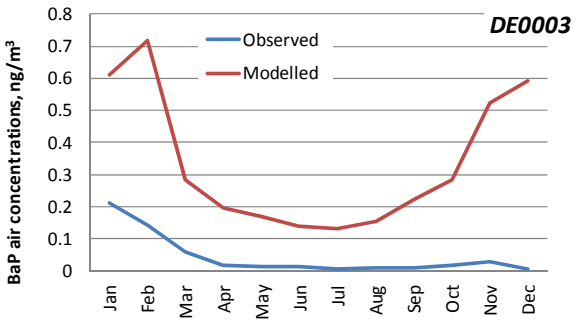
Fig. 4.1. *Modelled and observed annual mean concentrations of B(a)P in air at the EMEP stations in 2018*

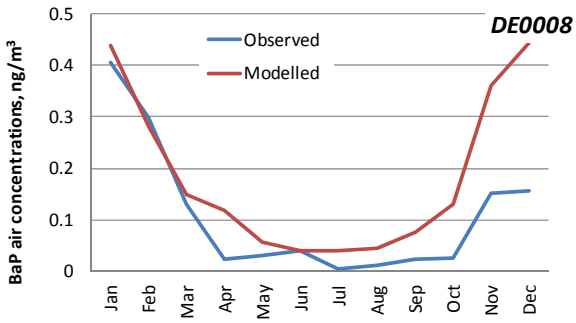

BE0013
Observed
Modelled
BaP air concentrations, ng/m³
0.5
0.4
0.3
0.2
0.1
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

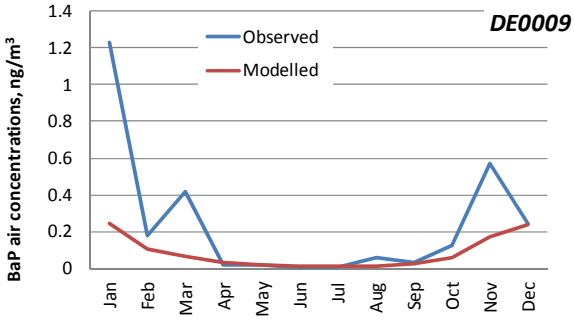

CZ0003
Observed
Modelled
BaP air concentrations, ng/m³
2
1.5
1
0.5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

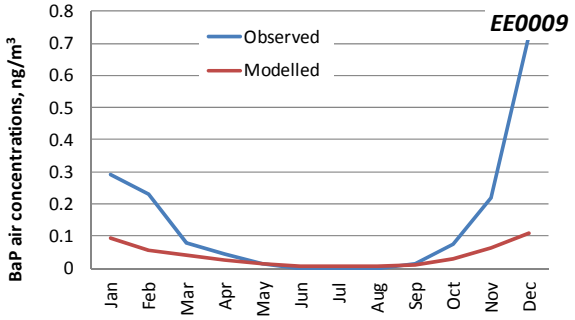

DE0001
Observed
Modelled
BaP air concentrations, ng/m³
0.25
0.2
0.15
0.1
0.05
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

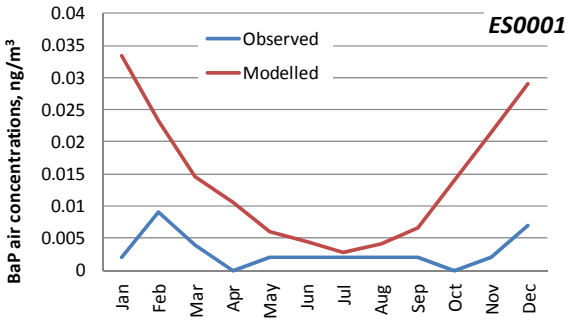

DE0002
Observed
Modelled
BaP air concentrations, ng/m³
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

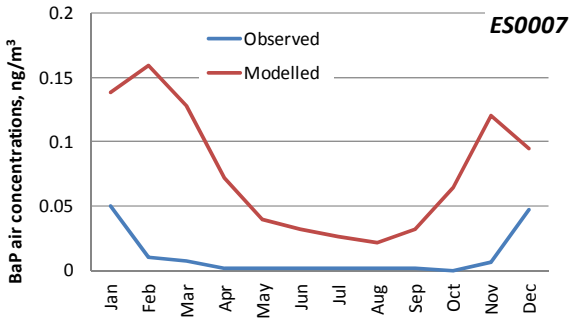

DE0003
Observed
Modelled
BaP air concentrations, ng/m³
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

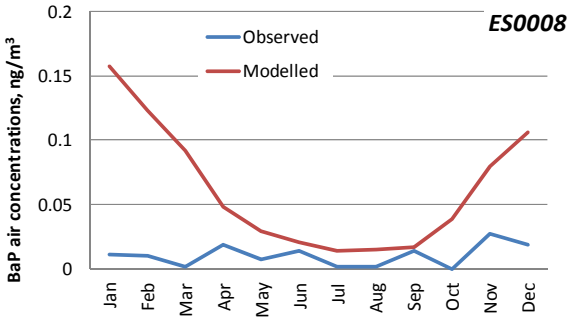

DE0008
Observed
Modelled
BaP air concentrations, ng/m³
0.5
0.4
0.3
0.2
0.1
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

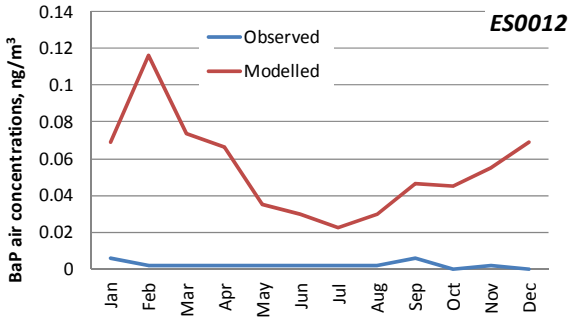

DE0009
Observed
Modelled
BaP air concentrations, ng/m³
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

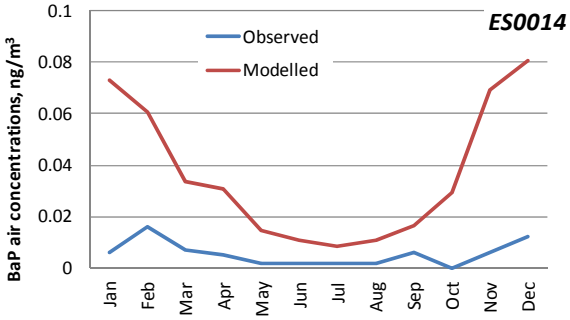

EE0009
Observed
Modelled
BaP air concentrations, ng/m³
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

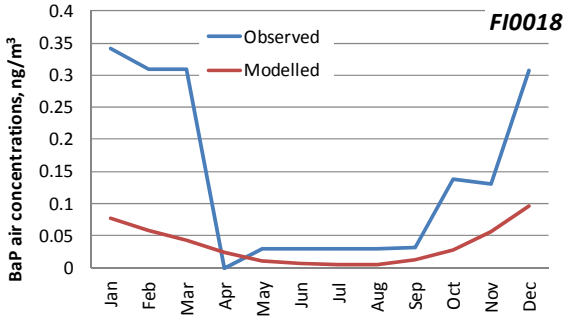

ES0001
Observed
Modelled
BaP air concentrations, ng/m³
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

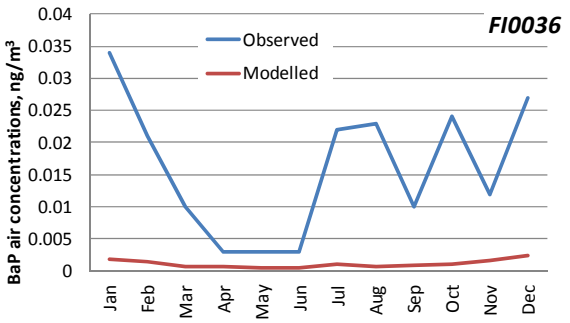

ES0007
Observed
Modelled
BaP air concentrations, ng/m³
0.2
0.15
0.1
0.05
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

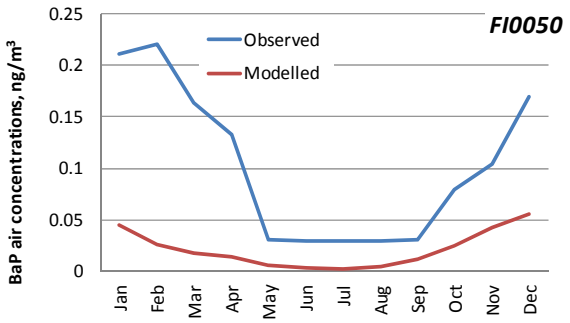

ES0008
Observed
Modelled
BaP air concentrations, ng/m³
0.2
0.15
0.1
0.05
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

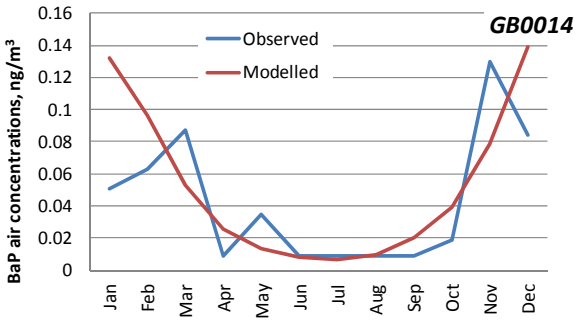

ES0012
Observed
Modelled
BaP air concentrations, ng/m³
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

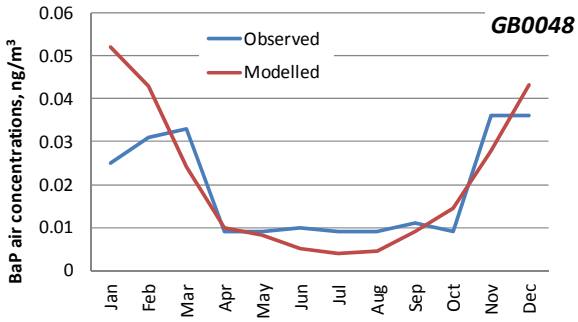

ES0014
Observed
Modelled
BaP air concentrations, ng/m³
0.1
0.08
0.06
0.04
0.02
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

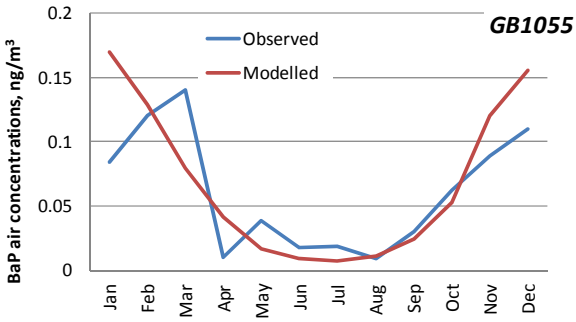

FI0018
Observed
Modelled
BaP air concentrations, ng/m³
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

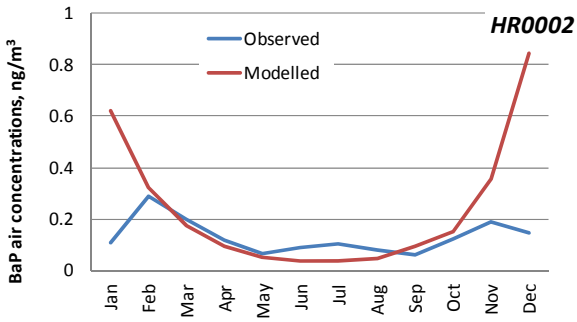

FI0036
Observed
Modelled
BaP air concentrations, ng/m³
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


FI0050
Observed
Modelled
BaP air concentrations, ng/m³
0.25
0.2
0.15
0.1
0.05
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


GB0014
Observed
Modelled
BaP air concentrations, ng/m³
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


GB0048
Observed
Modelled
BaP air concentrations, ng/m³
0.06
0.05
0.04
0.03
0.02
0.01
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


GB1055
Observed
Modelled
BaP air concentrations, ng/m³
0.2
0.15
0.1
0.05
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


HR0002
Observed
Modelled
BaP air concentrations, ng/m³
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

