applied sciences

Supplementary Material for the Article

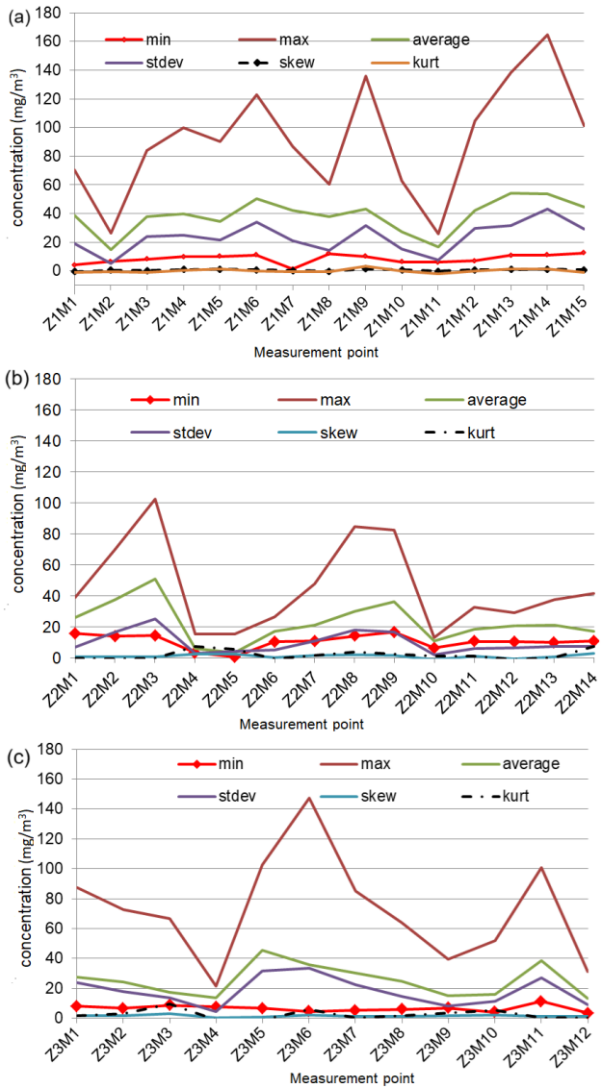


Figure S1. Basic statistics of the series recorded at the locations from Zones (a) 1, (b) 2, and (c)

