

## Supplement information

### Dissolved trace metals and organic matter distribution in the northern Adriatic, an increasingly oligotrophic shallow sea

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Content: Figures S1-S6, Tables S1-S7

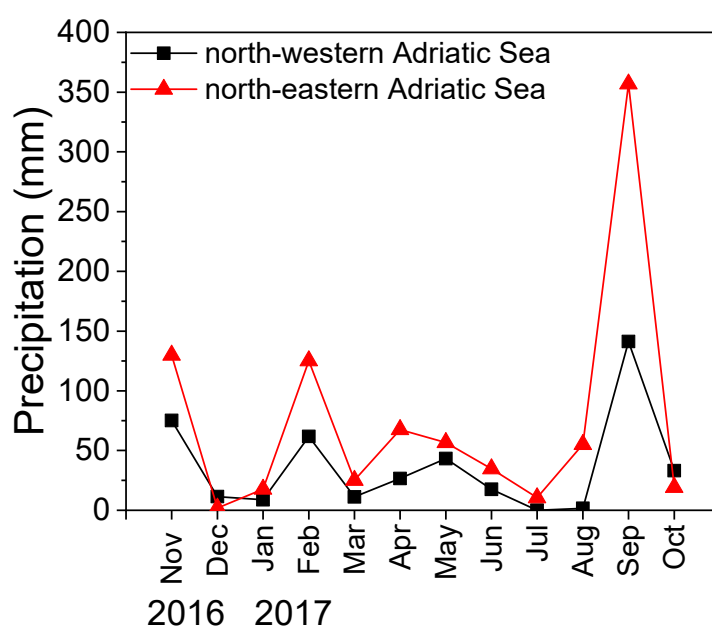


Figure S1. Monthly rain precipitation in the northern Adriatic.

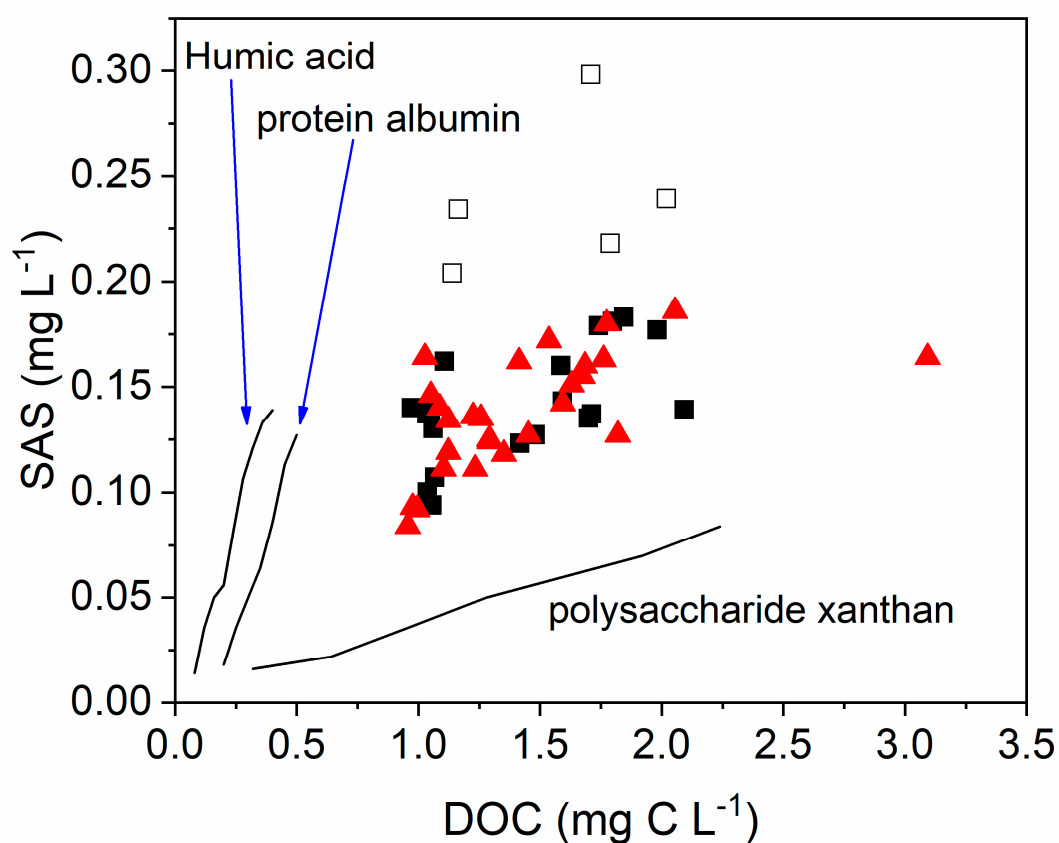


Figure S2. Surface-active organic substances (SAS) (eq. T-X-100, mg L<sup>-1</sup>) vs. DOC. Station 108 (■, □), station 107 (▲). Open squares represent high SAS vs. DOC detected at station 108. Lines represent SAS-DOC correlations for the selected model substances: humic acid, protein albumin and high molecular acidic polysaccharide xanthan.