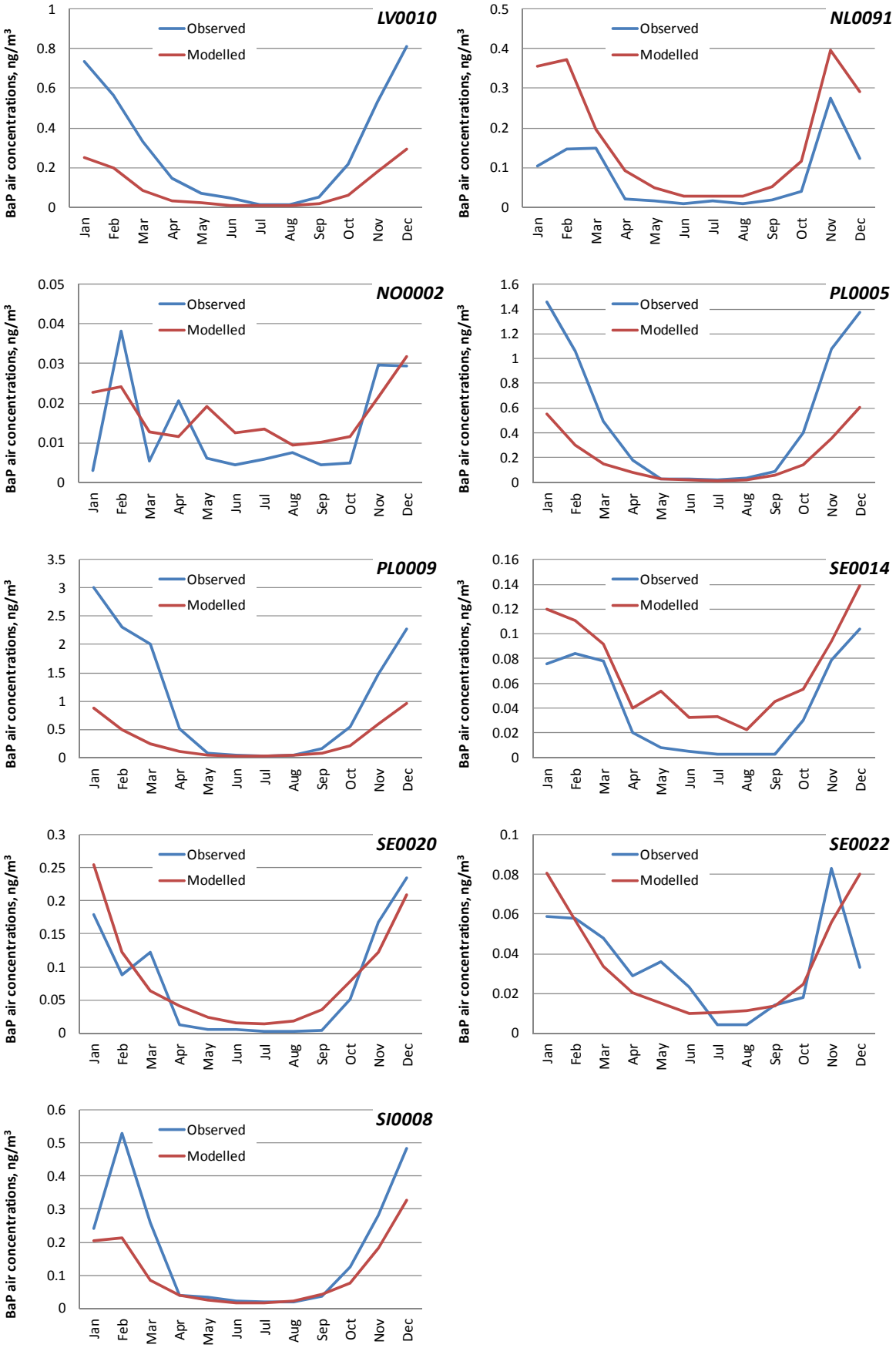


Fig. 4.2. *Modelled and observed monthly mean concentrations of B(a)P in air at the EMEP stations in 2018*

4.1.2. Benzo[b]fluoranthene (B(b)F)

Table 4.2. *Annual mean modelled and observed B(b)F air concentrations, ng/m^3, temporal correlation coefficient (Rc and relative bias (Bias) at EMEP stations in 2018*

Station name	Code	Type	Longitude	Latitude	Observed	Modelled	R	Bias
Kosetice (NOAK)	CZ0003R	air+pm10	15.08	49.57	0.52	0.91	0.85	76.9
Pallas (Matorova)	FI0036R	air+aerosol	24.24	68.00	0.02	0.02	0.97	-0.6
High Muffles	GB0014R	aerosol	-0.81	54.33	0.13	0.14	0.78	8.7
Auchencorth Moss	GB0048R	pm10	-3.24	55.79	0.06	0.07	0.80	6.1
Chilbolton Observatory	GB1055R	pm10	-1.44	51.15	0.12	0.16	0.89	31.4
Rucava	LV0010R	pm10	21.17	56.16	0.47	0.34	0.99	-26.2
Birkenes II	NO0002R	air+aerosol	8.25	58.39	0.06	0.10	0.43	67.9
Zeppelin mountain (Ny-Alesund)	NO0042G	air+aerosol	11.89	78.91	0.00	0.01	0.27	495.0
Diabla Gora	PL0005R	pm10	22.07	54.15	0.76	0.67	0.98	-10.9
Zielonka	PL0009R	pm10	17.93	53.66	1.16	0.88	0.94	-23.9
Rao	SE0014R	air+aerosol	11.91	57.39	0.09	0.18	0.95	88.2
Hallahus	SE0020R	air+aerosol	13.15	56.04	0.14	0.24	0.95	65.7
Norunda Stenen	SE0022R	air+aerosol	17.51	60.09	0.04	0.12	0.88	165.9

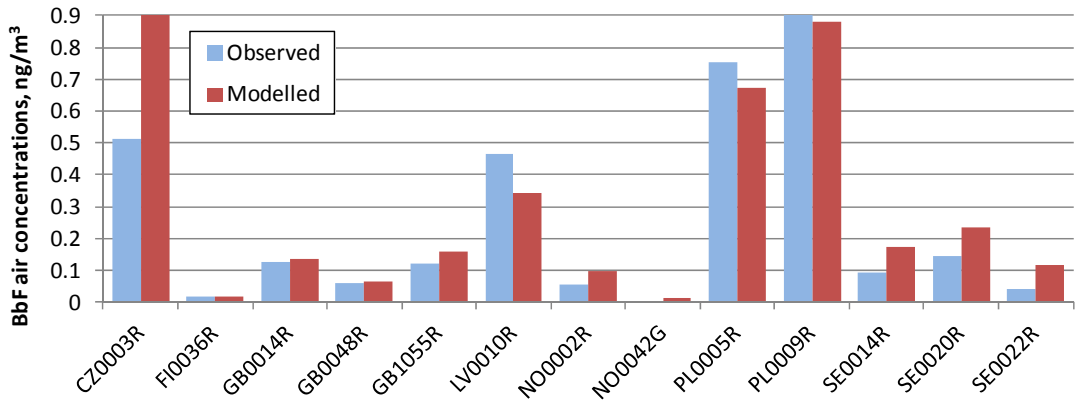
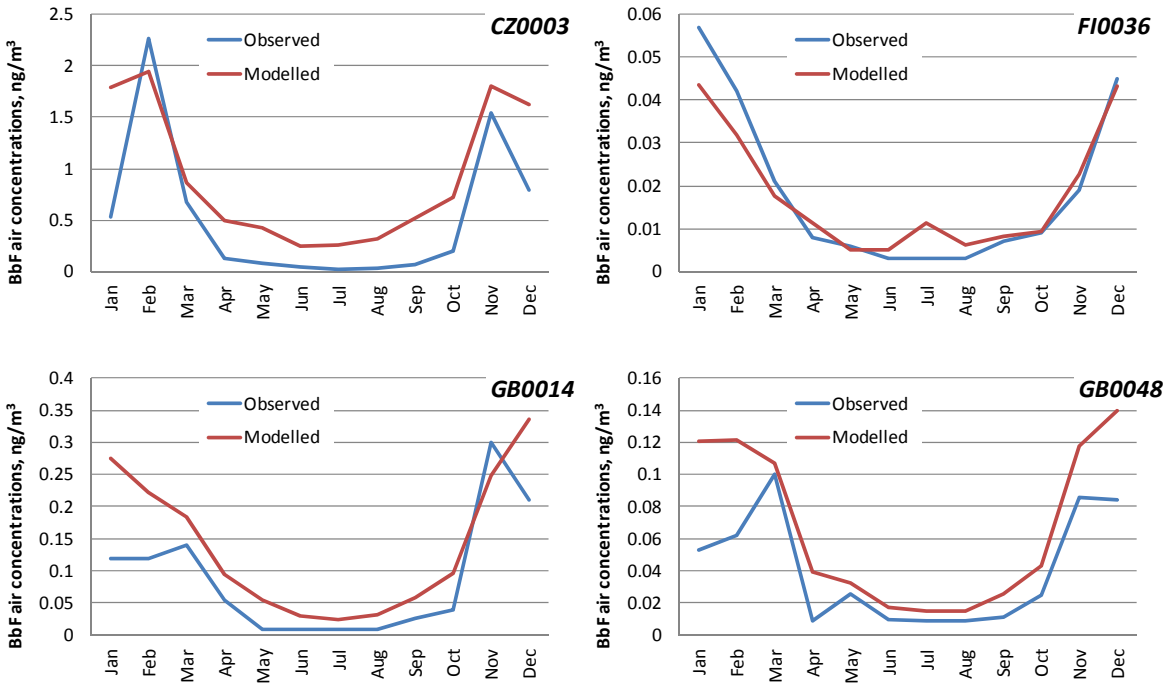


Fig. 4.3. *Modelled and observed annual mean concentrations of B(b)F in air at the EMEP stations in 2018*



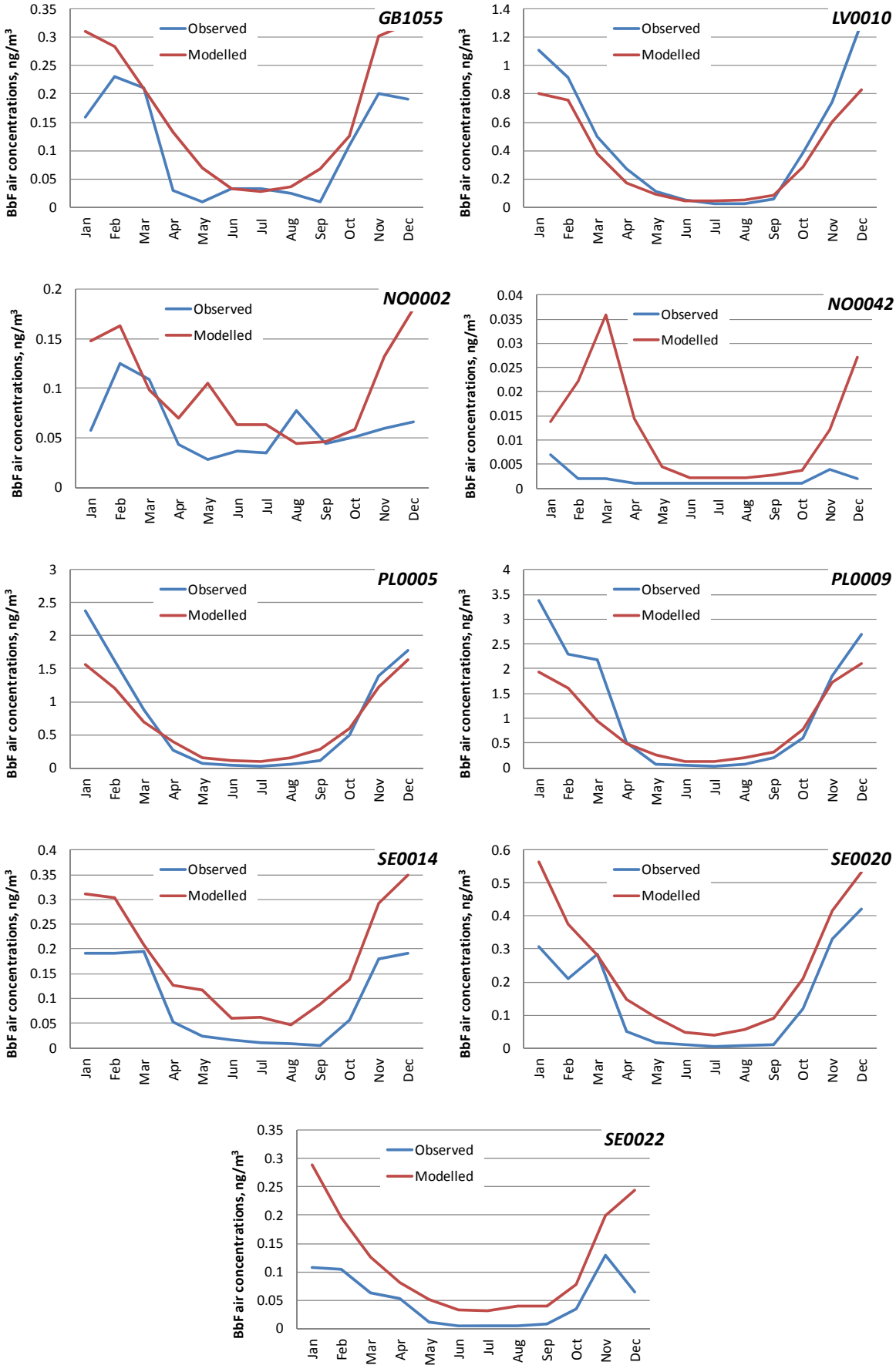


Fig. 4.4. *Modelled and observed monthly mean concentrations of B(b)F in air at the EMEP stations in 2018*

4.1.3. Benzo[k]fluoranthene (B(k)F)

Table 4.3. *Annual mean modelled and observed B(k)F air concentrations, ng/m^3, temporal correlation coefficient (Rc and relative bias (Bias) at EMEP stations in 2018*