 https://doi.org/10.3390/app142411921

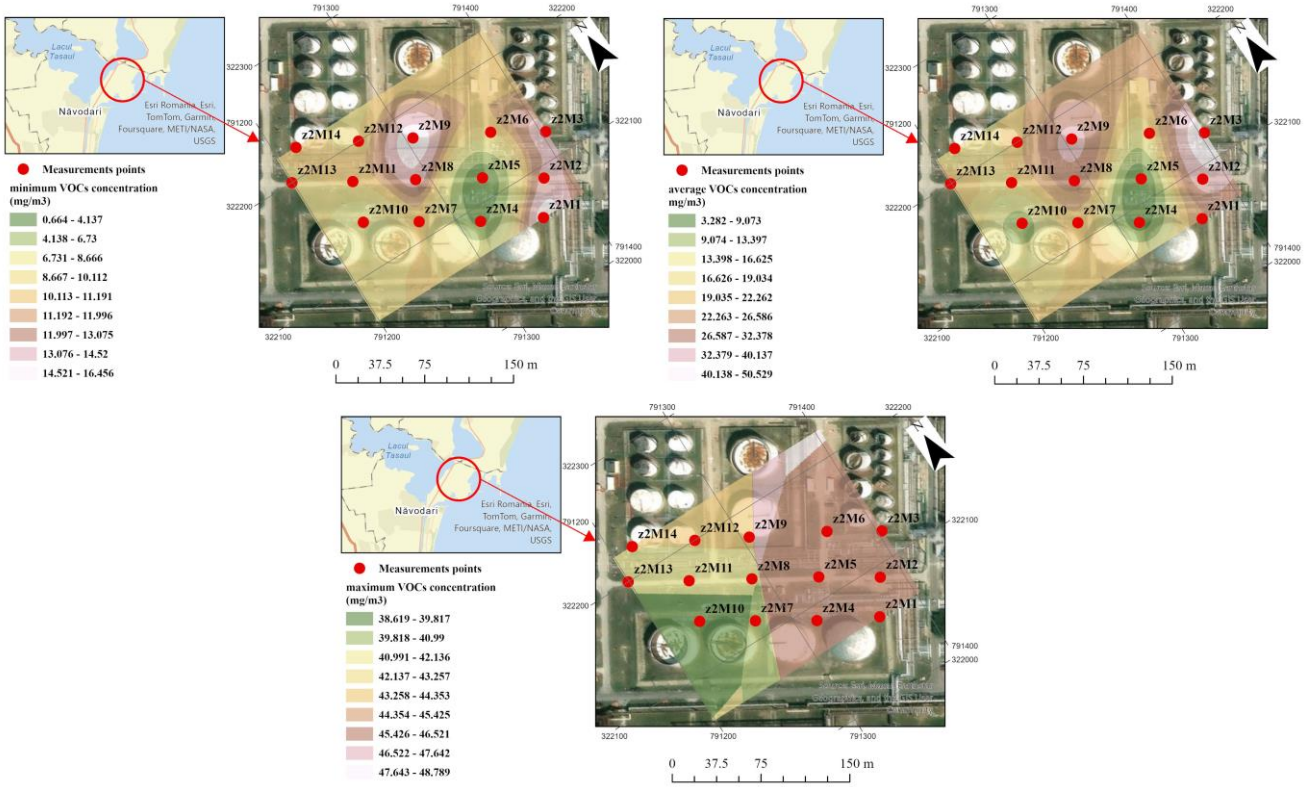


Figure S2. Maps reflecting the spatial distribution of the minimum, average, and maximum concentrations in Zone 2