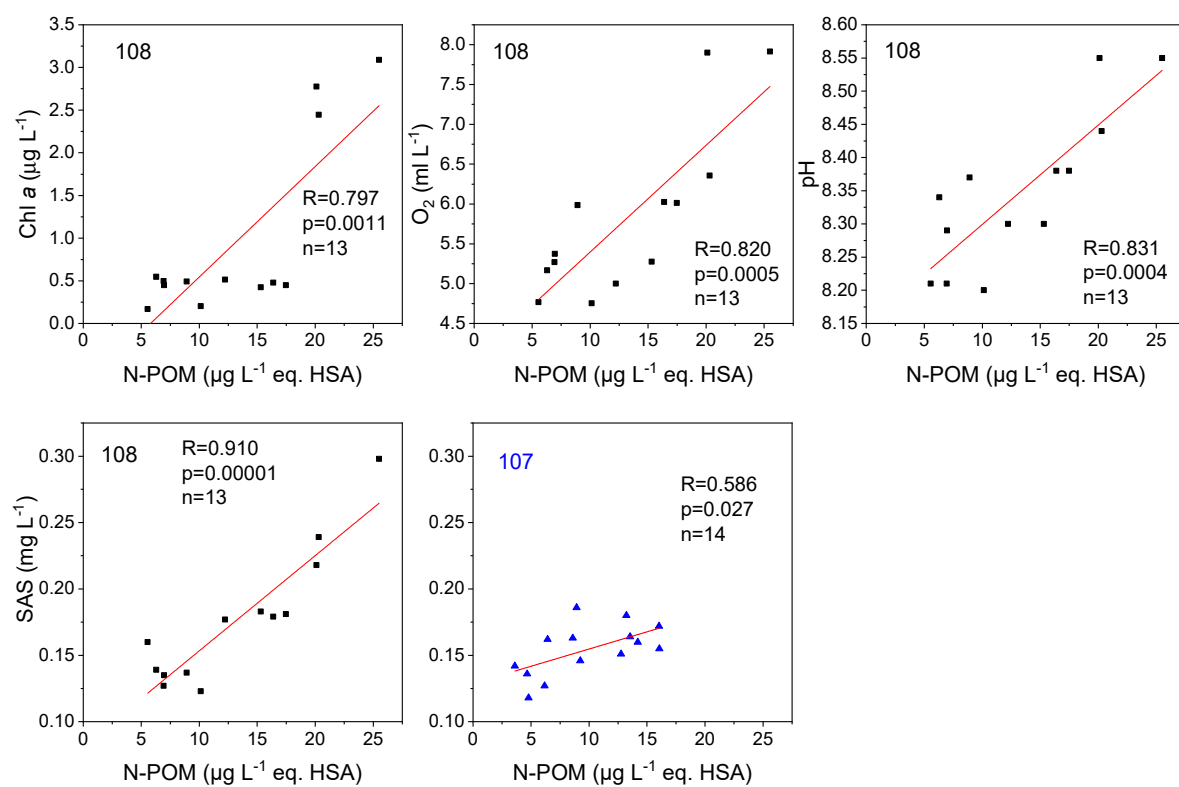


Figure S3. Nitrogen-containing polymeric organic material (N-POM) vs. Chl *a*,  $\text{O}_2$ , pH, and surface-active substances (SAS) for station 108 and N-POM vs. SAS for station 107.

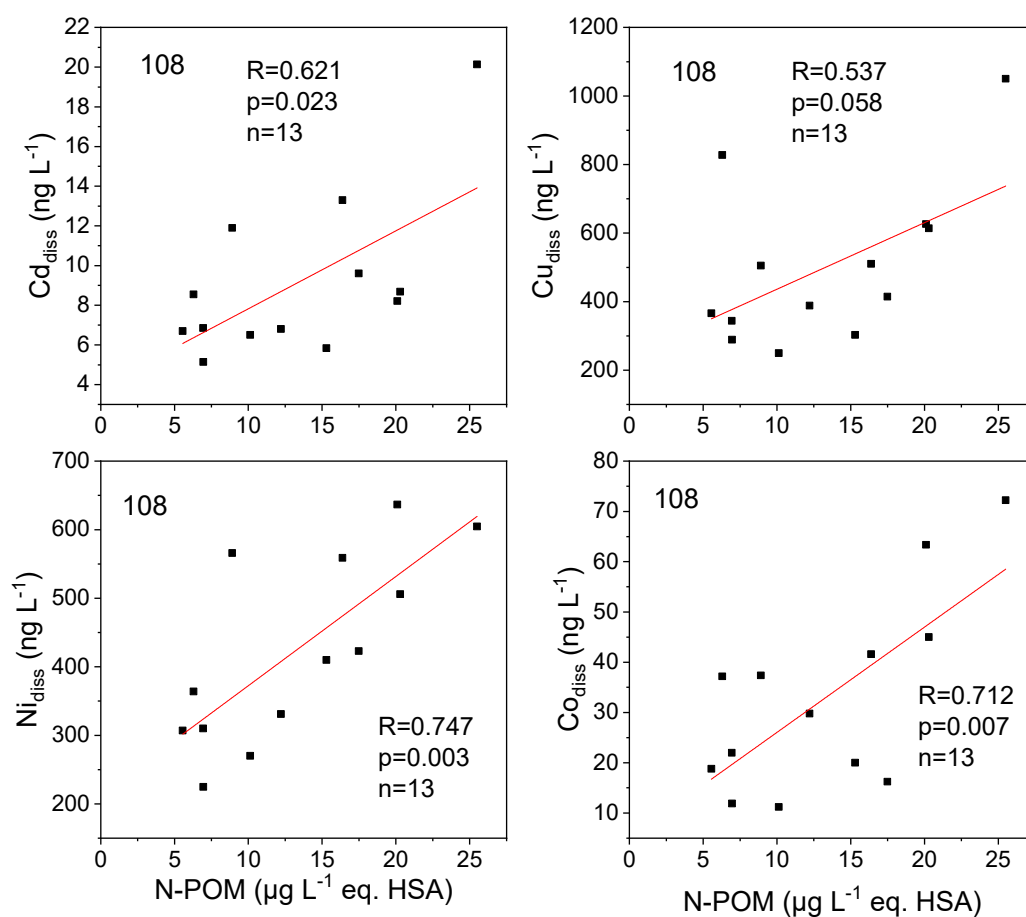
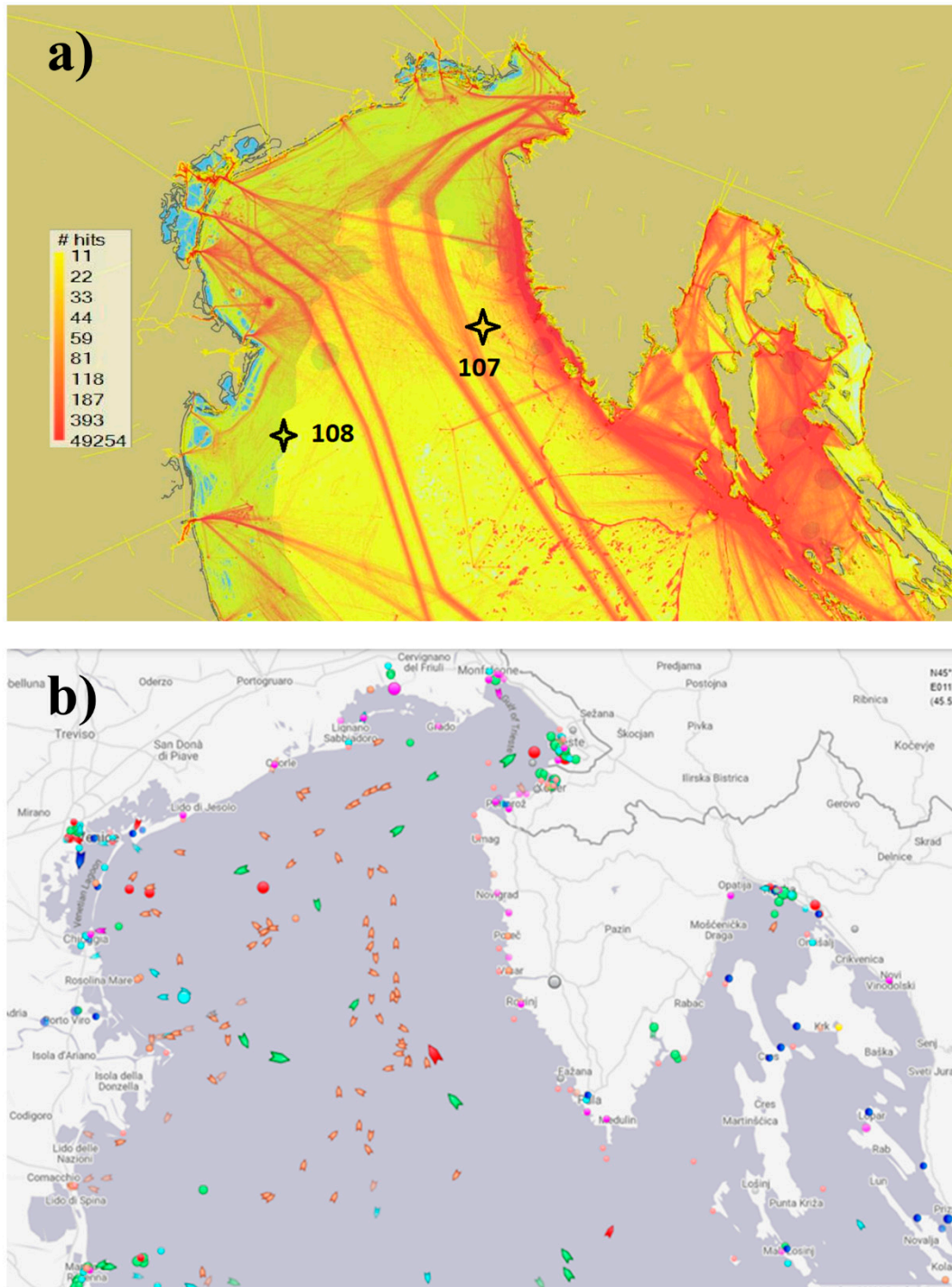