Station name	Code	Type	Longitude	Latitude	Observed	Modelled	R	Bias
Kosetice (NOAK)	CZ0003R	air+pm10	15.08	49.573	0.23	0.45	0.82	94.55
San Pablo de los Montes	ES0001R	pm10	-4.351	39.547	0.01	0.02	0.70	169.56
Viznar	ES0007R	pm10	-3.534	37.237	0.05	0.05	0.34	-3.17
Niembro	ES0008R	pm10	-4.85	43.439	0.03	0.05	0.09	51.37
Zarra	ES0012R	pm10	-1.101	39.083	0.02	0.04	0.35	132.10
Els Torms	ES0014R	pm10	0.735	41.394	0.01	0.03	0.66	180.63
Pallas (Matorova)	FI0036R	air+aerosol	24.237	68	0.01	0.00	0.96	-59.17
High Muffles	GB0014R	aerosol	-0.807	54.334	0.10	0.04	0.33	-60.29
Auchencorth Moss	GB0048R	pm10	-3.243	55.792	0.04	0.02	0.28	-56.37
Chilbolton Observatory	GB1055R	pm10	-1.438	51.15	0.07	0.04	0.64	-37.62
Rucava	LV0010R	pm10	21.173	56.162	0.25	0.08	0.99	-67.48
Birkenes II	NO0002R	air+aerosol	8.252	58.389	0.02	0.02	0.60	35.76
Zeppelin mountain (Ny-Alesund)	NO0042G	air+aerosol	11.887	78.907	0.00	0.00	0.37	46.84
Diabla Gora	PL0005R	pm10	22.067	54.15	0.30	0.14	0.98	-53.56
Zielonka	PL0009R	pm10	17.934	53.662	0.59	0.18	0.97	-69.31
Rao	SE0014R	air+aerosol	11.914	57.394	0.04	0.05	0.95	22.59
Hallahus	SE0020R	air+aerosol	13.148	56.043	0.05	0.06	0.93	12.26
Norunda Stenen	SE0022R	air+aerosol	17.505	60.086	0.02	0.03	0.80	61.53

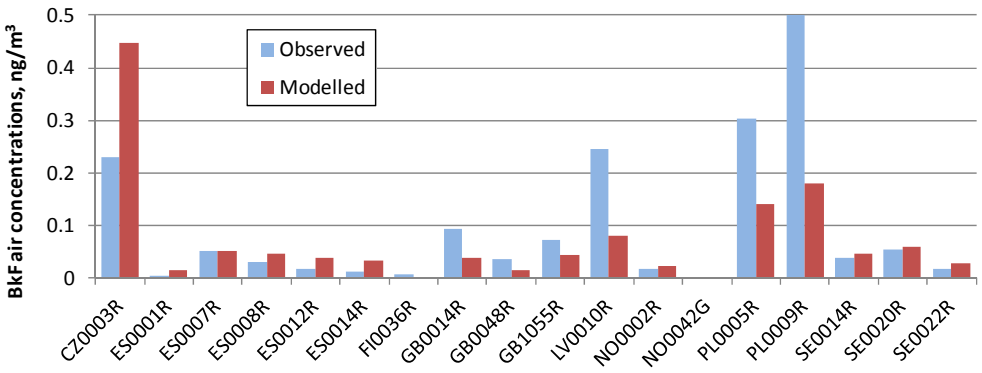
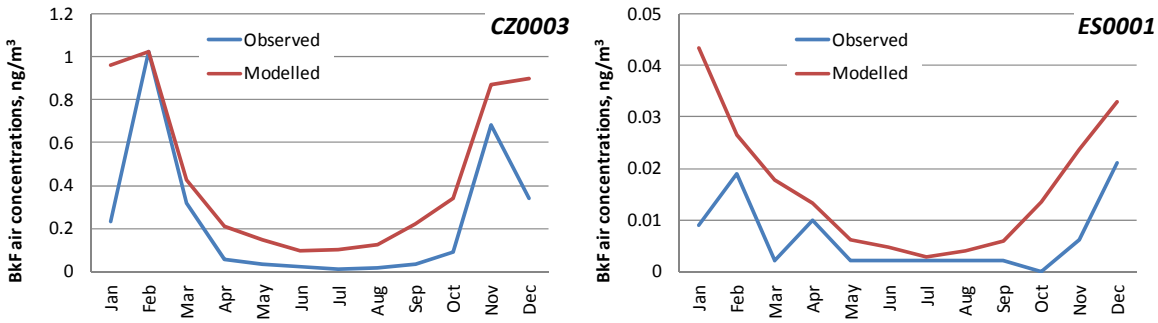
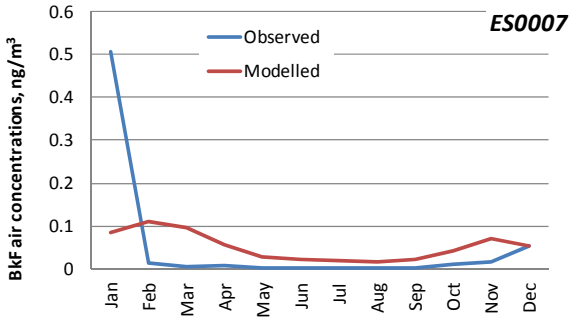
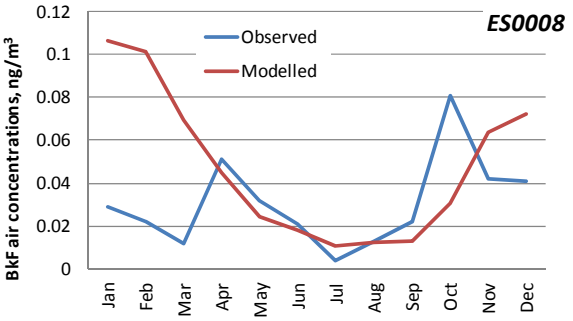
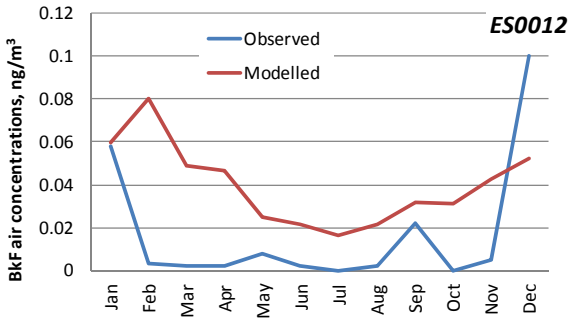


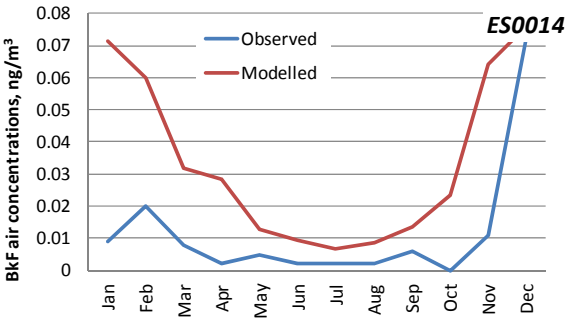
Fig. 4.5. *Modelled and observed annual mean concentrations of B(k)F in air at the EMEP stations in 2018*

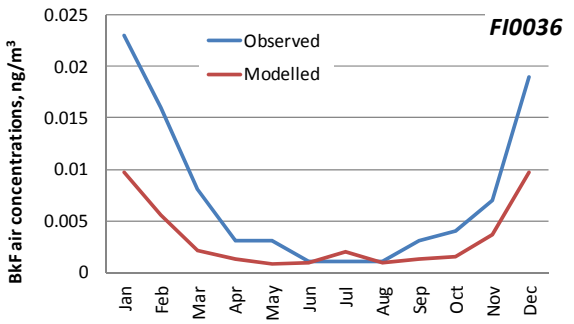


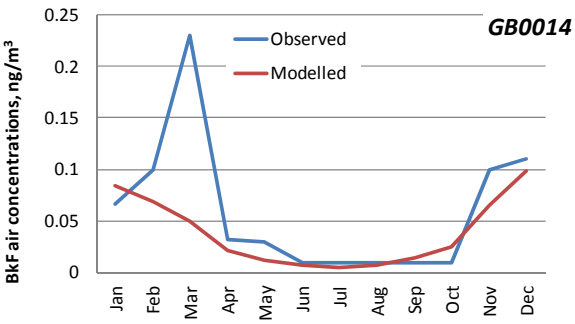

ES0007
Observed
Modelled
BkF air concentrations, ng/m³
0.6
0.5
0.4
0.3
0.2
0.1
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

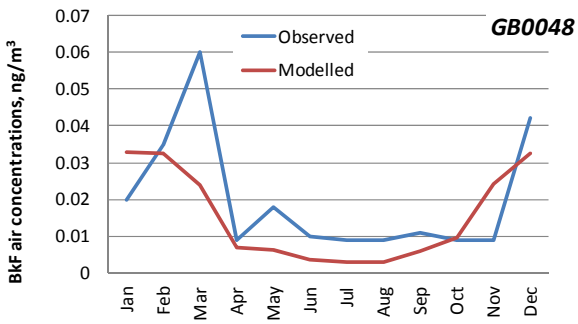

ES0008
Observed
Modelled
BkF air concentrations, ng/m³
0.12
0.1
0.08
0.06
0.04
0.02
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

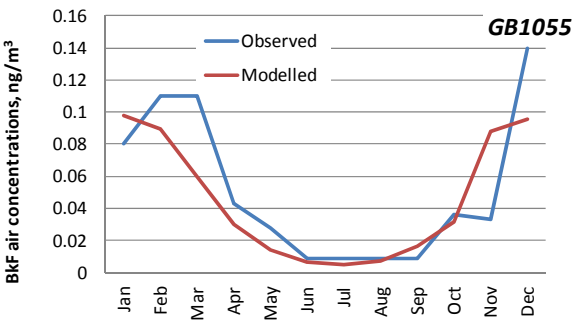

ES0012
Observed
Modelled
BkF air concentrations, ng/m³
0.12
0.1
0.08
0.06
0.04
0.02
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

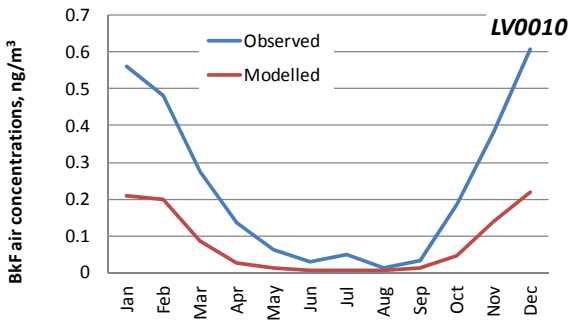

ES0014
Observed
Modelled
BkF air concentrations, ng/m³
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

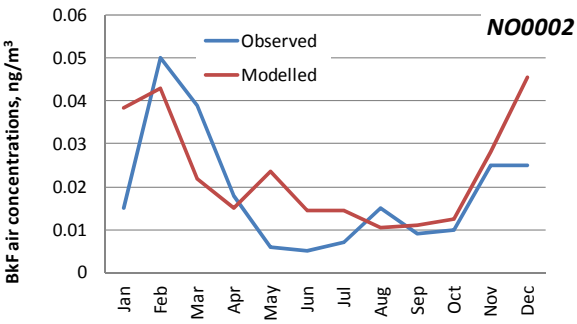

FI0036
Observed
Modelled
BkF air concentrations, ng/m³
0.025
0.02
0.015
0.01
0.005
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


GB0014
Observed
Modelled
BkF air concentrations, ng/m³
0.25
0.2
0.15
0.1
0.05
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


GB0048
Observed
Modelled
BkF air concentrations, ng/m³
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


GB1055
Observed
Modelled
BkF air concentrations, ng/m³
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


LV0010
Observed
Modelled
BkF air concentrations, ng/m³
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


NO0002
Observed
Modelled
BkF air concentrations, ng/m³
0.06
0.05
0.04
0.03
0.02
0.01
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

