

Convention on long-range transboundary air pollution. UN/ECE international co-operative programme on effects on materials, including historic and cultural monuments.

Late incoming data and errata to ICP Report no. 94: Environmental data report 2020-21.

01.12 2023

Legend

	IVL passive samplers were used
	Data availability ≤ 75%
	Not available
	Errata. Correction of data reported in 2020-21 report
	Paris data reported medio 2023 and Berlin (41) data reported 30.11.2023

Table B.1: Mandatory data

										Mandatory													
		Climate			Precipitation					Climate			Precipitation			Particles							
Samplingperiod		Temp	RH	Amount	Sampling period	Temp	RH	Amount	Sampling period	Temp	RH	SO ₂	IVL-passive SO ₂	NO ₂	IVL-passive NO ₂	O ₃	IVL-passive O ₃	HNO ₃	IVL-passive HNO ₃	Amount	H ⁺	C ⁻	IVL passive sampler. Three-monthly averages
Site no	Year	°C	%	mm	Year	°C	%	mm	Year	°C	%	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mm	pH	mgCl/l	µg cm ⁻² month ⁻¹
01	18/19	11.1	68	442.3	19/20	11.5	68	605.2	20/21	11.3	71	2.7		22.1		37			0.42	446.6	5.60	2.20	5.2
03	18/19	10.7	72	504.8	19/20	10.5	75	482.9	20/21	9.2	78	8.6		14.5		45			0.32	487.9	5.29	1.60	10.7
10	18/19	12.2	73	771.8	19/20	12.5	71	718.4	20/21	11.1	78	6.1		21.5		40			0.30	945.4	6.31	0.98	18.1
13	18/19	17.4	70	683.7	19/20	17.3	69	845.6	20/21	16.7	70		0.4		17.4		54.7		0.46	958.0			42.8
14	18/19	15.6	72	837.8	19/20	15.9	72	841.2	20/21	15.1	73		0.4		4.9		69.6		0.29	946.6			40.5
15	18/19	15.9	63	673.6	19/20	15.0	66	1036.8	20/21	16.4	61	2.6		32.0		50			0.71	637.2			15.3
16	18/19	13.3	78	812.2	19/20	13.9	79	801.4	20/21	13.2	79			30.7						513.6			
21	18/19	7.4	74	1038.3	19/20	8.2	74	1012.4	20/21	7.9	73	4.0		12.5				38.9	0.11	692.3	5.31	1.53	7.1
23	18/19	6.8	78	1923.6	19/20	7.3	78	2053.2	20/21	7.2	78	0.1		0.9		60	51.6	0.03	0.06	1864.9	4.99	2.14	5.0
24	18/19	8.2	74	500.8	19/20	9.3	71	491.4	20/21	8.8	74		0.4		6.4		56.2		0.25	475.3	5.23	0.29	16.1
26	18/19	7.2	79	575.1	19/20	8.9	77	597.0	20/21	7.9	80		0.2		1.4		43.4		0.07	688.0	5.10	0.43	1.3
31	18/19	14.9	54	217.3	19/20	14.8	60	739.2	20/21	14.0	60	1.1		19.2		55			0.54	388.5	6.27	0.44	12.0
33	18/19	15.0	56	380.0	19/20	16.0	70	403.2	20/21	15.2	70	0.6		1.0		82			0.27	656.2	5.79	0.32	11.6
35	18/19	5.7	82	956.3	19/20	7.2	83	768.4	20/21	6.4	81	0.4		1.9		60		0.18		782.5	5.16	0.28	
40	18/19	13.5	73	607.7	19/20	14.2	67	647.2	20/21	13.0	70	2.3	0.3	22.2	14.5	42	50.6		0.34	851.9	6.36	1.20	11.2
41	18/19	11.1	75		19/20	10.8	75		20/21	10.0	78		0.6		20.1		33.7		0.21	528.5	7.29		139.0
44	18/19	-0.2	74		19/20	1.4	73		20/21	1.5	72	1.2		2.0			58.3		0.06	484.7	5.25	1.28	4.3
45	18/19	7.6	75	1112.1	19/20	8.0	74	1127.2	20/21	6.8	77		0.2	4.0	1.1	77	72.5		0.15	1197.0			8.6
50	18/19	9.6	75	708.6	19/20	9.6	76	927.0	20/21	6.3	91	7.2		25.7		41				387.4			
51	18/19	18.9	58	411.2	19/20	19.3	57	440.6	20/21	18.6	58	6.2		43.1		19			0.78	493.0	7.24		52.9
53	18/19	12.3	69	725.0	19/20	12.0	69	686.0	20/21	10.2	71	1.2	0.6	15.4	9.9	55	56.2		0.41	623.0			6.9
57	18/19	6.0	80	447.8	19/20	7.2	80	664.8	20/21	6.3	79		0.3	8.3	4.4		52.9		0.13	615.0	5.2	0.64	7.4
58	18/19				19/20				20/21	16.2									0.26				17.9
59	18/19	10.0	75	736.0	19/20	9.9	78	876.9	20/21	9.6	72	3.5		17.5		57.1				724.5	6.69	1.69	
60	18/19	17.6	55	656.0	19/20	17.7	54	686.7	20/21	17.2	54	2.7	1.0	18.4	6.4		74.6		0.49	910.8	6.29	4.57	16.6
61	18/19	13.2	70	744.2	19/20	11.7	72	1098.9	20/21	12.3	71	3.6	0.4	28.2	15.2	43	44.2		0.41	777.7	6.07	0.73	10.9