Figure S4. Nitrogen-containing polymeric organic material (N-POM) vs. cadmium, copper, nickel and cobalt for station 108.



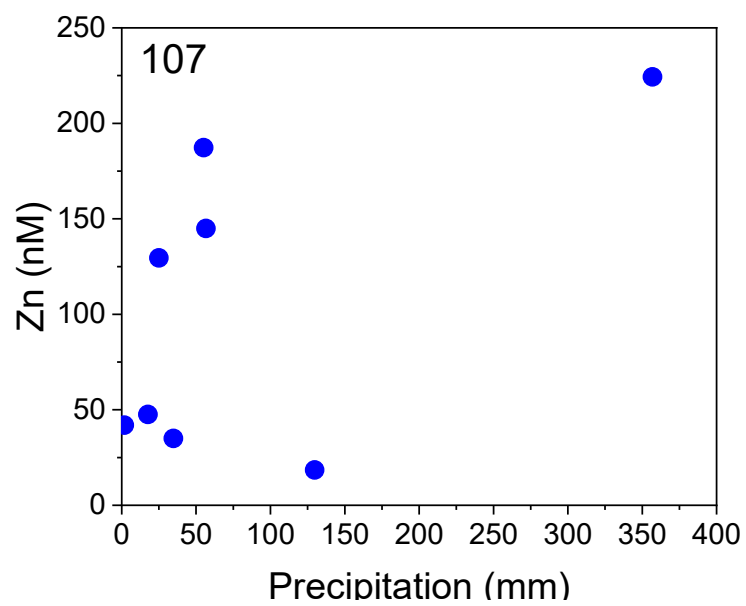


Figure S6. Dissolved Zn vs. precipitation at the surface of eastern station 107.

Table S1. Physico-chemical parameters at station 108 and 107 in the northern Adriatic.

Date	Depth (m)	Station 108				Station 107			
		T (°C)	pH	O <sub>2</sub> (ml L <sup>-1</sup> )	Salinity	T (°C)	pH	O <sub>2</sub> (ml L <sup>-1</sup> )	Salinity
<i>16.11.2016</i>	0	15.9	8.2	5.3	37.3	16.1	8.3	5.5	37.4
<i>12.12.2016</i>	0	12.7	8.3	5.8	36.0	14.8	8.3	5.5	38.3
<i>27.1.2017</i>	0	8.8	8.3	6.3	38.1	8.1	8.3	6.8	37.4
<i>28.3.2017</i>	0	13.7	8.6	7.9	34.2	11.4	8.3	6.1	38.3
<i>3.5.2017</i>	0	15.4	8.4	6	35.8	15.5	8.3	5.9	37.1
<i>12.6.2017</i>	0	25.1	8.4	6.4	31.3	23.7	8.2	5.1	36.2
<i>12.7.2017</i>	0	28	8.3	5.2	32.5	26.1	8.2	4.8	36.0
<i>30.8.2017</i>	0	27	8.2	4.8	36.6	26.4	8.2	4.8	36.4
<i>4.10.2017</i>	0					20.8	8.2	5.1	38.0
<i>16.11.2016</i>	5	15.9	8.2	5.3	37.4	16.1	8.3	5.5	37.4
<i>12.12.2016</i>	5	13	8.3	5.8	36.7	14.8	8.3	5.5	38.3
<i>27.1.2017</i>	5	8.8	8.3	6.3	38.1	8.6	8.3	6.6	37.5
<i>28.3.2017</i>	5	12.4	8.6	7.9	34.9	11.3	8.3	6.2	38.3
<i>3.5.2017</i>	5	14.9	8.4	6	35.9	14.6	8.3	5.9	37.3
<i>12.6.2017</i>	5	22.7	8.3	5.3	35.6	23.2	8.2	5.1	36.4
<i>12.7.2017</i>	5	26.3	8.3	5	33.9	26	8.2	4.8	36.1
<i>30.8.2017</i>	5	27	8.2	4.8	36.6	26.5	8.2	4.9	36.6
<i>4.10.2017</i>	5					20.8	8.2	5	38.0
<i>16.11.2016</i>	10	16.4	8.2	4.5	37.6	17.5	8.3	4.8	38.2
<i>12.12.2016</i>	10	13.6	8.3	5.7	37.7	14.8	8.3	5.6	38.3
<i>27.1.2017</i>	10	9	8.3	6.3	38.3	9.2	8.3	6.5	37.9
<i>28.3.2017</i>	10	9.1	8.2	6	37.8	11.3	8.3	6.2	38.3
<i>3.5.2017</i>	10	14.8	8.4	6	35.9	14.5	8.3	6	37.3
<i>12.6.2017</i>	10	21.6	8.3	5.4	36.4	22.5	8.2	5	36.8
<i>12.7.2017</i>	10	22.1	8.2	5.3	36.6	26	8.2	4.8	36.1
<i>30.8.2017</i>	10	26.4	8.2	4.8	37.7	26.1	8.2	4.8	37.0
<i>4.10.2017</i>	10					20.8	8.2	5.1	38.0

Table S2. a) Daily precipitation (mm) at the Pontelagoscuro Station (44.88°N, 11.60°E). Data obtained from “Annali Idrologici” published by Hydrographic and Mareographic National Service of Italy (SIMN) and by the Regional Environmental Protection Agency of Emilia Romagna (ARPA; <http://www.arpa.emr.it/>).

b) Daily precipitation (mm) at Rovinj Station (45.10°N, 13.63°E). Data obtained from Croatian Meteorological and hydrological service ([www.meteo.hr](http://www.meteo.hr)).