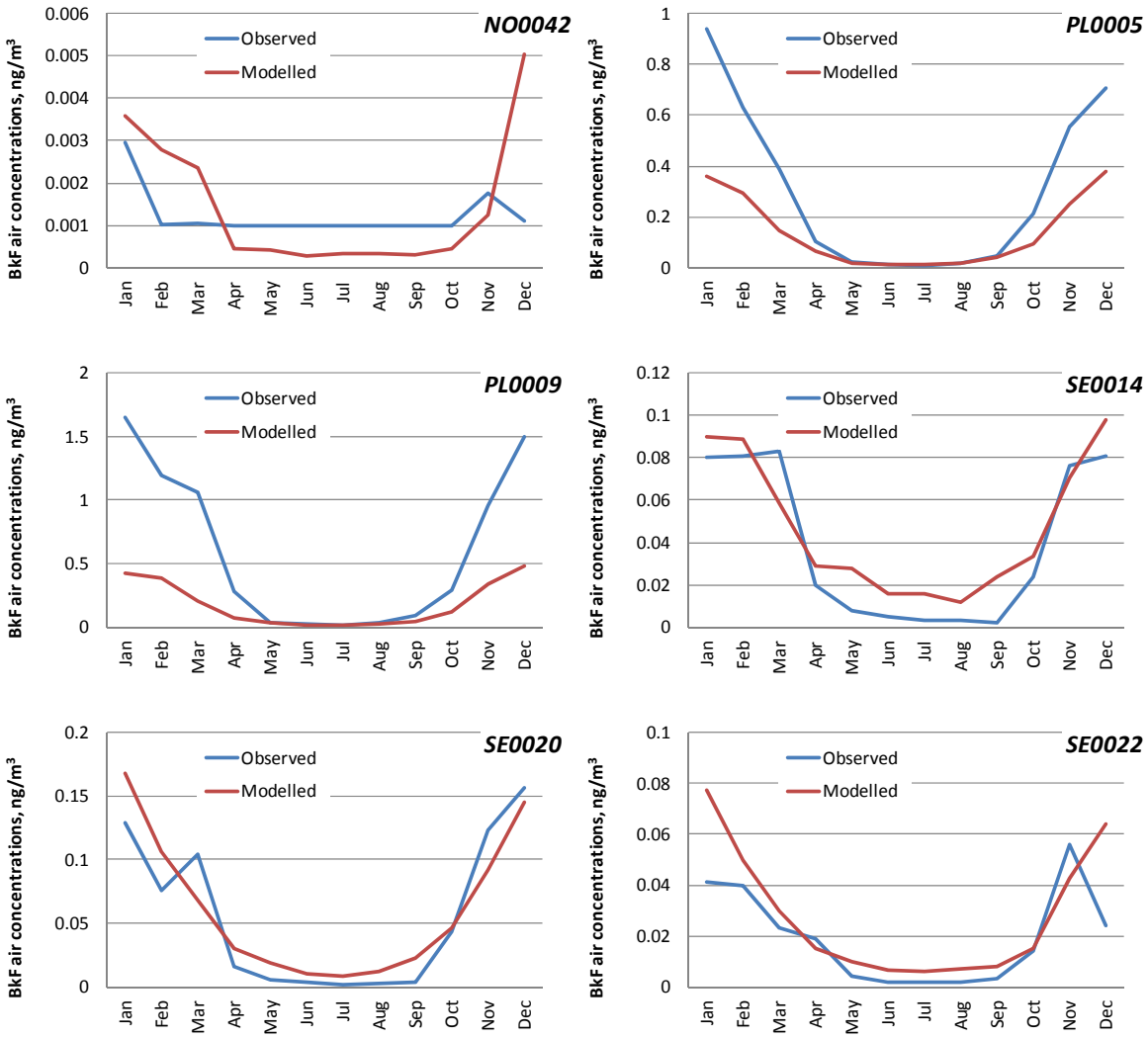


Fig. 4.6. *Modelled and observed monthly mean concentrations of B(k)F in air at the EMEP stations in 2018*

4.1.4. Indeno[1,2,3-cd]pyrene (IP)

Table 4.4. *Annual mean modelled and observed IP air concentrations, ng/m^3, temporal correlation coefficient (Rc and relative bias (Bias) at EMEP stations in 2018*

Station name	Code	Type	Longitude	Latitude	Observed	Modelled	R	Bias
Houtem	BE0013R	pm10	2.582	51.016	0.13	0.14	0.94	8.6
Kosetice (NOAK)	CZ0003R	air+pm10	15.08	49.573	0.38	0.87	0.87	125.6
Westerland	DE0001R	air+pm10	8.31	54.926	0.08	0.09	0.75	11.6
Waldhof	DE0002R	air+pm10	10.759	52.802	0.18	0.11	0.96	-40.8
Schauinsland	DE0003R	air+pm10	7.909	47.915	0.06	0.06	0.55	0.0
Schmucke	DE0008R	air+pm10	10.767	50.65	0.12	0.10	0.82	-22.0
Zingst	DE0009R	air+pm10	12.725	54.437	0.25	0.17	0.81	-31.1
San Pablo de los Montes	ES0001R	pm10	-4.351	39.547	0.01	0.08	0.19	482.2
Viznar	ES0007R	pm10	-3.534	37.237	0.08	0.19	0.15	140.4
Niembro	ES0008R	pm10	-4.85	43.439	0.06	0.18	-0.03	222.3
Zarra	ES0012R	pm10	-1.101	39.083	0.02	0.16	0.44	796.6
Els Torms	ES0014R	pm10	0.735	41.394	0.01	0.15	0.74	1520.4
Virolahti III	FI0018R	pm10	27.668	60.53	0.12	0.10	0.86	-14.9
Pallas (Matorova)	FI0036R	air+aerosol	24.237	68	0.01	0.01	0.96	-21.8
HyytiГ¤lГ¤	FI0050R	pm10	24.283	61.85	0.09	0.06	0.94	-30.1
High Muffles	GB0014R	aerosol	-0.807	54.334	0.08	0.09	0.86	10.8
Auchencorth Moss	GB0048R	pm10	-3.243	55.792	0.04	0.04	0.77	6.7
Chilbolton Observatory	GB1055R	pm10	-1.438	51.15	0.08	0.11	0.90	43.9
Puntijarka	HR0002R	aerosol	15.967	45.9	0.20	0.39	0.84	96.8
Rucava	LV0010R	pm10	21.173	56.162	0.44	0.25	0.99	-43.5
Birkenes II	NO0002R	air+aerosol	8.252	58.389	0.03	0.04	0.57	37.2
Zeppelin mountain (Ny-Alesund)	NO0042G	air+aerosol	11.887	78.907	0.00	0.00	0.39	83.5
Diabla Gora	PL0005R	pm10	22.067	54.15	0.60	0.59	0.97	-2.4
Zielonka	PL0009R	pm10	17.934	53.662	0.99	0.87	0.93	-11.9
Rao	SE0014R	air+aerosol	11.914	57.394	0.06	0.10	0.93	57.3
Hallahus	SE0020R	air+aerosol	13.148	56.043	0.10	0.16	0.96	62.9
Norunda Stenen	SE0022R	air+aerosol	17.505	60.086	0.03	0.06	0.82	107.8
Iskrba	SI0008R	pm10	14.867	45.567	0.36	0.19	0.95	-47.1

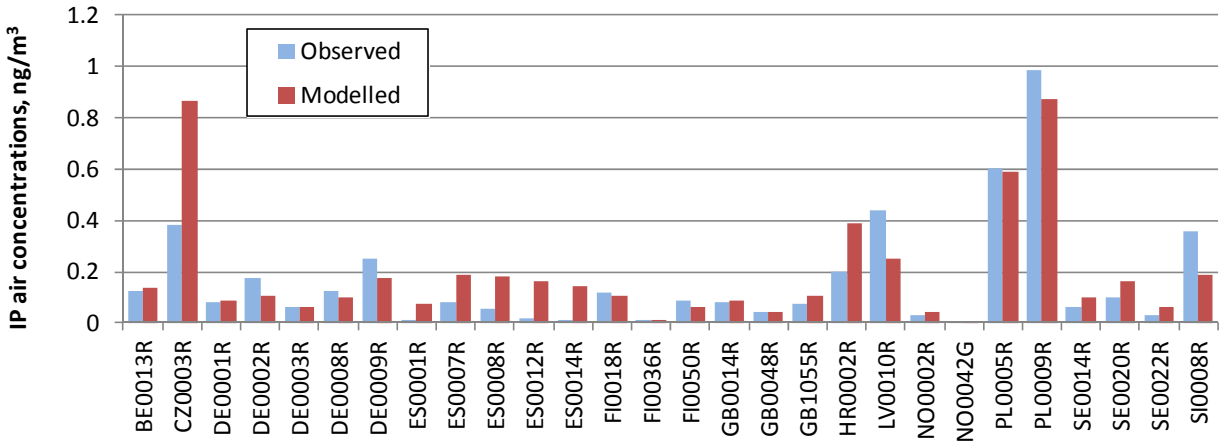
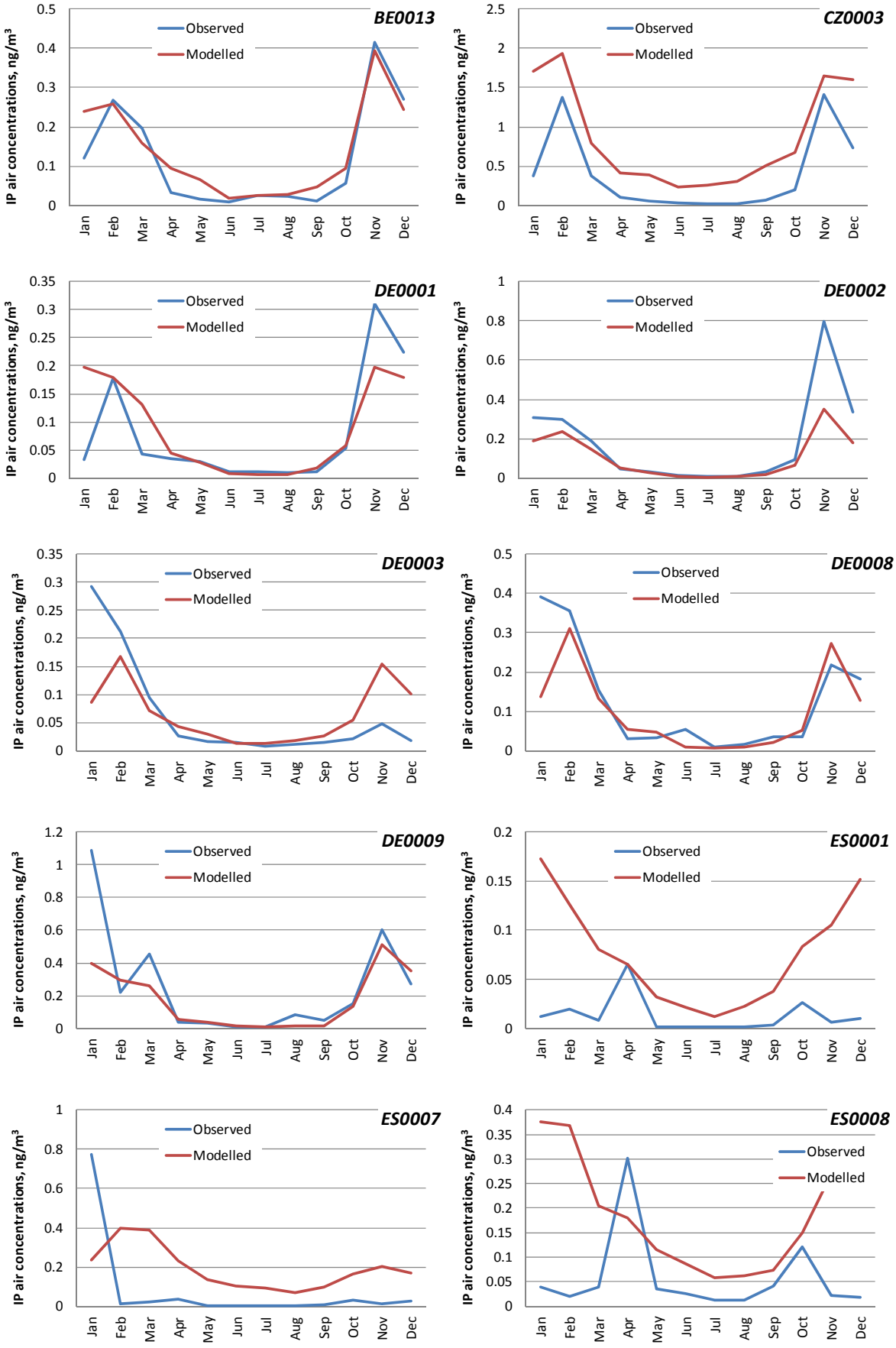
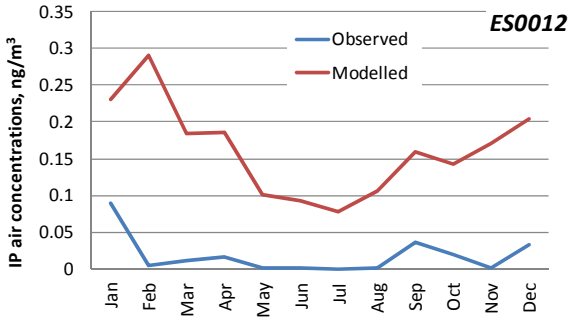
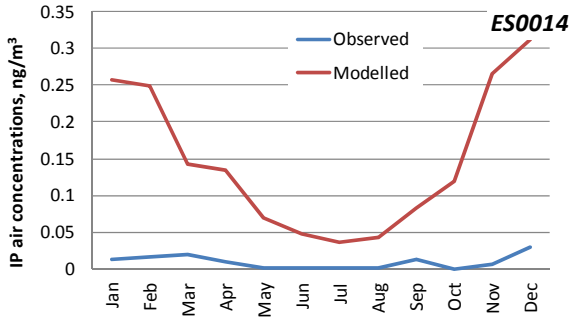
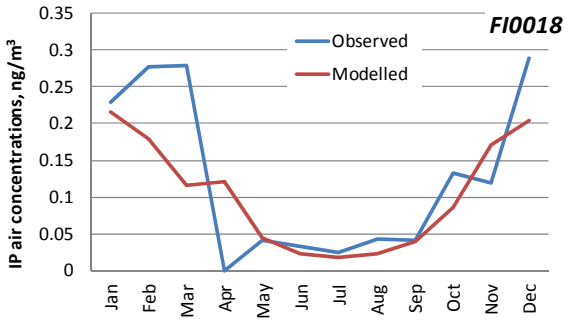