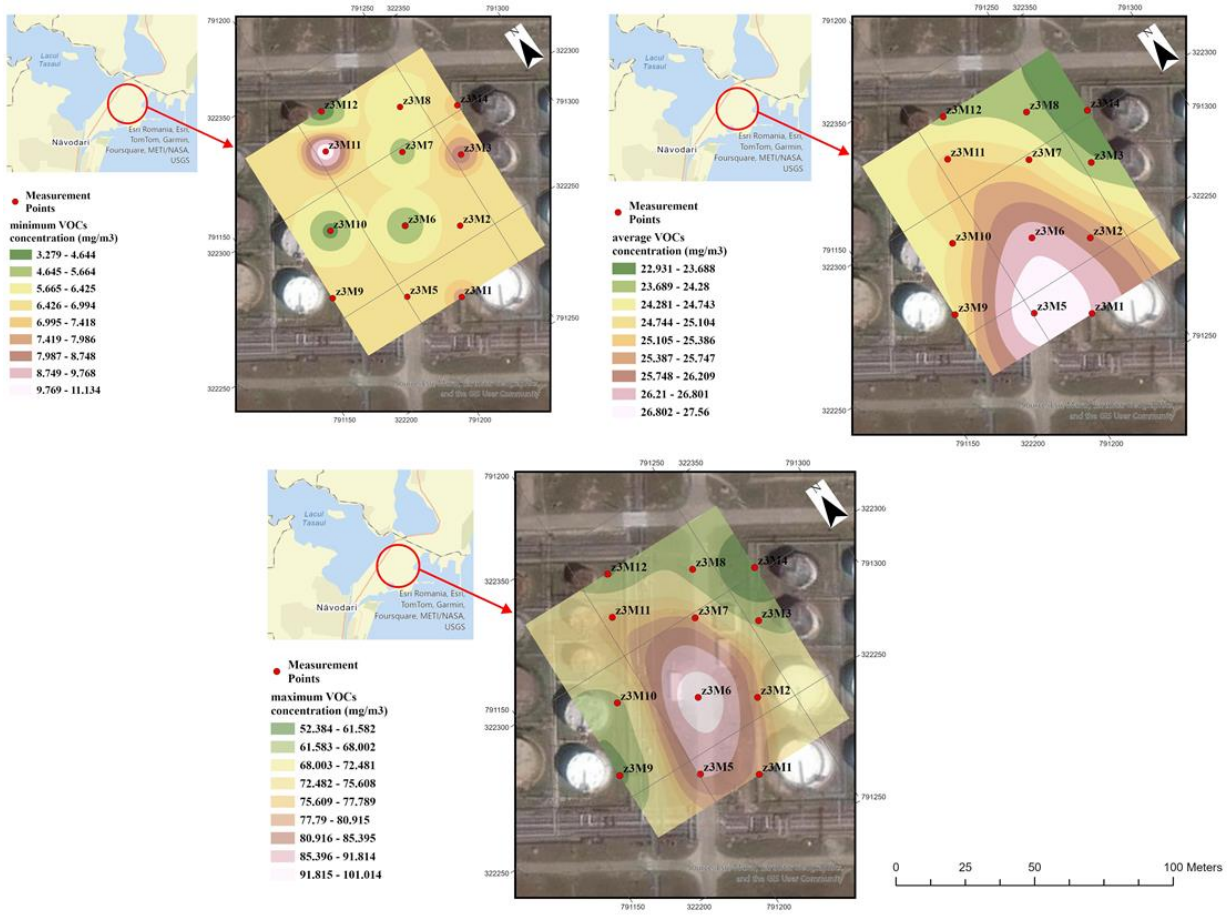


Figure S3. Maps reflecting the spatial distribution of the minimum, average, and maximum concentrations in Zone 3

(a)

	Z2M1	Z2M2	Z2M3	Z2M4	Z2M5	Z2M6	Z2M7	Z2M8	Z2M9	Z2M10	Z2M11	Z2M12	Z2M13
Z2M2	0.962												
Z2M3	0.801	0.659											
Z2M4	−0.306	−0.365	−0.266										
Z2M5	−0.371	−0.413	−0.349	0.810									
Z2M6	0.479	0.453	0.304	0.087	0.217								
Z2M7	0.127	0.079	0.149	−0.306	−0.300	−0.055							
Z2M8	−0.178	−0.234	−0.145	−0.205	−0.263	−0.272	−0.189						
Z2M9	−0.233	−0.254	−0.342	−0.035	−0.247	−0.189	−0.147	0.562					
Z2M10	0.062	0.006	0.162	0.435	0.276	0.164	−0.519	0.148	−0.120				
Z2M11	0.205	0.344	−0.058	0.008	0.059	0.243	−0.320	−0.143	−0.150	0.071			
Z2M12	−0.558	−0.495	−0.442	−0.350	−0.089	−0.372	0.134	0.120	0.130	−0.593	0.058		
Z2M13	−0.280	−0.329	−0.194	−0.109	0.221	−0.115	0.175	0.095	0.105	−0.358	0.092	0.627	
Z2M14	−0.413	−0.387	−0.379	0.695	0.573	−0.278	−0.195	−0.277	−0.288	0.285	−0.231	−0.171	−0.280

(b)

	Z3M1	Z3M2	Z3M3	Z3M4	Z3M5	Z3M6	Z3M7	Z3M8	Z3M9	Z3M10	Z3M11
Z3M2	0.148										
Z3M3	−0.174	−0.252									
Z3M4	−0.133	0.219	0.132								
Z3M5	0.039	−0.067	0.256	−0.234							
Z3M6	0.082	−0.126	0.332	−0.019	0.004						
Z3M7	0.755	0.380	−0.222	0.053	0.156	0.150					
Z3M8	0.265	−0.199	−0.157	0.147	−0.442	0.115	0.287				
Z3M9	−0.423	−0.211	0.409	0.340	−0.097	0.254	−0.328	0.240			
Z3M10	−0.031	−0.224	−0.215	0.147	−0.266	−0.020	−0.051	0.720	0.333		
Z3M11	−0.074	0.070	−0.195	0.509	−0.307	0.112	−0.045	0.541	0.445	0.560	
Z3M12	0.734	0.220	−0.084	−0.006	0.444	0.016	0.567	−0.034	−0.309	−0.132	−0.064