<b>a)</b>	2016		2017									
Pontelagoscuro	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Day	(mm)		(mm)									
1	0.2	—	0.2	—	1	—	—	—	—	—	5.6	—
2	—	0.2	0.6	—	—	—	2.4	—	—	—	—	4.2
3	—	—	—	0.8	—	—	1.4	—	—	—	10.6	—
4	—	0.8	—	2.6	—	—	0.8	—	—	—	—	—
5	0.6	0.8	—	6.6	—	0.4	3.8	—	—	—	—	—
6	9.8	0.2	—	29.4	—	—	—	—	—	—	—	—
7	0.2	0.2	—	9.6	1	—	23.2	1.4	—	0.8	—	10.2
8	—	0.4	—	—	0.2	—	1.2	—	—	—	35.4	—
9	—	0.2	—	—	—	—	6.4	—	—	—	—	—
10	1	—	—	—	—	—	—	—	—	—	33	0.2
11	—	0.4	—	—	—	—	—	—	—	0.8	2.2	—
12	15	—	—	—	—	—	—	—	18.4	—	5.6	0.2
13	—	0.2	2	—	—	—	—	—	—	—	2.2	—
14	—	0.2	5.6	—	—	—	0.4	—	—	—	—	0.4
15	0.2	—	—	—	—	—	3.2	8.2	4.8	—	2	0.2
16	—	—	—	—	—	4.4	—	—	—	—	9.4	0.2
17	—	0.2	0.2	—	—	3.2	—	—	—	—	—	0.2
18	—	0.4	—	4.2	—	—	—	—	—	—	—	0.4
19	30.6	—	—	0.2	—	2.2	—	—	—	—	21.4	—
20	1.8	0.2	—	—	—	0.2	—	—	—	—	6.2	—
21	1	5	—	0.4	—	—	0.4	—	—	—	—	—
22	—	0.2	—	—	—	—	—	—	—	—	—	—
23	—	0.2	—	0.2	—	—	—	—	—	—	—	16.8
24	0.4	0.6	—	—	—	—	—	—	—	—	—	—
25	0.8	—	—	7.8	—	1.4	—	—	20	—	7.6	—
26	12.4	0.2	—	—	7	—	—	—	»	—	—	—
27	1.2	0.4	—	—	2	9	—	0.6	»	—	—	—
28	—	0.2	—	—	—	5.8	—	0.2	—	—	—	0.2
29	—	—	—	—	—	—	7	—	—	—	—	0.2
30	—	—	—	—	—	—	0.2	—	—	—	—	—
31	—	—	0.2	—	—	—	—	—	—	—	—	—



Total	75.2	11.4	8.8	61.8	11.2	26.6	43.2	17.6	1.6	141. 2	33.2	
b)	2016		2017									
Rovinj	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Day	(mm)		(mm)									
1	—	—	—	28.5	1.9	—	—	—	0.8	—	7.8	—
2	—	—	—	7.1	4.5	—	0.6	—	—	—	7.5	—
3	0.1	—	0.8	6.6	—	—	—	—	0.3	—	9.3	—
4	—	1.7	—	8.9	—	—	—	—	—	—	4.1	1.3
5	5.2	0.1	—	11.4	3.8	—	18.5	—	—	—	4	—
6	30.4	—	—	21.1	1.1	1.4	—	0.1	—	—	—	—
7	5.2	—	—	1.5	7.8	7.3	17	1	—	25.4	0.1	5.6
8	5.6	—	—	—	—	—	0.4	7.2	—	—	65	—
9	0.0	—	—	—	—	—	0.5	—	0	—	—	—
10	0.2	—	—	—	—	—	0.2	—	—	0.1	1	—
11	0.9	—	—	0.6	—	—	1.3	—	—	3.3	115.6	—
12	30.1	—	—	—	—	—	—	—	3.6	2.4	15.8	—
13	0.0	—	9.8	—	—	—	2.1	—	—	0.3	5.6	—
14	—	—	6.2	—	—	—	—	—	—	—	—	—
15	—	—	—	—	—	—	—	1.6	0.1	—	—	—
16	—	—	—	—	—	7.4	0	—	—	—	40.5	—
17	—	—	—	—	—	6.8	—	—	—	—	5.2	—
18	2.3	—	—	13.2	—	—	—	—	—	—	1.2	—
19	2.6	—	—	—	—	15.6	—	—	—	—	17.2	—
20	15.6	—	—	—	—	—	3.1	—	—	17.3	15.8	—
21	2.6	—	—	—	—	—	10.6	—	—	—	—	—
22	0.1	—	—	—	—	—	—	—	0	—	—	—
23	0.2	—	—	—	—	—	—	—	—	—	—	11.7
24	—	—	—	—	—	—	—	—	—	—	—	0.6
25	5.2	—	—	26.3	—	—	2.4	—	5.1	—	39.6	—
26	16.8	—	—	—	—	—	—	9.8	—	—	1.6	—
27	6.7	—	—	—	6	0.5	—	0.1	—	—	—	—
28	—	—	—	—	—	24.9	—	0	—	0	—	—
29	—	—	—	—	—	3.7	—	15	—	6.3	—	—
30	—	—	—	—	—	—	—	—	—	—	—	—
31	—	—	0.9	—	—	—	—	—	0.6	—	—	—
Total	129.8	1.8	17.7	125.2	25.1	67.6	56.7	34.8	10.5	55.1	356.9	19.2

Table S3. Nutrient concentrations at stations 108 and 107 in the northern Adriatic.

		Station 108							Station 107				
Date	Depth	PO <sub>4</sub>	OrgP	NO <sub>3</sub>	NO <sub>2</sub>	NH <sub>4</sub>	SiO <sub>4</sub>	PO <sub>4</sub>	OrgP	NO <sub>3</sub>	NO <sub>2</sub>	NH <sub>4</sub>	SiO <sub>4</sub>
	(m)	μmol L <sup>-1</sup>											
16.11.2016	0	0.05	0.29	2.23	0.52	0.17	9.12	0.05	0.31	1.49	0.33	0.18	3.04
12.12.2016	0	0.04	0.31	5.93	1.19	0.43	9.49	0.05	0.12	0.94	0.64	0.24	2.92
27.1.2017	0	0.07	0.10	1.59	0.59	0.17	4.11	0.09	0.14	2.76	0.75	0.23	6.36
28.3.2017	0	0.12	0.28	3.14	0.38	0.28	0.13	0.03	0.19	0.19	0.09	0.17	4.70
3.5.2017	0	0.10	0.18	0.22	0.20	0.20	0.60	0.14	0.14	0.11	0.05	0.39	1.81
12.6.2017	0	0.11	0.39	0.37	0.11	0.59	3.00		0.19	0.08	0.05	0.25	3.15
12.7.2017	0	0.05	0.31	0.09	0.06	0.27	0.23		0.19	0.20	0.01	0.59	0.84
30.8.2017	0		0.52	0.12	0.02	0.14	0.64		0.25	0.18	0.02	0.30	0.23
4.10.2017	0								0.15	0.22	0.02	0.35	0.18
16.11.2016	5	0.07	0.33	2.53	0.49	0.15	9.56		0.26	1.60	0.32	0.17	4.95
12.12.2016	5		0.32	4.89	1.08	0.12	8.13	0.04	0.12	0.90	0.70	0.23	2.90
27.1.2017	5	0.07	0.10	1.79	0.60	0.17	3.95	0.10	0.15	2.77	0.73	0.14	5.82
28.3.2017	5	0.08	0.26	2.55	0.38	0.53	0.12	0.03	0.17	0.18	0.09	0.28	0.63
3.5.2017	5	0.11	0.13	0.22	0.19	0.16	0.63	0.06	0.12	0.10	0.03	0.24	0.38
12.6.2017	5	0.05	0.14	0.20	0.04	0.52	2.45		0.13	0.10	0.05	0.35	3.18
12.7.2017	5		0.25	0.12	0.01	0.25	0.19	0.04	0.15	0.10	0.02	0.43	0.70
30.8.2017	5		0.46	0.10	0.02	0.14	0.60		0.31	0.08	0.02	0.29	0.36
4.10.2017	5								0.13	0.10	0.01	0.25	0.27
16.11.2016	10	0.08	0.26	3.55	0.46	0.11	13.37	0.07	0.17	1.55	0.33	0.18	3.29
12.12.2016	10		0.32	1.57	0.56	0.13	5.92	0.04	0.19	0.86	0.67	0.22	2.96
27.1.2017	10	0.04	0.14	1.54	0.59	0.17	3.31	0.10	0.16	1.51	0.73	0.15	4.66
28.3.2017	10	0.03	0.20	1.37	0.22	0.85	0.75	0.03	0.20	0.20	0.08	0.30	0.75
3.5.2017	10	0.07	0.20	0.25	0.17	0.16	0.67	0.11	0.09	0.18	0.02	0.21	0.56
12.6.2017	10	0.06	0.15	0.10	0.04	0.39	2.60		0.14	0.10	0.05	0.41	2.51
12.7.2017	10		0.25	0.10	0.01	0.28	0.30	0.06	0.08	0.23	0.01	0.49	0.70
30.8.2017	10		0.21	0.21	0.01	0.15	0.88		0.22	0.08	0.01	0.29	0.67
4.10.2017	10								0.18	0.11	0.01	0.26	0.30