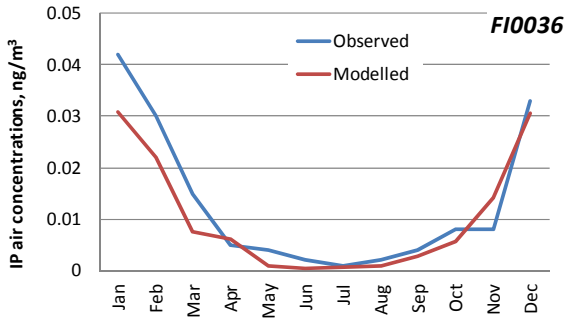
Fig. 4.7. *Modelled and observed annual mean concentrations of IP in air at the EMEP stations in 2018*

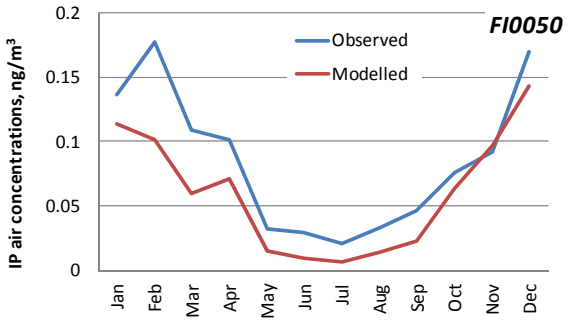

BE0013
CZ0003
DE0001
DE0002
DE0003
DE0008
DE0009
ES0001
ES0007
ES0008
Observed
Modelled
IP air concentrations, ng/m³
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

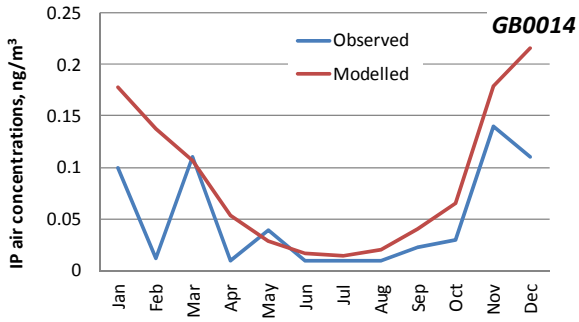

ES0012
Observed
Modelled
IP air concentrations, ng/m³
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

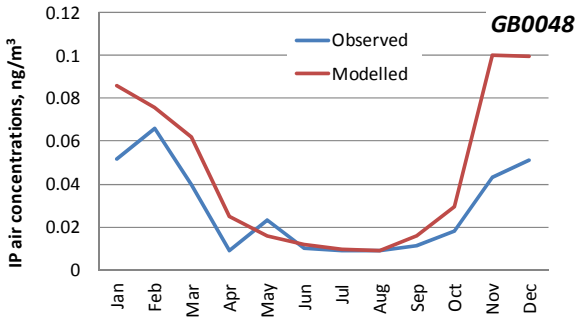

ES0014
Observed
Modelled
IP air concentrations, ng/m³
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

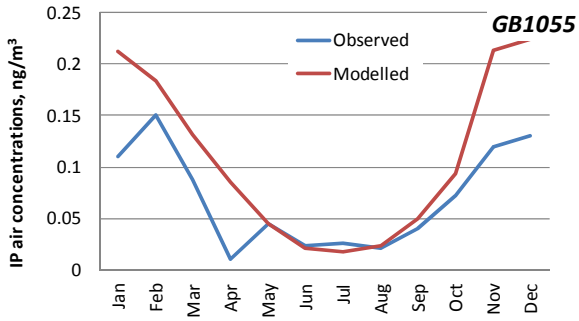

FI0018
Observed
Modelled
IP air concentrations, ng/m³
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

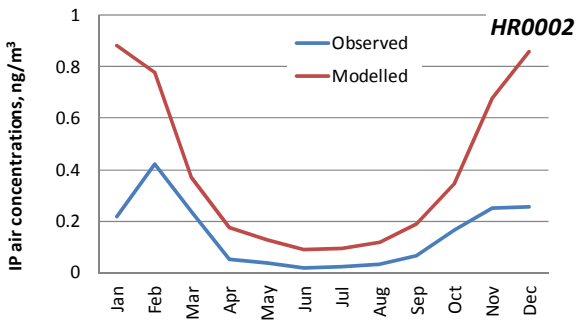

FI0036
Observed
Modelled
IP air concentrations, ng/m³
0.05
0.04
0.03
0.02
0.01
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

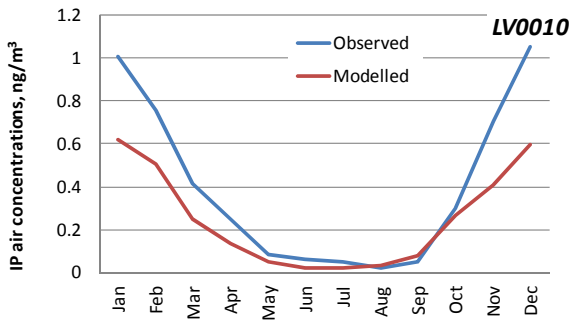

FI0050
Observed
Modelled
IP air concentrations, ng/m³
0.2
0.15
0.1
0.05
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


GB0014
Observed
Modelled
IP air concentrations, ng/m³
0.25
0.2
0.15
0.1
0.05
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


GB0048
Observed
Modelled
IP air concentrations, ng/m³
0.12
0.1
0.08
0.06
0.04
0.02
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


GB1055
Observed
Modelled
IP air concentrations, ng/m³
0.25
0.2
0.15
0.1
0.05
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


HR0002
Observed
Modelled
IP air concentrations, ng/m³
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec


LV0010
Observed
Modelled
IP air concentrations, ng/m³
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

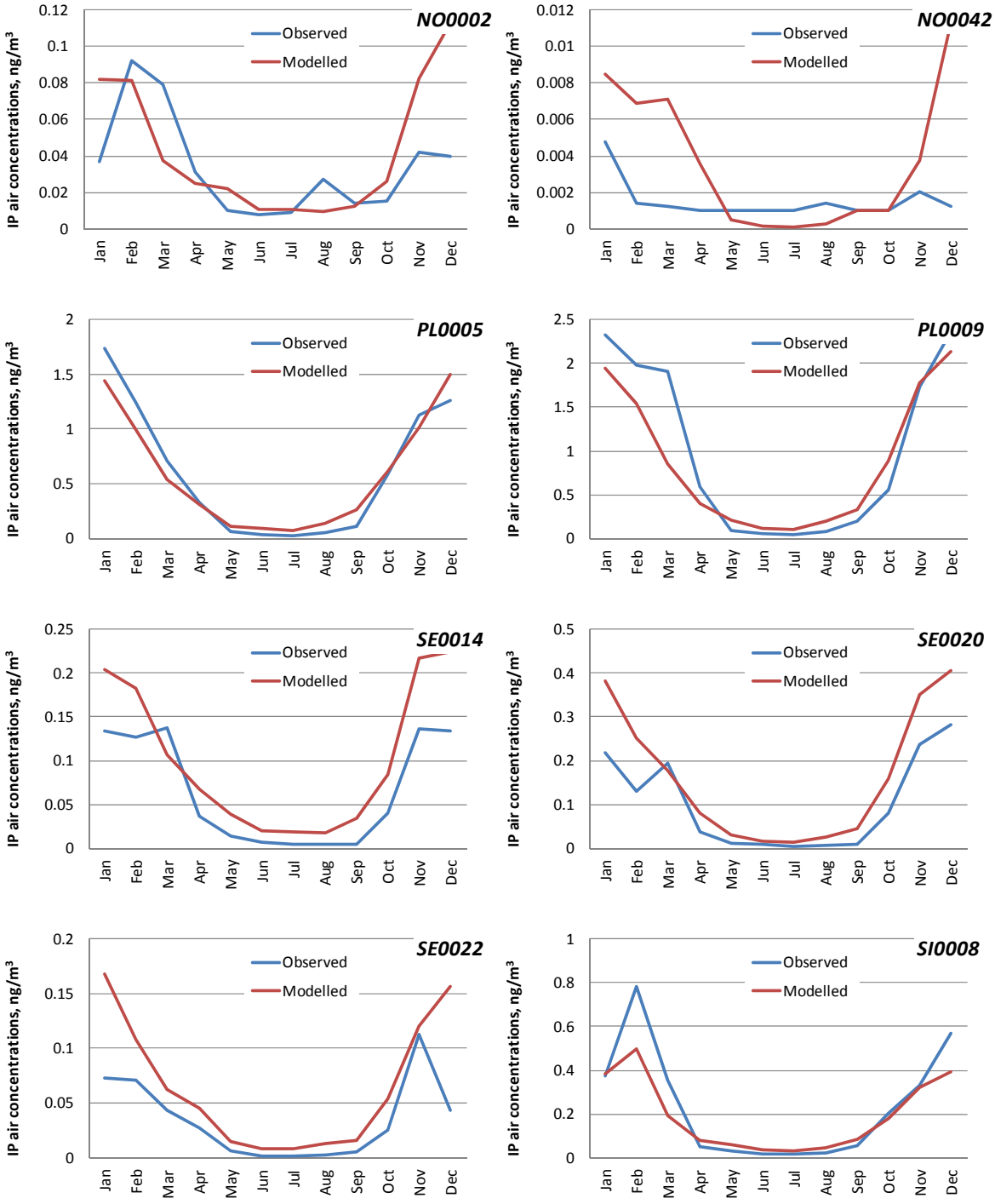


Fig. 4.8. *Modelled and observed monthly mean concentrations of IP in air at the EMEP stations in 2018*

4.2. Hexachlorobenzene (HCB)

Table 4.5. *Annual mean modelled and observed HCB air concentrations, ng/m^3, temporal correlation coefficient (Rc and relative bias (Bias) at EMEP stations in 2017*

Station name	Code	Type	Longitude	Latitude	Observed	Modelled	R	Bias
Kosetice (NOAK)	CZ0003R	air+aerosol	15.08	49.573	4.70E+01	6.34E+01	0.09	34.96
Pallas (Matorova)	FI0036R	air+aerosol	24.237	68	2.10E+01	2.77E+01	-0.55	31.89
Birkenes II	NO0002R	air+aerosol	8.252	58.389	4.78E+01	3.41E+01	0.28	-28.64
AndГёya	NO0090R	air+aerosol	16.012	69.278	2.89E+01	2.33E+01	-0.69	-19.18
Rao	SE0014R	air+aerosol	11.914	57.394	1.53E+01	4.01E+01	-0.71	161.62
Norunda Stenen	SE0022R	air+aerosol	17.505	60.086	2.30E+01	3.57E+01	-0.79	55.76

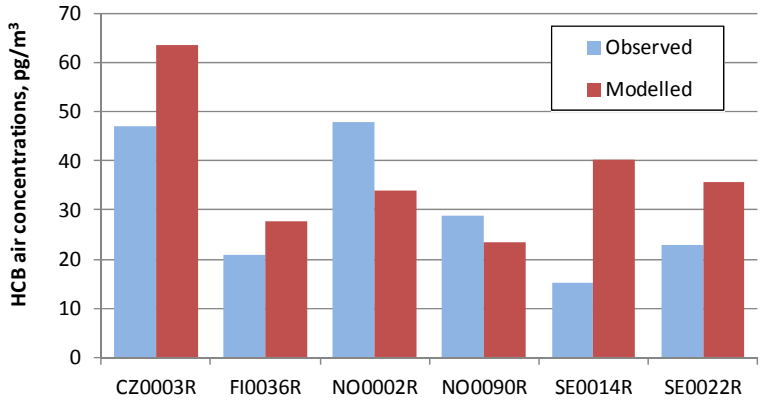
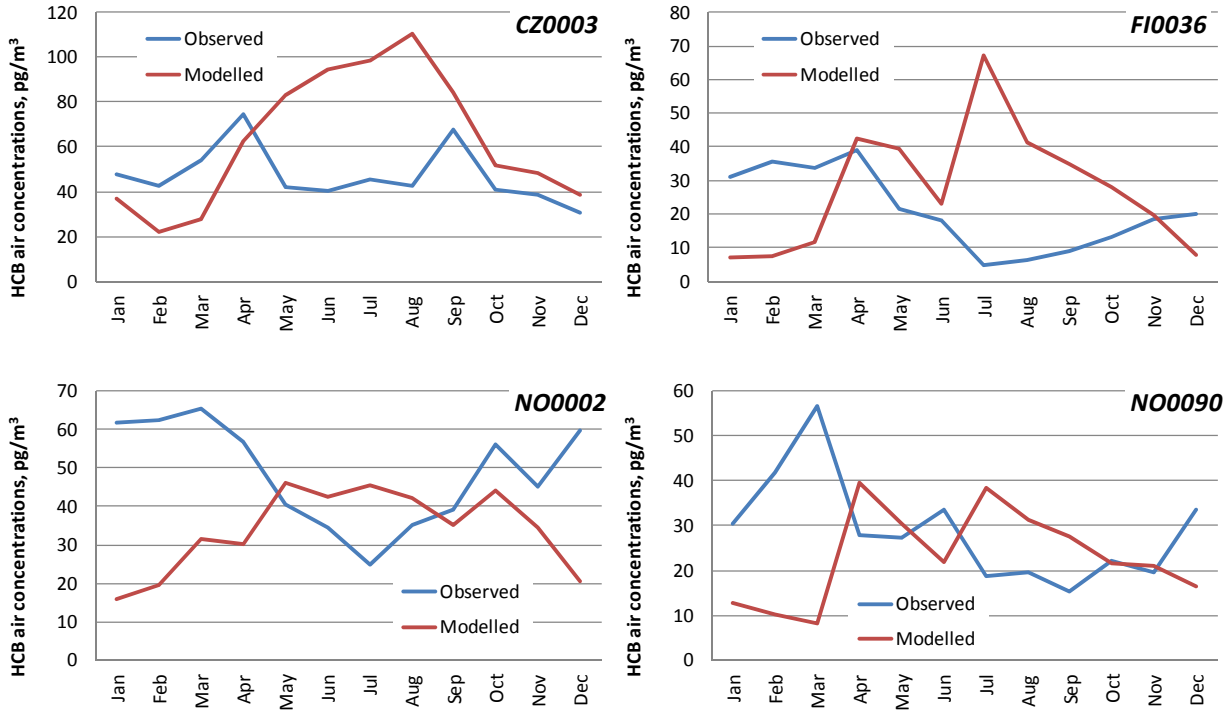