Table A.1: Monthly mandatory data including measurement with IVL samplers. The time for mounting and demounting of the IVL samplers are noted. Empty cells indicate that values are not available (n.a.) Measured zero values are reported as "0".

Site no	Year	Month	Temp (°C)	RH (%)	SO2 (µg/m3)	IVL-SO2 (µg/m3)	NO2 (µg/m3)	IVL-NO2 (µg/m3)	O3 (µg/m3)	IVL-O3 (µg/m3)	HNO3 (µg/m3)	IVL-HNO3 (µg/m3)	Prec. (mm)	pH	Cl- (mgCl/l)	IVL-Particle deposition (µg/cm²month)	Date of mounting of IVL passive samplers	Date of demounting of IVL passive samplers
21	2018	11	3.4	88									101.3					
21	2018	12	-1.2	85									63.2					
21	2019	1	-2.8	76									35.6					
21	2019	2	0.5	83									81.1					
21	2019	3	2.3	69									73.4					
21	2019	4	8.7	45									11.3					
21	2019	5	10.4	65									83.0					
21	2019	6	15.4	71									124.8					
21	2019	7	17.9	66									58.4					
21	2019	8	16.8	79									127.1					
21	2019	9	11.4	76									168.8					
21	2019	10	5.4	84									110.3					
21	2019	11	1.0	86									112.3					
21	2019	12	0.4	92									57.0					
21	2020	1	2.7	84									74.9					
21	2020	2	1.9	75									34.3					
21	2020	3	3.0	72									44.4					
21	2020	4	7.3	54									32.3					
21	2020	5	10.2	53									45.5					
21	2020	6	18.8	63									109.3					
21	2020	7	15.1	71									164.6					
21	2020	8	17.2	73									55.6					
21	2020	9	12.8	76									76.3					
21	2020	10	8.1	84	0.0		0.0						205.9					
21	2020	11	5.2	86	4.6		15.9						78.6	6.3	2.03			
21	2020	12	2.2	91	7.6		15.4						150.4	4.7	0.58			
21	2021	1	-4.7	84	10.3		22.4						34.2	5.5	5.80	3	22.10.2020 12:10	22.01.2021 14:00
21	2021	2	-3.2	77	5.6		23.6						26.9	6.7	8.21			
21	2021	3	3.1	69	5.8		12.4						16.1	6.5	3.09			
21	2021	4	5.7	47	4.9		8.3						4.7	6.3	1.72	11	22.01.2021 14:24	23.04.2021 09:30
21	2021	5	10.6	70	0.3		8.7						60.1	5.9	0.32			
21	2021	6	17.3	68	0.3		7.9						55.2					
21	2021	7	19.9	65	1.1		8.4						65.6	5.8	0.47	8	23.04.2021 09:30	21.07.2021 21:50
21	2021	8	16.4	66	3.6		6.7						45.9	5.9	0.66			
21	2021	9	13.2	74	3.9		5.0						69.4	6.1	0.67			
21	2021	10	8.7	82	0.3		14.8						85.2	6.2	1.34			
21	2021	11	2.7	83									0.13			7	21.07.2021 21:55	02.11.2021 11:00