Table S4. Chl *a* at stations 108 and 107 in the northern Adriatic.

Date	Depth m	Station 108	Station 107
		Chl <i>a</i> $\mu\text{g L}^{-1}$	Chl <i>a</i> $\mu\text{g L}^{-1}$
<i>16.11.2016</i>	0	2.41	2.09
<i>12.12.2016</i>	0	0.87	0.46
<i>27.1.2017</i>	0	0.81	0.97
<i>28.3.2017</i>	0	3.09	0.23
<i>3.5.2017</i>	0	0.49	0.41
<i>12.6.2017</i>	0	2.44	0.11
<i>12.7.2017</i>	0	0.55	0.16
<i>30.8.2017</i>	0	0.21	0.17
<i>4.10.2017</i>	0		0.23
<i>16.11.2016</i>	5	2.34	2.14
<i>12.12.2016</i>	5	0.89	0.46
<i>27.1.2017</i>	5	0.77	0.94
<i>28.3.2017</i>	5	2.78	0.26
<i>3.5.2017</i>	5	0.45	0.41
<i>12.6.2017</i>	5	0.42	0.12
<i>12.7.2017</i>	5	0.52	0.18
<i>30.8.2017</i>	5	0.17	0.19
<i>4.10.2017</i>	5		0.24
<i>16.11.2016</i>	10	1.80	0.53
<i>12.12.2016</i>	10	0.88	0.41
<i>27.1.2017</i>	10	0.80	0.98
<i>28.3.2017</i>	10	0.76	0.27
<i>3.5.2017</i>	10	0.48	0.42
<i>12.6.2017</i>	10	0.45	0.13
<i>12.7.2017</i>	10	0.50	0.20
<i>30.8.2017</i>	10	0.20	0.15
<i>4.10.2017</i>	10		0.26

Table S5. DOC, SAS and N-POM concentrations at stations 108 and 107 in the northern Adriatic.

Date	Depth m	Station 108			Station 107		
		DOC mg L <sup>-1</sup>	SAS mg L <sup>-1</sup> eq. T-X-100	N-POM µg L <sup>-1</sup> eq. HSA	DOC mg L <sup>-1</sup>	SAS mg L <sup>-1</sup> eq. T-X-100	N-POM µg L <sup>-1</sup> eq. HSA
<i>16.11.2016</i>	0	1.14	0.20		1.23	0.11	
<i>12.12.2016</i>	0	1.06	0.09		1.00	0.09	
<i>27.1.2017</i>	0	1.05	0.14		1.09	0.14	
<i>28.3.2017</i>	0	1.71	0.30	25.51	1.10	0.11	
<i>3.5.2017</i>	0	1.71	0.14	8.92	2.06	0.19	8.93
<i>12.6.2017</i>	0	2.02	0.24	20.30	1.59	0.14	3.61
<i>12.7.2017</i>	0	2.09	0.14	6.30	3.09	0.16	13.53
<i>30.8.2017</i>	0	1.59	0.14		1.77	0.18	13.22
<i>4.10.2017</i>	0				1.82	0.13	
<i>16.11.2016</i>	5	1.17	0.23		1.12	0.12	
<i>12.12.2016</i>	5	1.06	0.13		0.98	0.09	
<i>27.1.2017</i>	5	1.04	0.10		1.26	0.14	
<i>28.3.2017</i>	5	1.79	0.22	20.10	1.23	0.14	4.66
<i>3.5.2017</i>	5	1.80	0.18	17.48	1.41	0.16	6.42
<i>12.6.2017</i>	5	1.85	0.18	15.30	1.69	0.16	14.20
<i>12.7.2017</i>	5	1.98	0.18	12.22	1.68	0.16	16.07
<i>30.8.2017</i>	5	1.59	0.16	5.55	1.54	0.17	16.04
<i>4.10.2017</i>	5				1.29	0.12	
<i>16.11.2016</i>	10	1.11	0.16		1.12	0.13	
<i>12.12.2016</i>	10	0.97	0.14		0.96	0.08	
<i>27.1.2017</i>	10	1.04	0.14		1.05	0.15	9.24
<i>28.3.2017</i>	10	1.07	0.11		1.03	0.16	
<i>3.5.2017</i>	10	1.74	0.18	16.39	1.35	0.12	4.80
<i>12.6.2017</i>	10	1.70	0.14	6.96	1.76	0.16	8.60
<i>12.7.2017</i>	10	1.48	0.13	6.94	1.63	0.15	12.76
<i>30.8.2017</i>	10	1.42	0.12	10.13	1.45	0.13	6.17
<i>4.10.2017</i>	10				1.29	0.13	

Table S6. Concentrations of dissolved and total trace metals at station 108 at the western side of the northern Adriatic.