Fig. 4.9. *Modelled and observed annual mean concentrations of HCB in air at the EMEP stations in 2018*



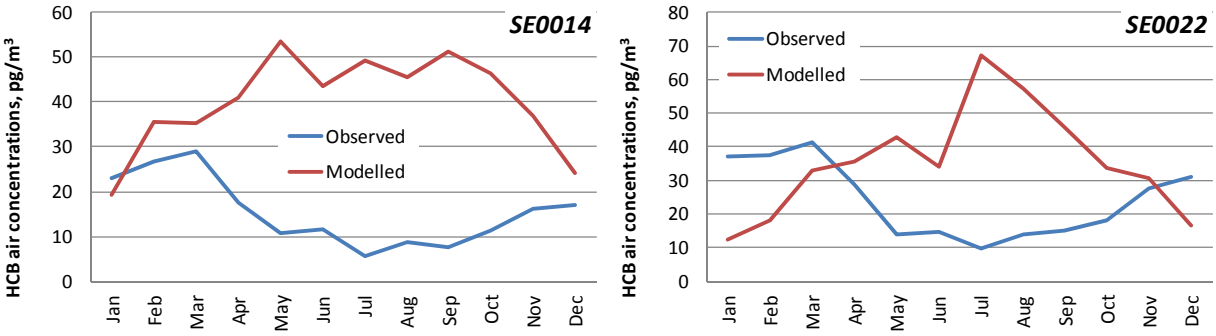


Fig. 4.10. *Modelled and observed monthly mean concentrations of HCB in air at the EMEP stations in 2018*

4.3. Polychlorinated biphenyls (PCB-153)

Table 4.6. *Annual mean modelled and observed PCB-153 air concentrations, pg/m^3, temporal correlation coefficient (Rc and relative bias (Bias) at EMEP stations in 2017*

Station name	Code	Type	Longitude	Latitude	Observed	Modelled	R	Bias
Kosetice (NOAK)	CZ0003R	air+pm10	15.08	49.57	0.48	1.00	0.88	110.1
Westerland	DE0001R	air+pm10	8.31	54.93	1.43	0.96	-0.20	-33.1
Waldhof	DE0002R	air+pm10	10.76	52.80	1.19	1.70	0.29	43.3
Zingst	DE0009R	air+pm10	12.73	54.44	0.73	0.88	0.54	20.4
Pallas (Matorova)	FI0036R	air+aerosol	24.24	68.00	0.13	0.10	0.94	-20.4
Birkenes II	NO0002R	air+aerosol	8.25	58.39	0.36	0.26	0.39	-28.3
Zeppelin mountain (Ny-Alesund)	NO0042G	air+aerosol	11.89	78.91	0.10	0.04	-0.15	-63.2
Rao	SE0014R	air+aerosol	11.91	57.39	1.09	0.54	0.72	-50.6
Norunda Stenen	SE0022R	air+aerosol	17.51	60.09	0.38	0.28	0.96	-26.1

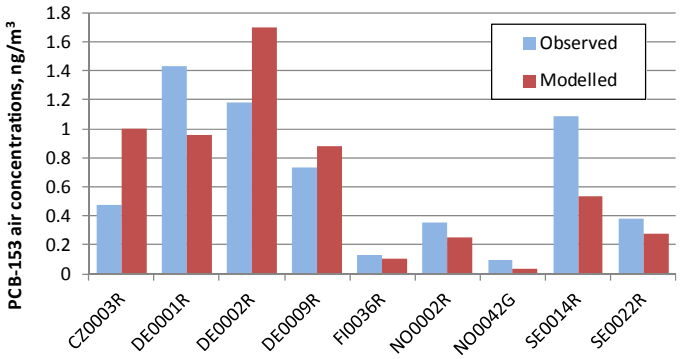
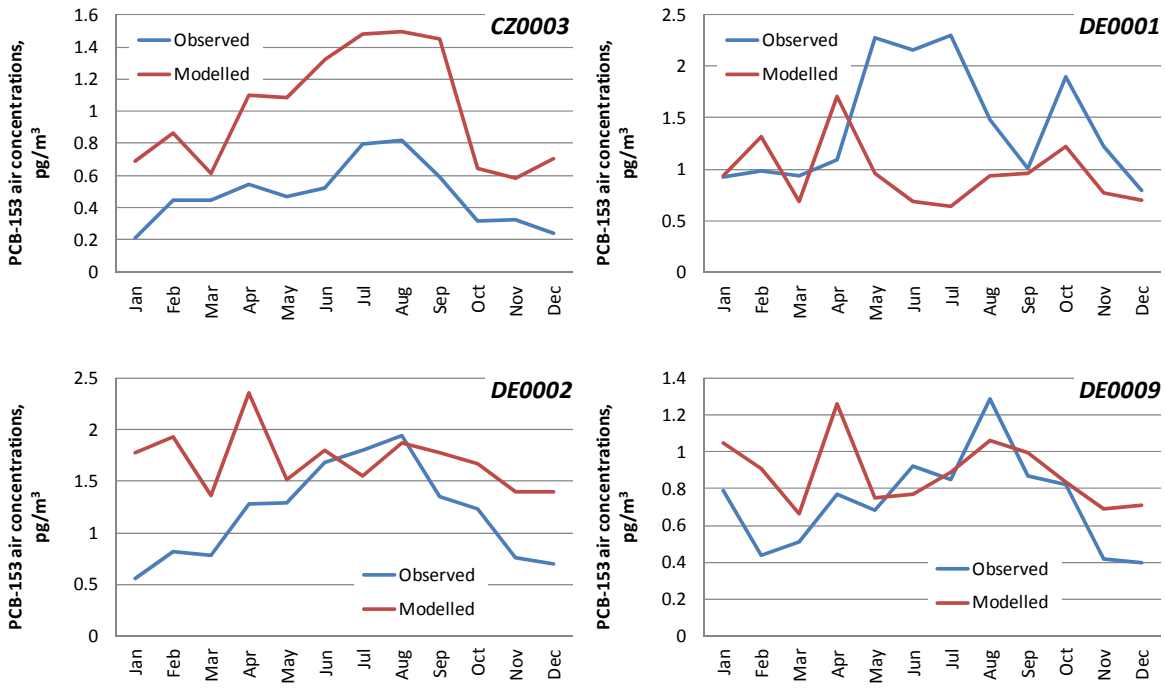


Fig. 4.11. *Modelled and observed annual mean concentrations of PCB-153 in air at the EMEP stations in 2018*



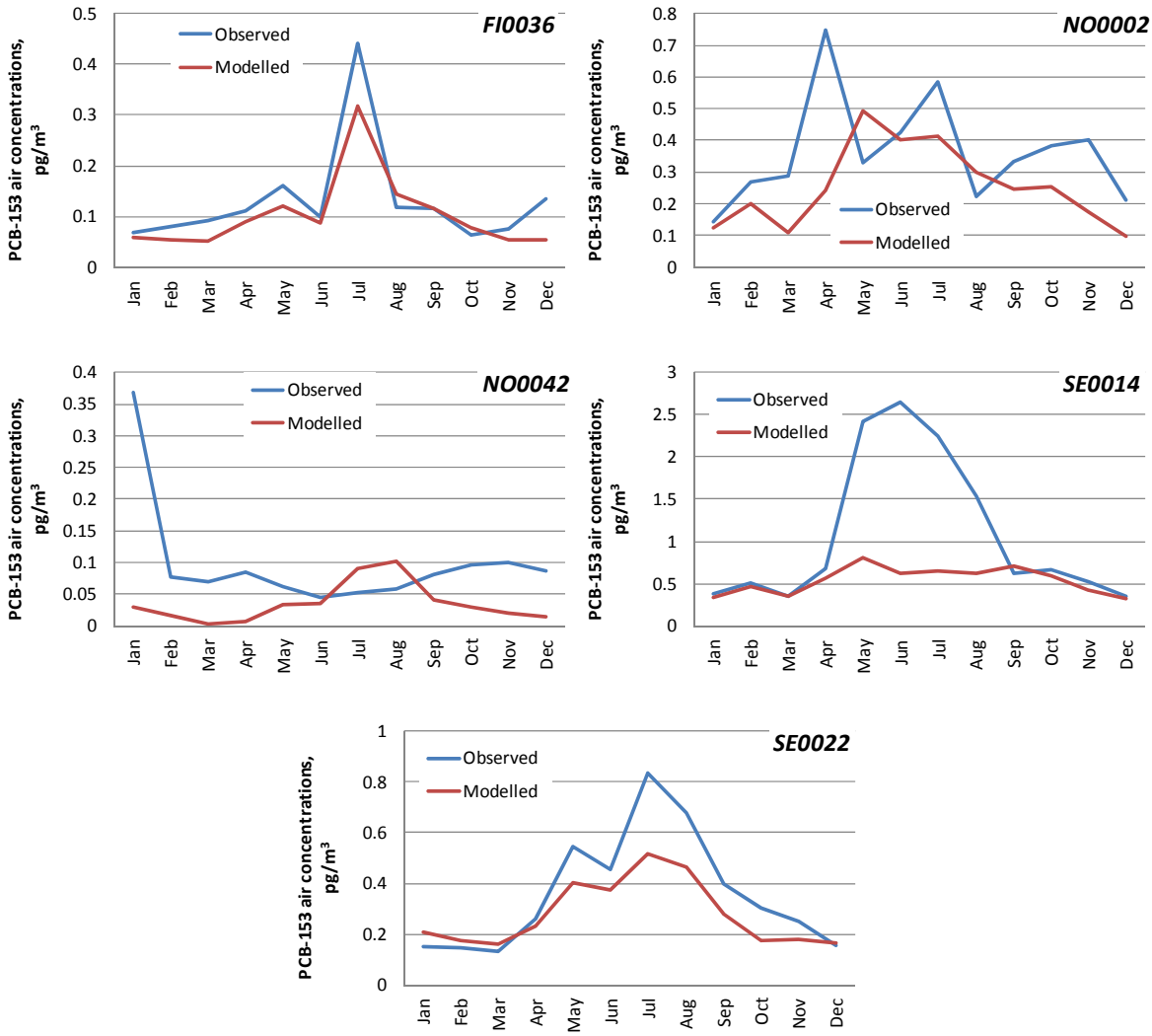


Fig. 4.12. *Modelled and observed monthly mean concentrations of PCB-153 in air at the EMEP stations in 2018*