Cell Contents: Pearson correlation

Figure S4. Correlation matrix for the series in (a) Zone 2 and (b) Zone 3

(a)

Mood median test for Zone 2
Chi-Square = 136.80 DF = 13 P = 0.000

	N≤	N>	Median	Q3-Q1	Individual 95.0% CIs
Z2M1	4	16	24.5	9.2	(*-)
Z2M2	2	18	30.7	26.1	(-*--------)
Z2M3	1	19	40.5	43.2	(-*----------)
Z2M4	20	0	5.0	2.0	(*
Z2M5	20	0	1.7	0.9	*
Z2M6	13	7	17.1	7.8	(-*)
Z2M7	12	8	16.4	12.0	(*---)
Z2M8	4	16	24.2	9.6	(*)
Z2M9	1	19	30.3	20.6	(-*-----)
Z2M10	20	0	11.3	2.1	(*
Z2M11	12	8	17.9	6.7	(*)
Z2M12	6	14	22.6	13.4	(-*-)
Z2M13	8	12	22.6	11.4	(--*)
Z2M14	17	3	14.6	4.1	*)

---------+---------+---------+-------
20 40 60

Overall median = 19.1

Mood median test for Zone 3
Chi-Square = 44.80 DF = 11 P = 0.000

(b)

Mood median test for Zone 3
Chi-Square = 44.80 DF = 11 P = 0.000

	N≤	N>	Median	Q3-Q1	Individual 95.0% CIs
Z3M1	9	11	18.0	20.0	(--*-----)
Z3M2	8	12	19.9	14.8	(--*---)
Z3M3	16	4	11.7	6.6	(*-)
Z3M4	15	5	13.9	7.6	(-*)
Z3M5	4	16	36.4	62.3	(------*---------------)
Z3M6	6	14	22.7	38.9	(--*----------)
Z3M7	8	12	25.2	32.3	(-----*-----)
Z3M8	6	14	20.3	18.0	(-*---)
Z3M9	13	7	11.7	9.2	(*--)
Z3M10	14	6	13.8	11.3	(-*-)
Z3M11	5	15	28.2	42.9	(----*----------)
Z3M12	16	4	9.7	10.2	(-*--)