<i>Station 108</i>							
<i>Date</i>	Depth (m)	Zn	Cd	Pb	Cu	Ni	Co
		Dissolved (nM)					
<i>16.11.2016</i>	0	7.5 ± 0.6	0.07 ± 0.01	0.07 ± 0.01	14.3 ± 0.8	7.9 ± 0.7	0.31 ± 0.04
<i>12.12.2016</i>	0	10.2 ± 0.9	0.08 ± 0.00	0.07 ± 0.02	4.4 ± 0.4	8.7 ± 0.0	0.22 ± 0.03
<i>27.1.2017</i>	0	16.0 ± 0.8	0.05 ± 0.00	0.10 ± 0.01	7.0 ± 0.7	7.6 ± 0.7	0.29 ± 0.02
<i>28.3.2017</i>	0	32.8 ± 4.3	0.18 ± 0.05	0.40 ± 0.19	16.5 ± 0.8	10.3 ± 0.9	1.23 ± 0.16
<i>3.5.2017</i>	0	15.1 ± 0.6	0.11 ± 0.02	0.19 ± 0.05	8.0 ± 0.0	9.6 ± 0.5	0.63 ± 0.06
<i>12.6.2017</i>	0	37.9 ± 0.9	0.08 ± 0.01	0.13 ± 0.01	9.7 ± 0.6	8.6 ± 0.5	0.76 ± 0.05
<i>12.7.2017</i>	0	95.5 ± 3.4	0.08 ± 0.01	0.08 ± 0.00	13.0 ± 0.9	6.2 ± 0.4	0.63 ± 0.05
<i>30.8.2017</i>	0	56.6 ± 4.4	0.07 ± 0.01	0.15 ± 0.01	5.7 ± 0.3	5.4 ± 0.4	0.33 ± 0.02
<i>16.11.2016</i>	5	8.4 ± 1.0	0.06 ± 0.00	0.06 ± 0.01	3.7 ± 0.4	8.0 ± 0.8	0.33 ± 0.03
<i>12.12.2016</i>	5	11.3 ± 0.7	0.09 ± 0.00	0.06 ± 0.01	4.5 ± 0.1	7.6 ± 0.8	0.22 ± 0.03
<i>27.1.2017</i>	5	5.1 ± 0.5	0.05 ± 0.00	0.07 ± 0.01	3.0 ± 0.3	7.2 ± 0.4	0.27 ± 0.03
<i>28.3.2017</i>	5	10.8 ± 0.7	0.07 ± 0.06	0.11 ± 0.03	9.9 ± 0.4	10.8 ± 0.5	1.08 ± 0.06
<i>3.5.2017</i>	5	116.0 ± 2.5	0.09 ± 0.01	0.17 ± 0.01	6.5 ± 0.5	7.2 ± 0.5	0.28 ± 0.03
<i>12.6.2017</i>	5	74.1 ± 4.7	0.05 ± 0.00	0.09 ± 0.00	4.8 ± 0.7	7.0 ± 0.4	0.34 ± 0.08
<i>12.7.2017</i>	5	42.2 ± 5.1	0.06 ± 0.00	0.04 ± 0.01	6.1 ± 0.5	5.6 ± 0.6	0.51 ± 0.05
<i>30.8.2017</i>	5	21.3 ± 2.4	0.06 ± 0.01	0.62 ± 0.01	5.8 ± 0.7	5.2 ± 0.4	0.32 ± 0.03
<i>16.11.2016</i>	10	10.3 ± 0.6	0.07 ± 0.01	0.08 ± 0.01	3.8 ± 0.0	6.5 ± 0.7	0.21 ± 0.02
<i>12.12.2016</i>	10	4.6 ± 0.5	0.05 ± 0.00	0.06 ± 0.01	3.4 ± 0.4	6.1 ± 0.5	0.23 ± 0.02
<i>27.1.2017</i>	10	7.8 ± 0.7	0.04 ± 0.00	0.07 ± 0.02	3.6 ± 0.3	6.8 ± 0.6	0.26 ± 0.01
<i>28.3.2017</i>	10	10.4 ± 0.8	0.08 ± 0.02	0.06 ± 0.02	5.6 ± 0.6	7.7 ± 0.4	0.41 ± 0.04
<i>3.5.2017</i>	10	9.7 ± 0.2	0.12 ± 0.01	0.16 ± 0.02	8.0 ± 0.8	9.5 ± 0.7	0.71 ± 0.04
<i>12.6.2017</i>	10	37.5 ± 3.4	0.05 ± 0.00	0.09 ± 0.01	4.5 ± 0.9	3.8 ± 0.9	0.20 ± 0.02
<i>12.7.2017</i>	10	12.6 ± 1.6	0.06 ± 0.01	0.05 ± 0.01	5.4 ± 1.1	5.3 ± 0.4	0.37 ± 0.00
<i>30.8.2017</i>	10	39.7 ± 2.6	0.06 ± 0.01	0.11 ± 0.01	3.9 ± 0.2	4.6 ± 0.4	0.19 ± 0.02
		Total (nM)					
<i>16.11.2016</i>	0	17.5 ± 0.3	0.06 ± 0.01	0.50 ± 0.06	26.5 ± 1.3	11.6 ± 0.8	0.92 ± 0.05
<i>12.12.2016</i>	0	11.6 ± 0.2	0.08 ± 0.00	0.26 ± 0.01	8.3 ± 0.1	8.9 ± 1.0	0.73 ± 0.08
<i>27.1.2017</i>	0	16.7 ± 0.3	0.06 ± 0.01	0.37 ± 0.01	9.8 ± 0.5	10.6 ± 0.4	0.58 ± 0.02
<i>28.3.2017</i>	0	36.4 ± 1.8	0.14 ± 0.01	0.67 ± 0.14	24.6 ± 2.3	12.3 ± 1.2	1.28 ± 0.08
<i>3.5.2017</i>	0	16.4 ± 0.5	0.13 ± 0.01	0.29 ± 0.02	10.0 ± 0.3	11.1 ± 0.8	0.91 ± 0.09
<i>12.6.2017</i>	0	62.5 ± 2.9	0.09 ± 0.00	0.45 ± 0.03	12.8 ± 1.4	13.3 ± 1.0	0.87 ± 0.06
<i>12.7.2017</i>	0	101.4 ± 8.4	0.08 ± 0.01	0.35 ± 0.03	15.7 ± 2.9	7.4 ± 0.9	0.74 ± 0.00
<i>30.8.2017</i>	0	57.5 ± 4.8	0.08 ± 0.01	0.18 ± 0.02	9.4 ± 1.2	5.8 ± 0.3	0.35 ± 0.01
<i>16.11.2016</i>	5	12.1 ± 1.5	0.06 ± 0.00	0.27 ± 0.02	6.9 ± 0.6	8.9 ± 0.4	0.68 ± 0.08
<i>12.12.2016</i>	5	13.3 ± 0.8	0.10 ± 0.00	0.27 ± 0.02	8.7 ± 0.6	8.5 ± 1.3	0.62 ± 0.05
<i>27.1.2017</i>	5	7.0 ± 1.0	0.06 ± 0.00	0.27 ± 0.02	5.7 ± 0.6	8.3 ± 0.6	0.46 ± 0.03