5. POLLUTION OF MARGINAL SEAS

5.1. Polycyclic aromatic hydrocarbons (PAHs)

5.1.1. Benzo[a]pyrene (B(a)P)

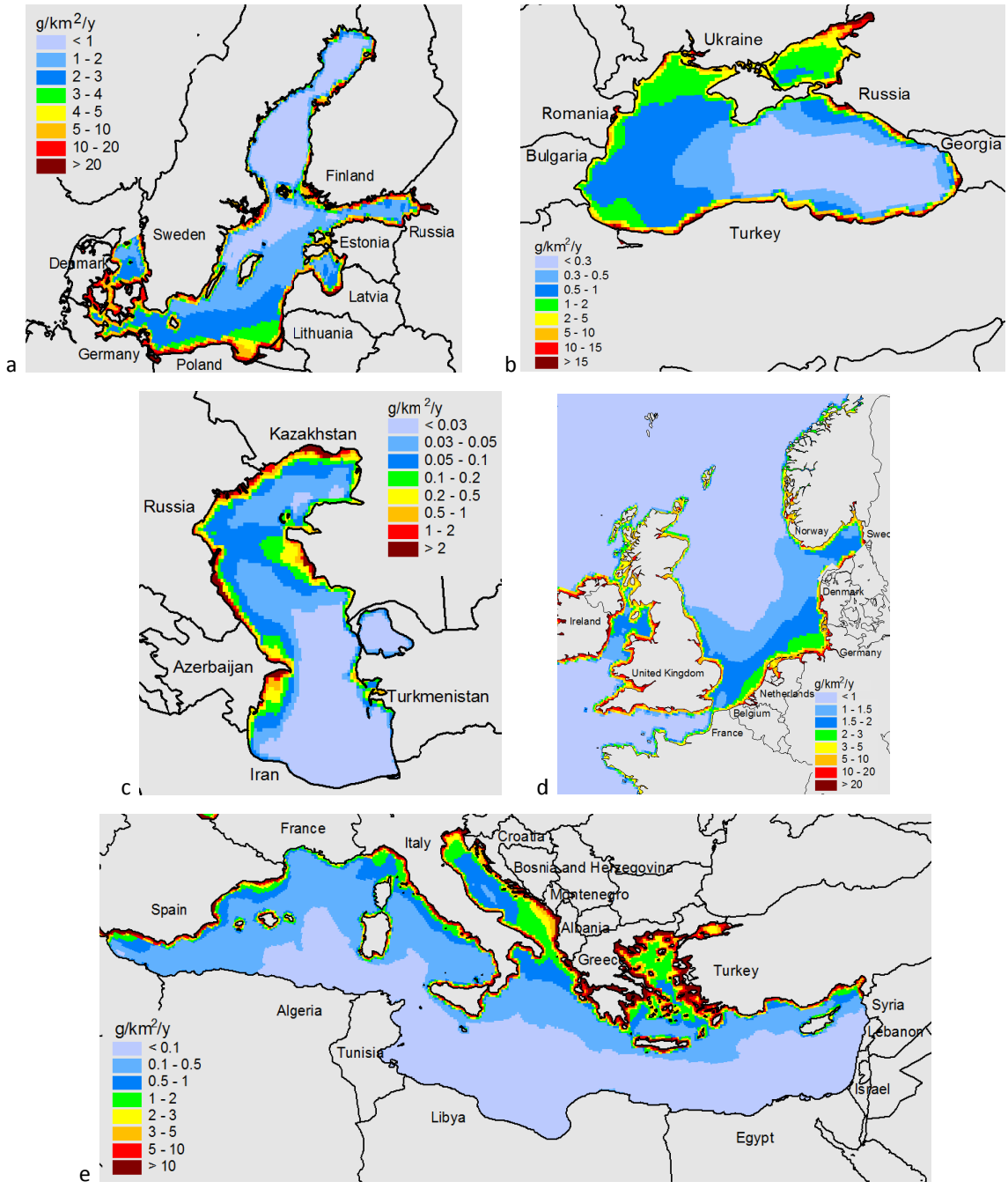


Figure 5.1. *B(a)P atmospheric input to the Baltic (a), Black (b), Caspian (c), North (d) and Mediterranean (d) Seas*

5.1.2. Benzo[b]fluoranthene (B(b)F)

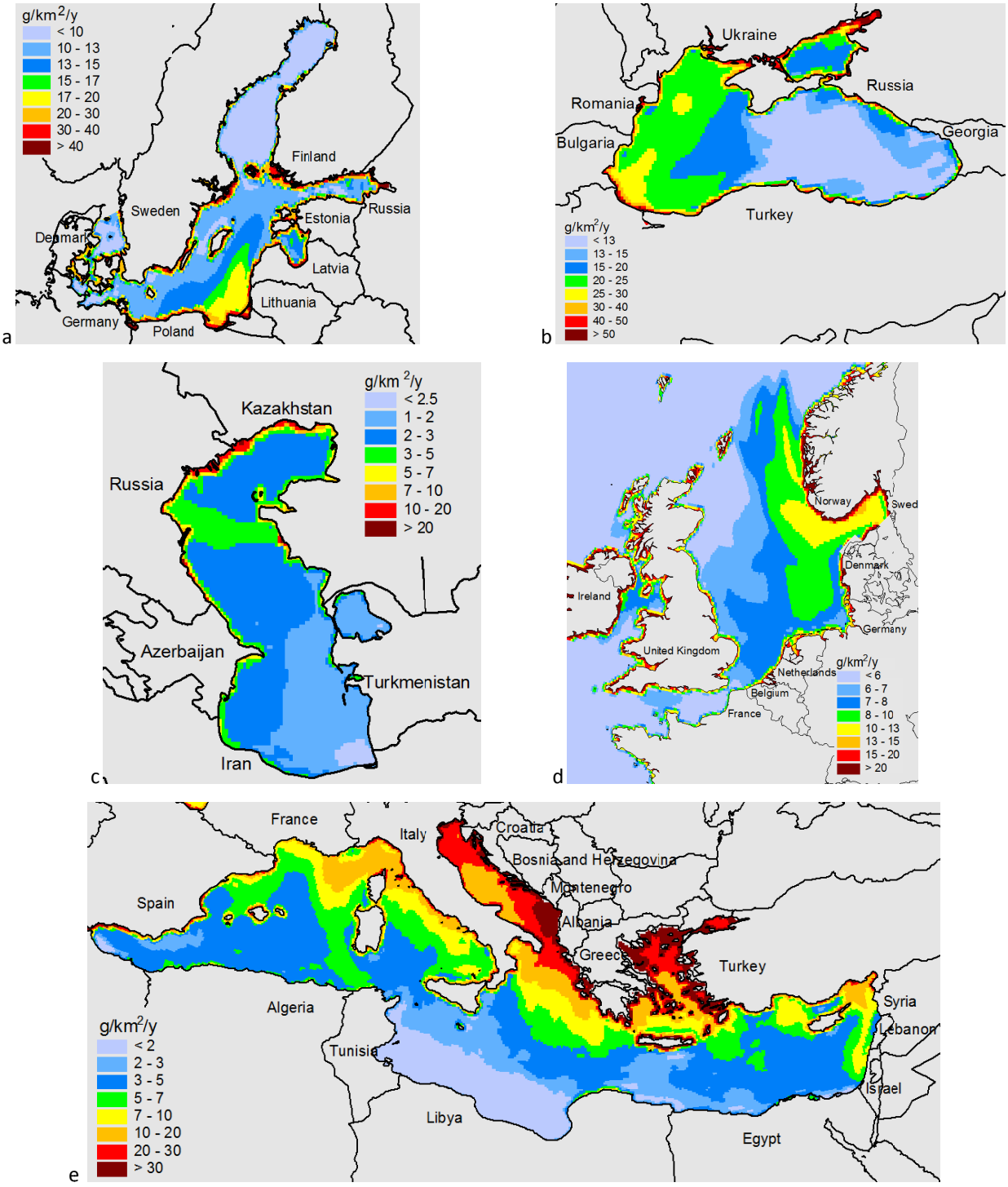


Figure 5.2. *B(b)F atmospheric input to the Baltic (a), Black (b), Caspian (c), North (d) and Mediterranean (d) Seas*

5.1.3. Benzo[k]fluoranthene (B(k)F)

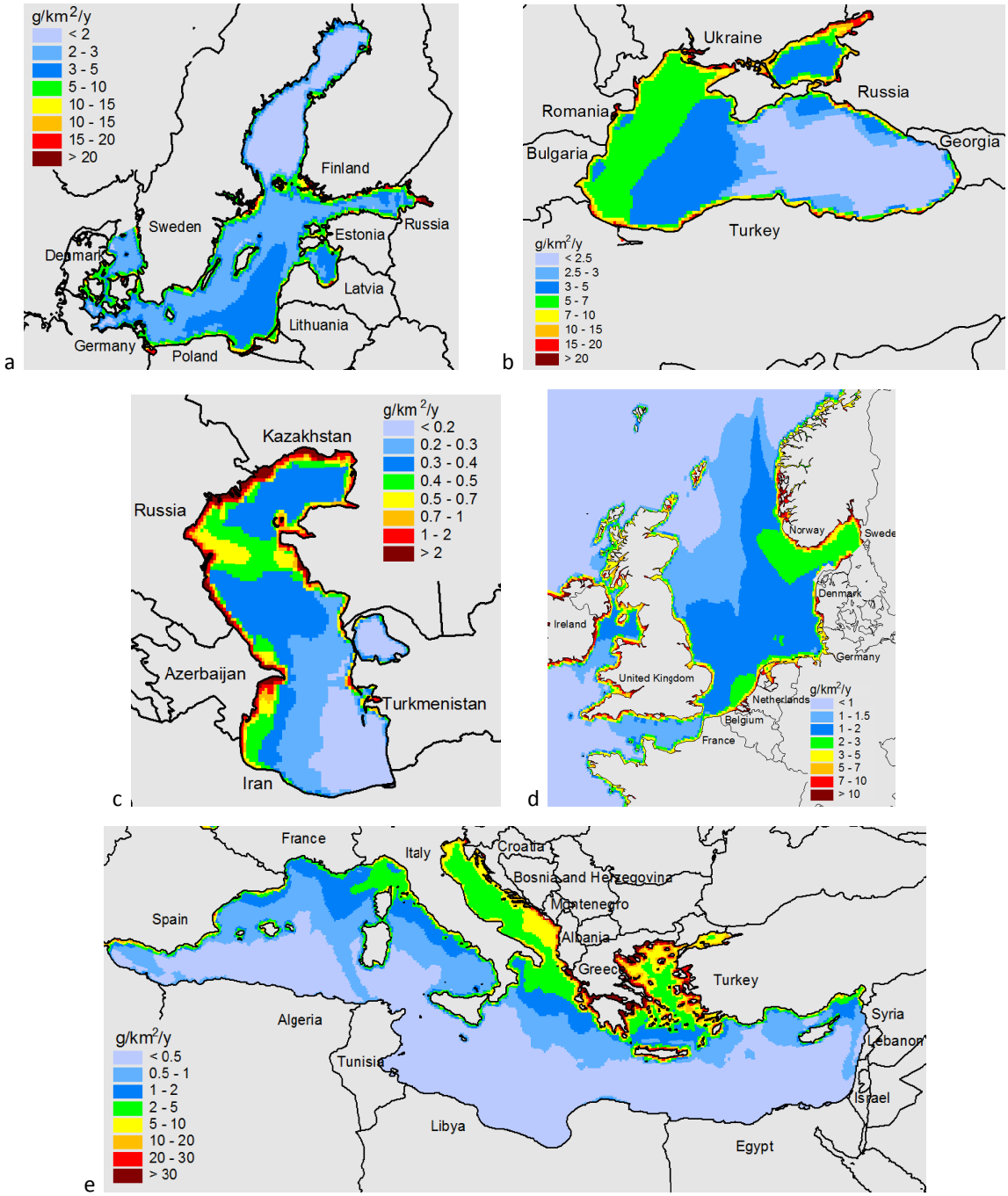


Figure 5.3. *B(k)F atmospheric input to the Baltic (a), Black (b), Caspian (c), North (d) and Mediterranean (d) Seas*

5.1.4. Indeno[1,2,3-cd]pyrene (IP)

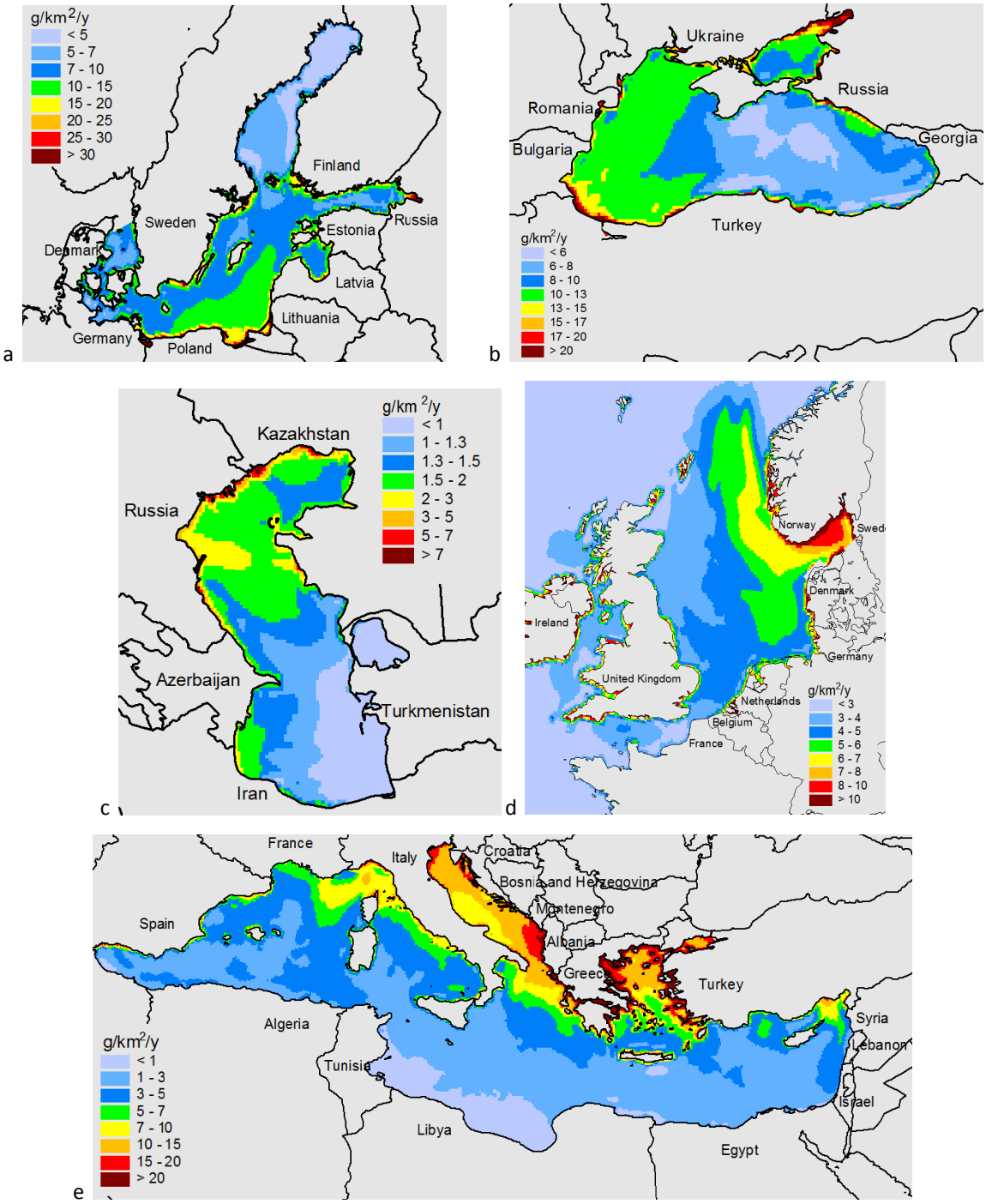


Figure 5.4. *IP atmospheric input to the Baltic (a), Black (b), Caspian (c), North (d) and Mediterranean (d) Seas*