-------+---------+---------+---------
20 40 60

Overall median = 17.1

Figure S5. Mood's median test for (**a**)Zone 2 and (**b**) Zone 3

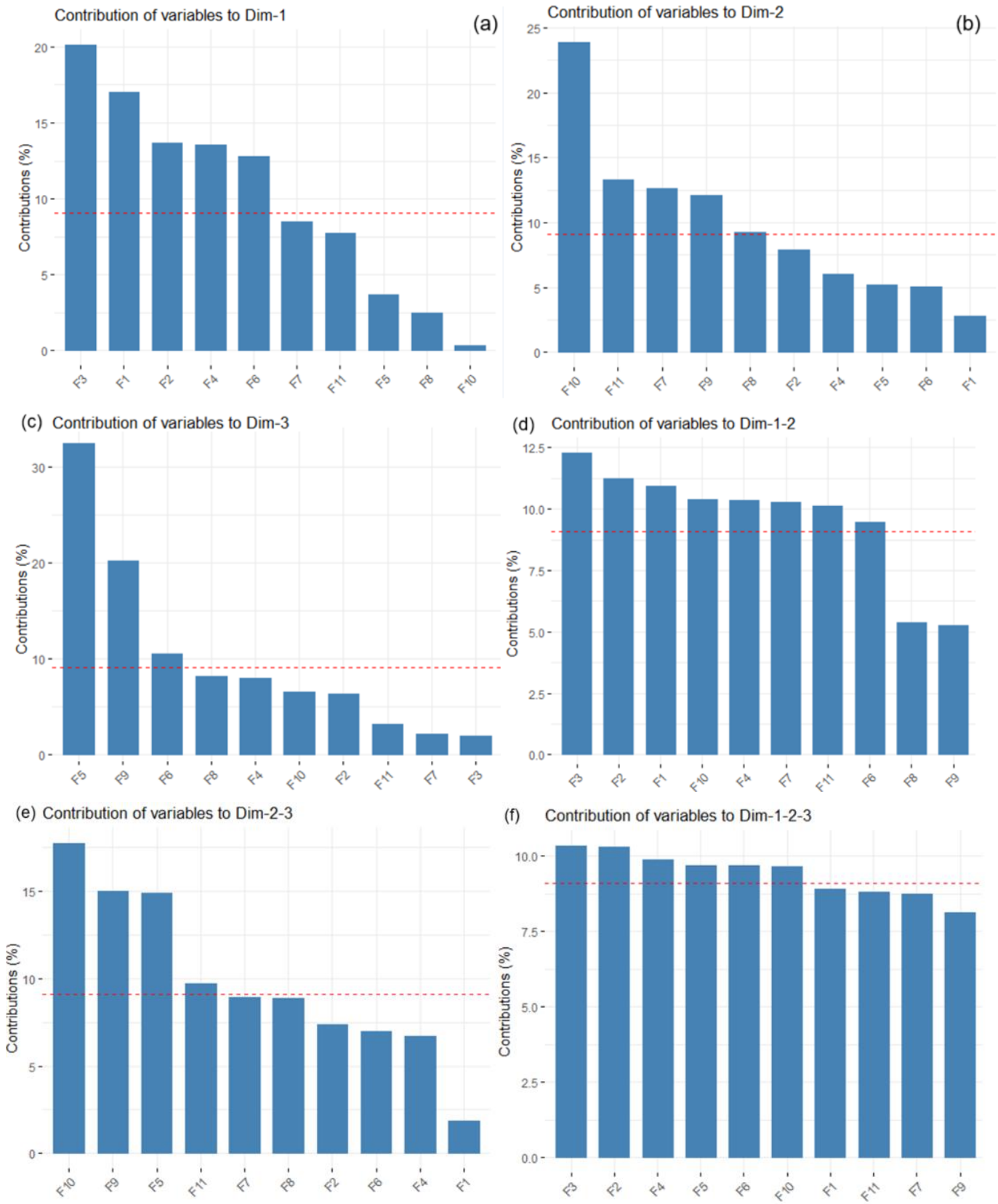


Figure S6. Contribution of variables in Zone 2 to **(a)** Dim-1, **(b)** Dim-2 **(c)** Dim-3, **(d)** Dim-1-2, **(e)** Dim-1-2, **(f)** Dim-1-2-3.