<i>28.3.2017</i>	5	$12.7 \pm 0.8$	$0.13 \pm 0.02$	$0.19 \pm 0.01$	$10.3 \pm 0.8$	$11.5 \pm 1.7$	$1.15 \pm 0.08$
<i>3.5.2017</i>	5	$119.4 \pm 5.3$	$0.09 \pm 0.01$	$0.25 \pm 0.03$	$7.7 \pm 0.6$	$8.3 \pm 0.3$	$0.39 \pm 0.05$
<i>12.6.2017</i>	5	$103.7 \pm 7.2$	$0.06 \pm 0.01$	$0.13 \pm 0.01$	$5.2 \pm 1.1$	$7.2 \pm 0.5$	$0.39 \pm 0.04$
<i>12.7.2017</i>	5	$45.4 \pm 2.4$	$0.07 \pm 0.01$	$0.12 \pm 0.01$	$10.1 \pm 1.0$	$6.8 \pm 0.5$	$0.58 \pm 0.01$
<i>30.8.2017</i>	5	$21.8 \pm 1.5$	$0.06 \pm 0.01$	$0.76 \pm 0.07$	$7.1 \pm 0.3$	$5.3 \pm 0.1$	$0.39 \pm 0.02$
<i>16.11.2016</i>	10	$13.4 \pm 1.1$	$0.07 \pm 0.01$	$0.41 \pm 0.06$	$11.5 \pm 0.9$	$9.4 \pm 0.4$	$0.85 \pm 0.06$
<i>12.12.2016</i>	10	$6.1 \pm 0.4$	$0.07 \pm 0.00$	$0.24 \pm 0.05$	$6.5 \pm 0.1$	$7.0 \pm 0.3$	$0.44 \pm 0.04$
<i>27.1.2017</i>	10	$11.1 \pm 0.9$	$0.05 \pm 0.00$	$0.24 \pm 0.03$	$5.5 \pm 0.5$	$8.0 \pm 0.6$	$0.44 \pm 0.05$
<i>28.3.2017</i>	10	$11.3 \pm 0.5$	$0.13 \pm 0.01$	$0.11 \pm 0.02$	$8.2 \pm 0.7$	$7.4 \pm 0.4$	$0.45 \pm 0.02$
<i>3.5.2017</i>	10	$10.6 \pm 0.4$	$0.12 \pm 0.01$	$0.71 \pm 0.03$	$19.0 \pm 0.7$	$15.3 \pm 0.6$	$0.89 \pm 0.06$
<i>12.6.2017</i>	10	$38.9 \pm 2.6$	$0.05 \pm 0.01$	$0.12 \pm 0.01$	$5.6 \pm 0.7$	$4.2 \pm 0.6$	$0.20 \pm 0.03$
<i>12.7.2017</i>	10	$13.2 \pm 0.8$	$0.07 \pm 0.01$	$0.06 \pm 0.01$	$6.2 \pm 0.3$	$5.5 \pm 0.5$	$0.39 \pm 0.03$
<i>30.8.2017</i>	10	$46.5 \pm 4.1$	$0.06 \pm 0.00$	$0.12 \pm 0.01$	$5.2 \pm 0.3$	$4.8 \pm 0.2$	$0.21 \pm 0.02$

Table S7. Concentrations of dissolved and total TM at station 107 at the eastern side of the northern Adriatic.

<i>Station 107</i>							
<i>Date</i>	Depth (m)	Zn	Cd	Pb	Cu	Ni	Co
		Dissolved (nM)					
<i>16.11.2016</i>	0	18.4 ± 1.1	0.06 ± 0.01	0.07 ± 0.01	4.2 ± 0.5	7.0 ± 0.3	0.35 ± 0.03
<i>12.12.2016</i>	0	42.0 ± 2.2	0.05 ± 0.00	0.09 ± 0.02	9.7 ± 0.8	6.9 ± 0.7	0.21 ± 0.02
<i>27.1.2017</i>	0	47.6 ± 0.9	0.07 ± 0.01	0.12 ± 0.00	8.5 ± 0.3	9.1 ± 0.7	0.42 ± 0.05
<i>28.3.2017</i>	0	129.5 ± 12.2	0.09 ± 0.01	0.19 ± 0.03	9.7 ± 1.3	7.3 ± 0.4	0.28 ± 0.03
<i>3.5.2017</i>	0	144.9 ± 14.2	0.10 ± 0.01	0.25 ± 0.02	8.5 ± 0.3	8.4 ± 0.6	0.46 ± 0.06
<i>12.6.2017</i>	0	35.0 ± 6.0	0.16 ± 0.02	0.45 ± 0.05	15.0 ± 2.1	7.4 ± 0.5	0.38 ± 0.05
<i>12.7.2017</i>	0	1082 ± 103	0.10 ± 0.01	0.30 ± 0.02	7.3 ± 1.1	6.3 ± 0.6	0.20 ± 0.02
<i>30.8.2017</i>	0	187.2 ± 0.6	0.08 ± 0.01	0.41 ± 0.03	14.2 ± 0.9	7.4 ± 0.6	0.34 ± 0.01
<i>4.10.2017</i>	0	224.3 ± 24.1	0.05 ± 0.00	0.16 ± 0.04	4.5 ± 0.3	5.3 ± 0.8	0.16 ± 0.04
<i>16.11.2016</i>	5	10.1 ± 0.8	0.05 ± 0.00	0.07 ± 0.01	4.0 ± 0.3	7.0 ± 0.3	0.31 ± 0.04
<i>12.12.2016</i>	5	14.6 ± 0.2	0.05 ± 0.00	0.07 ± 0.01	2.8 ± 0.2	7.0 ± 0.3	0.25 ± 0.03
<i>27.1.2017</i>	5	47.1 ± 2.0	0.06 ± 0.01	0.07 ± 0.01	6.8 ± 0.1	9.2 ± 0.6	0.43 ± 0.04
<i>28.3.2017</i>	5	65.3 ± 3.7	0.08 ± 0.01	0.24 ± 0.01	8.1 ± 0.1	19.1 ± 0.9	0.48 ± 0.03
<i>3.5.2017</i>	5	28.8 ± 3.7	0.10 ± 0.01	0.22 ± 0.03	7.6 ± 0.6	9.4 ± 0.6	0.66 ± 0.06
<i>12.6.2017</i>	5	147.6 ± 11.9	0.06 ± 0.01	0.11 ± 0.01	2.5 ± 0.2	5.8 ± 0.6	0.43 ± 0.03
<i>12.7.2017</i>	5	190.1 ± 10.2	0.06 ± 0.00	0.08 ± 0.01	3.8 ± 0.3	4.6 ± 0.9	0.27 ± 0.02
<i>30.8.2017</i>	5	40.9 ± 2.4	0.07 ± 0.01	1.24 ± 0.05	4.2 ± 0.6	5.6 ± 0.5	0.30 ± 0.01
<i>4.10.2017</i>	5	6.2 ± 0.7	0.03 ± 0.02	0.13 ± 0.07	5.5 ± 0.6	5.8 ± 0.1	0.21 ± 0.01
<i>16.11.2016</i>	10	36.3 ± 1.0	0.07 ± 0.01	0.06 ± 0.01	17.0 ± 0.9	8.4 ± 0.8	0.45 ± 0.04
<i>12.12.2016</i>	10	30.1 ± 1.7	0.05 ± 0.00	0.09 ± 0.00	3.8 ± 0.1	5.2 ± 0.4	0.21 ± 0.02
<i>27.1.2017</i>	10	20.6 ± 0.6	0.06 ± 0.01	0.08 ± 0.01	6.4 ± 0.5	15.7 ± 0.9	0.43 ± 0.02
<i>28.3.2017</i>	10	56.9 ± 4.2	0.06 ± 0.01	0.09 ± 0.00	3.7 ± 0.2	5.7 ± 0.5	0.29 ± 0.03
<i>3.5.2017</i>	10	100.0 ± 4.7	0.08 ± 0.01	0.10 ± 0.01	4.6 ± 0.2	7.8 ± 0.4	0.35 ± 0.05
<i>12.6.2017</i>	10	217.6 ± 19.4	0.08 ± 0.01	0.15 ± 0.01	4.6 ± 0.3	4.3 ± 0.6	0.22 ± 0.04
<i>12.7.2017</i>	10	20.4 ± 0.9	0.05 ± 0.01	0.05 ± 0.01	5.0 ± 0.2	5.1 ± 0.7	0.47 ± 0.04
<i>30.8.2017</i>	10	6.1 ± 0.5	0.04 ± 0.01	0.07 ± 0.01	4.2 ± 0.1	4.5 ± 0.5	0.29 ± 0.03
<i>4.10.2017</i>	10	44.6 ± 3.9	0.05 ± 0.01	0.14 ± 0.01	3.9 ± 0.5	5.4 ± 0.7	0.14 ± 0.02
		Total (nM)					
<i>16.11.2016</i>	0	24.1 ± 2.3	0.06 ± 0.01	0.21 ± 0.04	8.3 ± 0.9	7.7 ± 0.7	0.56 ± 0.06
<i>12.12.2016</i>	0	44.9 ± 3.2	0.06 ± 0.00	0.42 ± 0.03	17.2 ± 0.2	14.1 ± 0.9	0.69 ± 0.05
<i>27.1.2017</i>	0	51.3 ± 2.5	0.08 ± 0.01	0.26 ± 0.03	9.7 ± 0.2	13.0 ± 0.8	0.72 ± 0.06
<i>28.3.2017</i>	0	142.8 ± 4.2	0.12 ± 0.02	0.31 ± 0.01	16.0 ± 2.1	10.0 ± 0.5	0.41 ± 0.03
<i>3.5.2017</i>	0	105.9 ± 29.1	0.10 ± 0.01	0.41 ± 0.03	10.3 ± 1.1	9.8 ± 0.7	0.53 ± 0.06
<i>12.6.2017</i>	0	55.3 ± 1.1	0.16 ± 0.01	0.60 ± 0.07	23.4 ± 4.1	9.0 ± 1.0	0.45 ± 0.03
<i>12.7.2017</i>	0	1100 ± 128	0.10 ± 0.01	0.33 ± 0.03	10.8 ± 0.1	6.4 ± 0.7	0.26 ± 0.02
<i>30.8.2017</i>	0	203.3 ± 19.4	0.14 ± 0.01	0.66 ± 0.08	21.5 ± 2.3	11.5 ± 0.9	0.34 ± 0.04