Site no	Year	Month	Temp (°C)	RH (%)	SO2 (µg/m3)	IVL-SO2 (µg/m3)	NO2 (µg/m3)	IVL-NO2 (µg/m3)	O3 (µg/m3)	IVL-O3 (µg/m3)	HNO3 (µg/m3)	IVL-HNO3 (µg/m3)	Prec. (mm)	pH	Cl- (mgCl/l)	IVL-Particle depositon (µg/cm ² month)	Date of mounting of IVL passive samplers	Date of demounting of IVL passive samplers
40	2018	11	14.4	74									18.9					
40	2018	12	8.2	87									73.4					
40	2019	1	4.6	84									44.5					
40	2019	2	8.0	76									32.7					
40	2019	3	10.4	72									40.4					
40	2019	4	12.6	64									14.6					
40	2019	5	14.3	68									96.4					
40	2019	6	20.5	68									51.9					
40	2019	7	23.0	53									33.3					
40	2019	8	21.5	62									61.2					
40	2019	9	18.0	66									30.5					
40	2019	10	13.8	83									62.2					
40	2019	11	8.3	87									97.4					
40	2019	12	7.1	85									67.2					
40	2020	1	6.7	87									24.2					
40	2020	2	9.3	79									75.7					
40	2020	3	9.7	56									40.4					
40	2020	4	15.7	52									10.8					
40	2020	5	17.0	52									46.4					
40	2020	6	19.2	60									56.7					
40	2020	7	21.5	55									6.0					
40	2020	8	23.1	57									26.7					
40	2020	9	19.6	61									52.5					
40	2020	10	12.9	78	NA		NA		NA				81.0					
40	2020	11	10.4	79	NA		26		NA				17.7	6.1	8.15			
40	2020	12	7.1	86	1		26		26				118.5	5.8	0.82			
40	2021	1	5.2	82	1		33		24				99.2	7.5	1.80			
40	2021	2	7.4	71	3	0.4	26	23.4	37	30		0.11	41.2	5.8	1.51		28.10.2020 14:30	04.02.2021 14:30
40	2021	3	9.2	63	2		0		43				29.6	6.9	5.43			
40	2021	4	10.4	54	2		26		60				55.1	7.7	2.11			
40	2021	5	13.5	65	2	0.4	21	16.5	58	51		0.27	57.1	8.3	1.76	13	04.02.2021 14:30	11.05.2021 14:00
40	2021	6	20.7	66	3		23		53				186.7	7.8	0.14			
40	2021	7	20.6	67	3		20		44	89			97.9	7.3	0.48		11.05.2021 12:00:00	05.07.2021 12:00
40	2021	8	19.6	66	2	0.3	18	1.2	46	59		0.52	3.1	6.0	6.27	16	05.07.2021 16:03:00 (O3)	11.08.2021 12:25
40	2021	9	19.3	69	4		25		43				130.7	6.2	0.38		11.05.2021 12:00:00 (other)	
40	2021	10	13.2	76	3	0.3	NA	16.6	28	45		0.49	15.1	6.4	1.49	4		
40	2021	11	7.4	83	3		NA		17				39.3				11.08.2021 12:30	29.10.2021 14:30
40	2021	12	7.5	84	4		27		23				88.3					