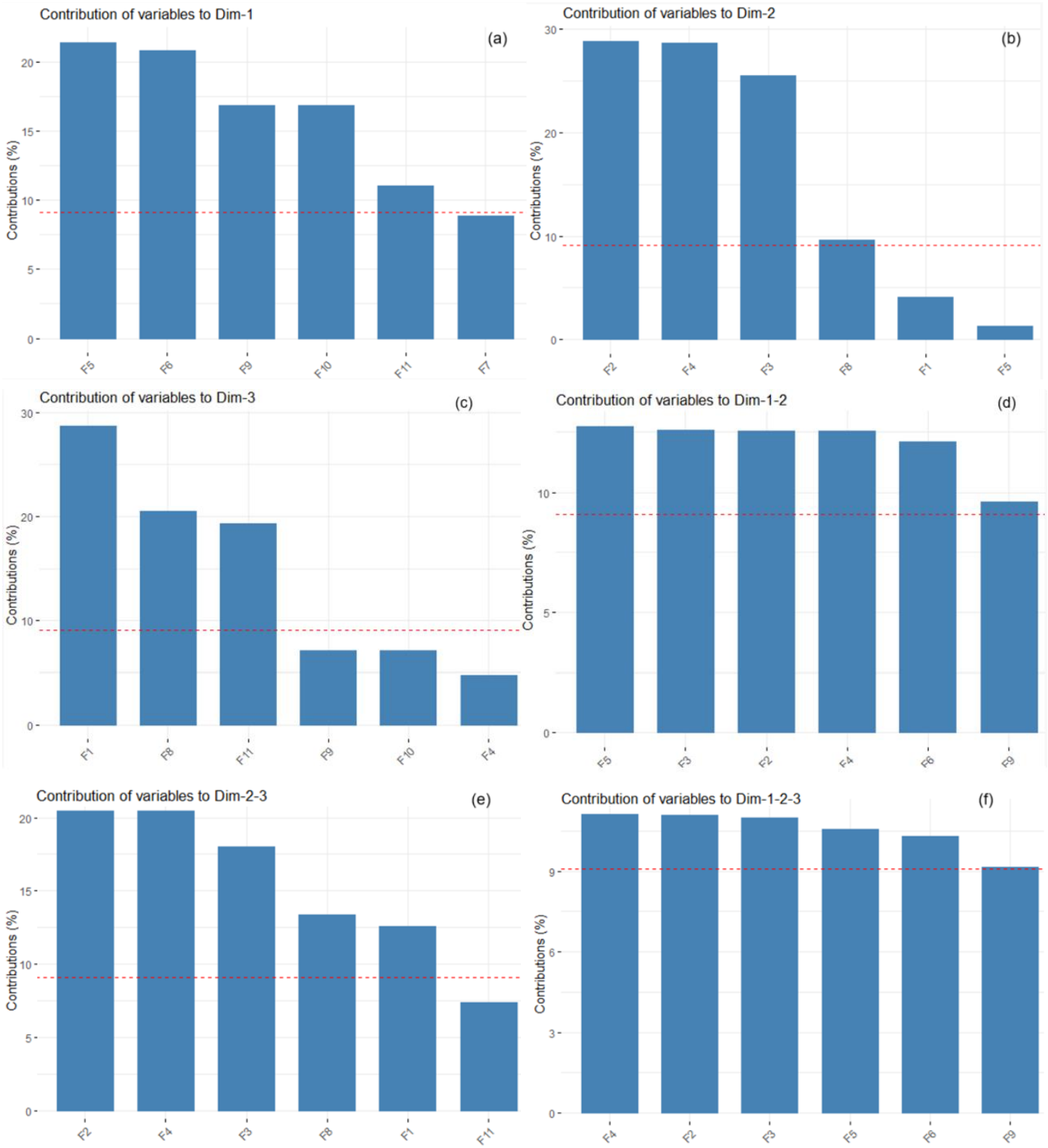


Figure S7. Contribution of variables in Zone 3 to **(a)** Dim-1, (**b**) Dim-2, **(c)** Dim-3, (**d**) Dim-1-2, **(e)** Dim-1-2, (**f**) Dim-1-2-3.

Table S1. Zone 1: Basic statistics. The measurement units are mg/m^3 for min, max, average, stdev. Skew and kurt are numbers

Latitude	Longitude	Point	min	max	average	stdev	skew	kurt
44°20'14.84"N	28°39'2.28"E	P1.1	4.18	70.46	38.85	19.39	-0.30	-0.80
44°20'15.42"N	28°39'1.06"E	P1.2	6.48	26.16	15.08	5.48	0.46	-0.69
44°20'16.05"N	28°38'59.67"E	P1.3	8.28	84.2	37.99	23.85	0.42	-1.18
44°20'14.92"N	28°39'0.63"E	P1.4	10.04	100.01	39.84	24.79	1.00	0.67
44°20'13.80"N	28°39'1.42"E	P1.5	10.15	90.28	34.32	21.48	1.19	1.40
44°20'14.10"N	28°39'0.80"E	P1.6	11.19	122.9	50.58	34.04	0.86	-0.13
44°20'14.42"N	28°39'0.15"E	P1.7	1.20	86.98	42.03	21.28	0.24	-0.31
44°20'14.70"N	28°38'59.57"E	P1.8	12.03	60.28	37.85	14.18	-0.17	-0.70
44°20'15.06"N	28°38'58.73"E	P1.9	10.15	135.77	43.38	31.58	1.50	3.10
44°20'13.90"N	28°38'59.73"E	P1.10	6.36	62.76	27.57	15.57	0.70	-0.12
44°20'12.74"N	28°39'0.46"E	P1.11	6.18	25.98	16.97	7.69	-0.11	-1.86
44°20'13.28"N	28°38'59.16"E	P1.12	7.06	104.43	42.41	29.56	0.86	-0.26
44°20'14.00"N	28°38'57.74"E	P1.13	10.92	138.02	54.3	31.9	1.00	1.51
44°20'12.96"N	28°39'1.84"E	P1.14	11.02	164.53	53.52	43.39	1.34	1.45
44°20'13.96"N	28°39'2.75"E	P1.15	12.69	101.08	44.5	29.49	0.71	-0.81

Table S2. Zone 2: Basic statistics. The measurement units are mg/m^3 for min, max, average, stdev. Skew and kurt are numbers.