5.2. Polychlorinated dibenzo(p)dioxins and dibenzofurans (PCDD/Fs)

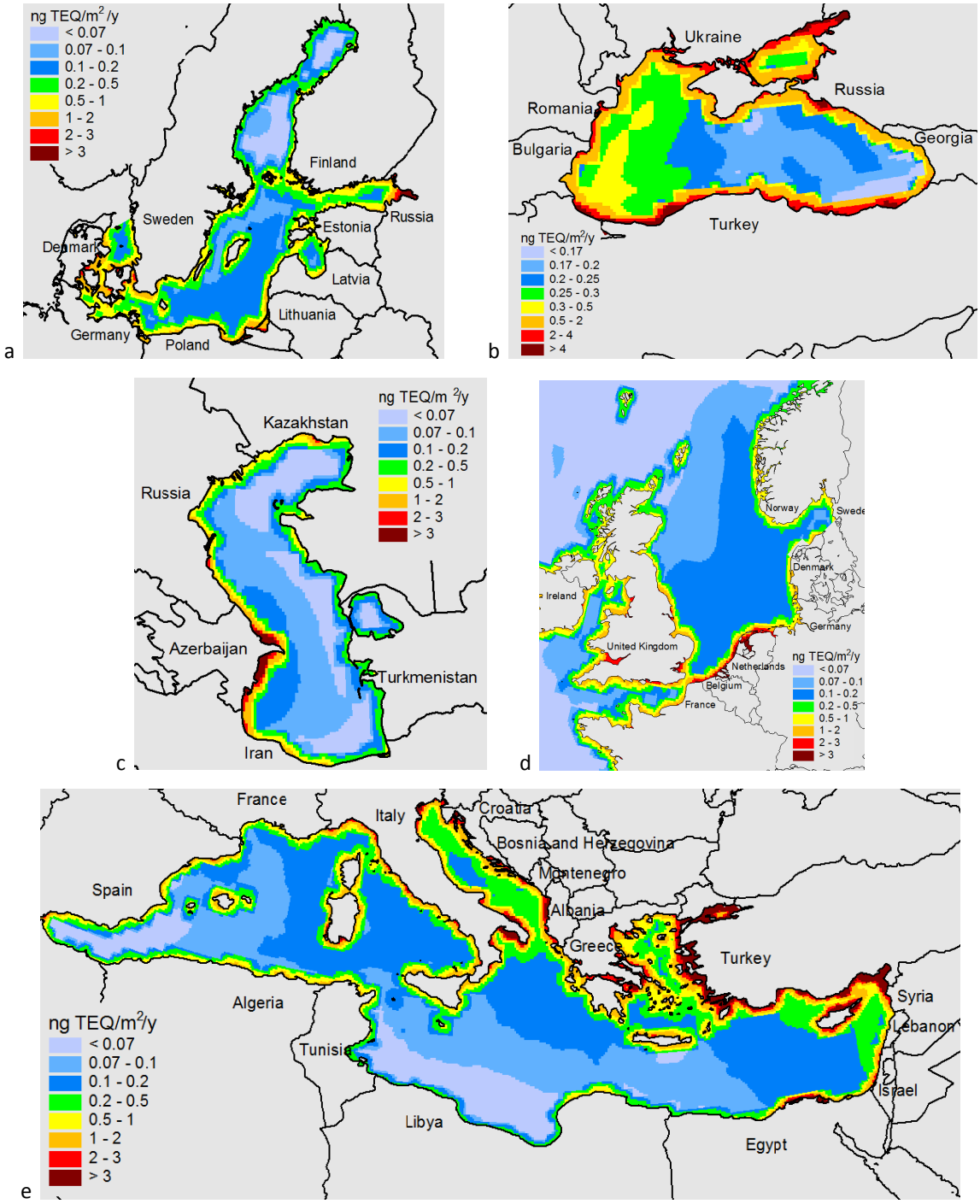


Figure 5.5. *PCDD/Fs atmospheric input to the Baltic (a), Black (b), Caspian (c), North (d) and Mediterranean (d) Seas*

5.3. Hexachlorobenzene (HCB)

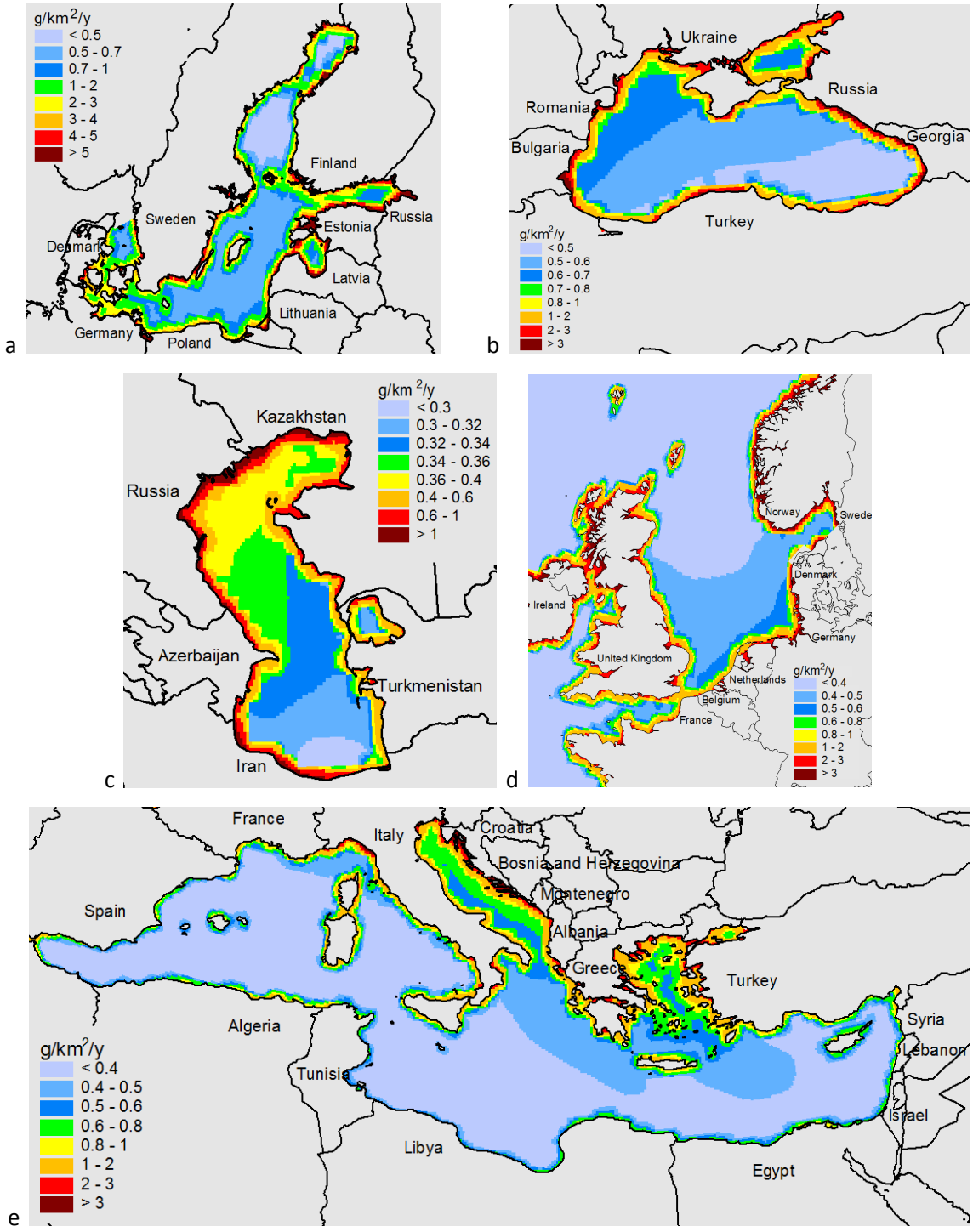


Figure 5.6. *HCB atmospheric input to the Baltic (a), Black (b), Caspian (c), North (d) and Mediterranean (d) Seas*

5.4. Polychlorinated biphenyls (PCB-153)

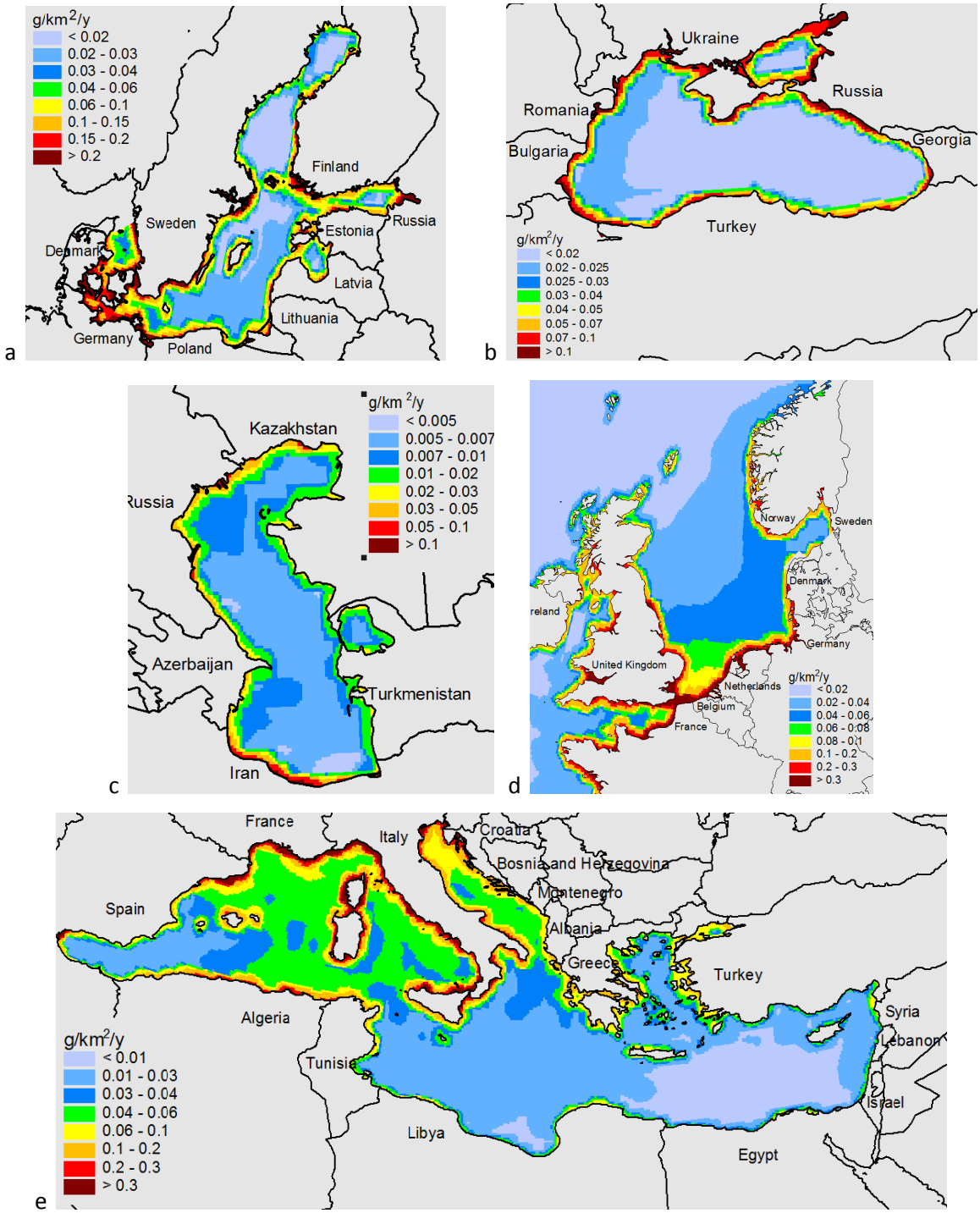


Figure 5.7. *PCB-153 atmospheric input to the Baltic (a), Black (b), Caspian (c), North (d) and Mediterranean (d) Seas*