Site no	Year	Month	Temp (°C)	RH (%)	SO2 (µg/m3)	IVL-SO2 (µg/m3)	NO2 (µg/m3)	IVL-NO2 (µg/m3)	O3 (µg/m3)	IVL-O3 (µg/m3)	HNO3 (µg/m3)	IVL-HNO3 (µg/m3)	Prec. (mm)	pH	Cl- (mgCl/l)	IVL-Particle depositon (µg/cm ² month)	Date of mounting of IVL passive samplers	Date of demounting of IVL passive samplers
41	2018	11	5.3	87.3									15.0					
41	2018	12	4.5	88.1									48.1					
41	2019	1	1.4	85.8									40.6					
41	2019	2	4.4	73.4									21.4					
41	2019	3	7.0	77.1									62.1					
41	2019	4	11.1	60.0									8.2					
41	2019	5	12.6	69.3									39.0					
41	2019	6	21.9	62.0									71.1					
41	2019	7	19.4	66.6									98.5					
41	2019	8	20.3	69.3									24.3					
41	2019	9	14.5	78.4									56.0					
41	2019	10	11.0	86.4									47.0					
41	2019	11	6.2	91.3									41.1					
41	2019	12	4.2	86.3									27.2					
41	2020	1	4.2	86.2									32.0					
41	2020	2	6.0	79.0									74.9					
41	2020	3	5.6	68.9									28.9					
41	2020	4	10.7	54.4									14.4					
41	2020	5	12.4	66.5									23.7					
41	2020	6	18.9	65.7									66.1	6.8				
41	2020	7	18.2	67.9									51.6	7.1				
41	2020	8	21.2	64.9									23.2	7.0				
41	2020	9	15.3	76.7									46.8	7.0				
41	2020	10	11.0	86.6									66.7	7.0				
41	2020	11	7.0	85.6									13.6	7.0				
41	2020	12	3.3	87.1									25.1	7.3				
41	2021	1	1.1	88.2									45.8	7.3				
41	2021	2	1.0	83.8									29.9	7.3				
41	2021	3	5.2	74.4		0.6		28.8		25		0.09	35.4	7.1		100	06.12.2020 15:00	16.03.2021 10:30
41	2021	4	6.9	68.2									18.2	7.2				
41	2021	5	12.0	70.9									51.9	7.3				
41	2021	6	20.7	60.1		0.9		12.4				0.23	62.5	7.2		92	16.03.2021 11:00	16.06.2021 10:30
41	2021	7	20.3	71.5									69.5	7.4				
41	2021	8	17.4	75.9									83.0	7.3				
41	2021	9	15.6	81.3		0.1		17.6		48		0.34	25.9	7.6		92	16.06.2021 11:00	16.09.2021 11:00
41	2021	10	10.5	81.3									21.8	7.5				
41	2021	11	6.3	88.3									59.4	7.3				
41	2021	12	2.2	90.1		0.8		21.7		31		0.17	40.0	7.6		91	16.09.2021 11:30	16.12.2021 11:30
41	2021	1	0.0	85.4									32.6	7.6				
41	2021	2	5.2	77.7									58.4	7.7				
41	2021	3	5.5	60.5						32			0.2			90	16.12.2021 11:30	16.03.2022 11:45

Site no	Year	Month	Temp (°C)	RH (%)	SO2 (µg/m3)	IVL-SO2 (µg/m3)	NO2 (µg/m3)	IVL-NO2 (µg/m3)	O3 (µg/m3)	IVL-O3 (µg/m3)	HNO3 (µg/m3)	IVL-HNO3 (µg/m3)	Prec. (mm)	pH	Cl- (mgCl/l)	IVL-Particle depositon (µg/cm ² month)	Date of mounting of IVL passive samplers	Date of demounting of IVL passive samplers
44	2018	11	0.1	80														
44	2018	12	-6.5	77														
44	2019	1	-13.3	78														
44	2019	2	-12.0	77														
44	2019	3	-6.6	71														
44	2019	4	2.1	66														
44	2019	5	4.4	67														
44	2019	6	9.0	66														
44	2019	7	11.7	73														
44	2019	8	10.9	79														
44	2019	9	8.0	78														
44	2019	10	-1.5	81														
44	2019	11	-8.1	78														
44	2019	12	-5.8	79														
44	2020	1	-11.4	76														
44	2020	2	-7.1	75														
44	2020	3	-4.1	69														
44	2020	4	-1.1	68														
44	2020	5	5.1	61														
44	2020	6	11.2	63														
44	2020	7	14.8	70														
44	2020	8	11.6	74														
44	2020	9	8.7	78														
44	2020	10	3.2	82														
44	2020	11	0.2	79	0.7		1.4						14.6	5.3	1.13			
44	2020	12	-6.3	76	2.7		2.3						11.5	4.9	1.54			
44	2021	1	-11.0	74	6.1		2.6						12.4	4.9	1.72			
44	2021	2	-12.8	74	1.0		3.4		51		0.09		39.0	5.3	4.14	-0.1	01.11.2020 12:00	01.02.2021 14:00
44	2021	3	-4.8	70	1.0		1.3						20.1	5.0	4.00			
44	2021	4	1.2	65	0.5		0.6						18.1	4.9	2.47			
44	2021	5	3.6	69	0.3		0.3				0.05		57.8	4.9	1.03	4.7	01.02.2021 12:00	03.05.2021 12:00
44	2021	6	13.5	61	0.0		0.3		75				51.2	5.5	0.23		01.02.21 14:00	01.06.21 15:05
44	2021	7	14.4	65	0.3		0.3						69.4	5.7	0.43			
44	2021	8	11.8	74	0.4		7.6		51		0.05		73.2	5.5	0.81	6.8	01.06.2021 15:05:00 (O3)	01.08.2021 11:20
44	2021	9	6.3	74	0.0		2.4						35.1	5.3	1.20		03.05.2021 12:00:00	
44	2021	10	1.9	78	1.3		1.1		48		0.03		82.3	5.4	0.93	5.6	01.08.2021 11:20	01.11.2021 08:30