Latitude	Longitude	Point	min	max	average	stdev	skew	kurt
44°20'20.61"N	28°39'10.17"E	P2.1	15.75	38.60	25.72	6.95	0.69	-0.38
44°20'21.49"N	28°39'11.04"E	P2.2	13.68	69.97	37.57	16.76	0.64	-0.64
44°20'22.51"N	28°39'12.09"E	P2.3	14.21	102.47	50.65	24.82	0.67	-0.57
44°20'21.50"N	28°39'8.11"E	P2.4	3.15	15.10	5.72	2.70	2.46	7.41
44°20'22.45"N	28°39'9.11"E	P2.5	0.62	15.00	3.21	4.09	2.53	5.45
44°20'23.35"N	28°39'10.36"E	P2.6	10.11	26.45	17.00	5.09	0.23	-0.71
44°20'22.45"N	28°39'6.18"E	P2.7	10.64	47.46	21.16	10.58	1.5	1.56
44°20'23.45"N	28°39'6.98"E	P2.8	14.00	84.75	29.86	17.98	1.93	3.62
44°20'24.43"N	28°39'7.79"E	P2.9	16.50	82.50	36.10	16.35	1.44	2.22
44°20'23.37"N	28°39'4.21"E	P2.10	6.38	12.98	10.73	1.85	-1.33	0.94
44°20'24.38"N	28°39'4.97"E	P2.11	10.46	32.64	18.52	5.81	1.01	1.19
44°20'25.20"N	28°39'6.01"E	P2.12	10.20	28.85	20.75	6.41	-0.72	-1.07
44°20'25.30"N	28°39'3.03"E	P2.13	9.67	37.42	20.79	7.01	0.32	-0.03
44°20'26.03"N	28°39'3.92"E	P2.14	10.61	41.67	16.83	7.35	2.62	7.13

Table S3. Zone 3: Basic statistics. The measurement units are mg/m^3 for min, max, average, stdev. Skew and kurt are numbers.

Latitude	Longitude	Point	min	max	average	stdev	skew	kurt
44°20'27.28"N	28°39'1.97"E	P3.1	7.82	87.32	27.51	23.69	1.61	1.63
44°20'26.70"N	28°39'3.19"E	P3.2	6.48	72.47	24.39	17.57	1.70	2.75
44°20'26.26"N	28°39'4.07"E	P3.3	8.72	66.74	17.08	13.62	2.92	9.55
44°20'28.08"N	28°39'2.68"E	P3.4	7.45	21.24	13.77	4.16	0.03	-1.25
44°20'27.54"N	28°39'3.95"E	P3.5	6.49	102.79	45.33	31.59	0.55	-1.19
44°20'27.10"N	28°39'4.84"E	P3.6	4.36	147.42	35.94	33.37	2.17	5.85
44°20'29.04"N	28°39'3.49"E	P3.7	5.04	84.94	30.00	22.54	1.04	0.34
28°39'4.07"E	28°39'4.07"E	P3.8	5.84	63.71	24.75	14.39	1.21	1.57
44°20'27.92"N	28°39'5.65"E	P3.9	6.74	39.49	15.06	8.13	1.72	3.23
44°20'29.54"N	28°39'3.87"E	P3.10	3.96	52.01	16.07	11.14	1.97	5.06
44°20'28.96"N	28°39'5.19"E	P3.11	11.15	100.72	38.44	27.04	1.09	0.26
44°20'28.52"N	28°39'6.14"E	P3.12	3.23	31.18	12.93	9.03	1.14	0.1