<i>4.10.2017</i>	0	$408.7 \pm 56.6$	$0.06 \pm 0.00$	$0.23 \pm 0.02$	$7.7 \pm 1.2$	$8.1 \pm 0.1$	$0.19 \pm 0.03$
<i>16.11.2016</i>	5	$13.1 \pm 0.5$	$0.05 \pm 0.01$	$0.14 \pm 0.02$	$6.5 \pm 0.6$	$7.7 \pm 0.5$	$0.49 \pm 0.03$
<i>12.12.2016</i>	5	$14.8 \pm 0.9$	$0.05 \pm 0.00$	$0.28 \pm 0.02$	$6.8 \pm 0.8$	$9.2 \pm 0.4$	$0.59 \pm 0.07$
<i>27.1.2017</i>	5	$51.8 \pm 0.9$	$0.08 \pm 0.01$	$0.27 \pm 0.03$	$9.5 \pm 1.0$	$9.7 \pm 0.7$	$0.70 \pm 0.05$
<i>28.3.2017</i>	5	$75.3 \pm 5.3$	$0.12 \pm 0.01$	$0.84 \pm 0.04$	$13.2 \pm 1.0$	$23.5 \pm 0.6$	$0.73 \pm 0.07$
<i>3.5.2017</i>	5	$30.9 \pm 1.6$	$0.11 \pm 0.01$	$0.24 \pm 0.01$	$8.2 \pm 0.0$	$10.1 \pm 0.9$	$0.68 \pm 0.06$
<i>12.6.2017</i>	5	$144.0 \pm 7.6$	$0.06 \pm 0.01$	$0.14 \pm 0.02$	$5.5 \pm 0.9$	$6.3 \pm 0.9$	$0.37 \pm 0.02$
<i>12.7.2017</i>	5	$192.7 \pm 2.7$	$0.07 \pm 0.01$	$0.08 \pm 0.01$	$4.6 \pm 0.5$	$5.5 \pm 0.7$	$0.39 \pm 0.05$
<i>30.8.2017</i>	5	$43.8 \pm 2.9$	$0.11 \pm 0.01$	$1.56 \pm 0.12$	$5.8 \pm 0.4$	$6.0 \pm 0.5$	$0.35 \pm 0.02$
<i>4.10.2017</i>	5	$7.4 \pm 1.0$	$0.03 \pm 0.01$	$0.14 \pm 0.03$	$5.6 \pm 0.6$	$6.1 \pm 0.8$	$0.22 \pm 0.01$
<i>16.11.2016</i>	10	$47.0 \pm 4.4$	$0.08 \pm 0.01$	$0.33 \pm 0.04$	$29.0 \pm 2.5$	$8.6 \pm 0.4$	$0.64 \pm 0.04$
<i>12.12.2016</i>	10	$32.6 \pm 2.9$	$0.05 \pm 0.01$	$0.26 \pm 0.03$	$5.8 \pm 0.1$	$7.0 \pm 0.5$	$0.50 \pm 0.02$
<i>27.1.2017</i>	10	$23.2 \pm 1.6$	$0.06 \pm 0.00$	$0.25 \pm 0.03$	$8.8 \pm 0.6$	$16.1 \pm 1.0$	$0.53 \pm 0.03$
<i>28.3.2017</i>	10	$63.8 \pm 1.8$	$0.08 \pm 0.02$	$0.13 \pm 0.02$	$4.8 \pm 0.2$	$6.1 \pm 0.1$	$0.32 \pm 0.03$
<i>3.5.2017</i>	10	$105.7 \pm 6.0$	$0.08 \pm 0.01$	$0.24 \pm 0.03$	$6.0 \pm 0.2$	$8.2 \pm 0.4$	$0.41 \pm 0.04$
<i>12.6.2017</i>	10	$241.5 \pm 8.2$	$0.07 \pm 0.01$	$0.38 \pm 0.02$	$5.7 \pm 0.7$	$4.9 \pm 0.8$	$0.25 \pm 0.02$
<i>12.7.2017</i>	10	$21.5 \pm 1.7$	$0.06 \pm 0.01$	$0.09 \pm 0.00$	$6.2 \pm 0.2$	$5.5 \pm 0.6$	$1.15 \pm 0.10$
<i>30.8.2017</i>	10	$6.8 \pm 0.5$	$0.07 \pm 0.01$	$0.09 \pm 0.01$	$5.4 \pm 0.6$	$5.0 \pm 0.1$	$0.38 \pm 0.01$
<i>4.10.2017</i>	10	$47.4 \pm 3.2$	$0.05 \pm 0.00$	$0.44 \pm 0.08$	$4.0 \pm 0.5$	$6.6 \pm 0.4$	$0.20 \pm 0.03$