

Table S1. Raw data of physicochemical and microbial variables: Temperature (Tem, °C), salinity (salin., ppt), Total Dissolved Nitrogen (TDN, mmol-N L<sup>-1</sup>), Total Dissolved Phosphorus (TDP, μmol-P L<sup>-1</sup>), Dissolved Organic Carbon (DOC, mmol-C l<sup>-1</sup>), chlorophyll *a* (Chl *a*, μg/L), Prokaryotic heterotrophic abundance (HA, cells mL<sup>-1</sup>), cyanobacteria abundance (CA, cells mL<sup>-1</sup>), Bacterial production (BP, pmoles of leucine L<sup>-1</sup>h<sup>-1</sup>), Archaeal Production (ArP, pmoles of leucine L<sup>-1</sup>h<sup>-1</sup>) and Virus abundance (VA, particles mL<sup>-1</sup>) for each ponds in the study wetlands.

Odiel Marshes (OdielM) Huelva, Spain	Sampling Date (dd/mm/yy)	Tem	Salin.	TN	TDN	TP	TDP	DOC	Chl <i>a</i>	HA (x10 <sup>6</sup> )	CA (x10 <sup>3</sup> )	BP	ArP	VA (x10 <sup>9</sup> )
E1 37°13'08.3"N 06°59'56.7"W	28/05/12	24.7	23.15	n.d.	0.05	7.16	3.66	0.36	n.d.	8.29	103.99	1165.86	235.57	0.17
E2 37°12'40.8"N 06°59'43.1"W	29/05/12	21.0	39.27	0.10	0.02	6.26	3.12	0.60	18.21	6.37	1599.42	476.79	336.36	0.29
E3 37°12'40.8"N 06°59'43.1"W	29/05/12	21.2	37.07	0.31	0.05	12.36	7.88	0.87	25.79	8.88	2719.25	888.20	439.43	0.48
E4 37°13'31.2"N 06°59'46.1"W	29/05/12	20.8	61.62	0.31	0.12	20.07	13.62	1.68	108.99	32.58	11968.78	285.08	329.40	0.60
E5 37°13'46.6"N 07°00'48.5"W	28/05/12	23.1	27.84	n.d.	0.03	7.16	4.20	0.38	n.d.	8.42	135.50	713.94	266.62	0.18
E6 37°13'46.6"N 07°00'48.5"W	28/05/12	25.4	61.15	0.14	0.11	12.72	12.00	1.19	24.34	2.24	2508.49	463.24	506.13	0.50
E7 37°13'46.5"N 07°00'48.5"W	28/05/12	24.9	64.57	0.17	0.10	17.56	12.18	1.28	14.03	19.70	1456.49	468.01	922.51	0.60

E8 37°13'46.5"N 07°00'48.5"W	28/05/12	22.2	80.46	0.21	0.14	39.45	27.97	1.61	39.25	0.35	4103.46	824.58	916.08	0.50
E9 37°14'07.3"N 07°00'13.8"W	29/05/12	22.1	75.56	0.79	0.23	25.45	17.56	1.64	79.28	26.45	6354.18	n.d.	1888.60	0.64
E10 37°15'11.9"N 06°59'45.0"W	30/05/12	20.1	83.30	0.56	0.16	25.19	20.79	2.00	35.49	17.61	1423.58	276.40	959.76	0.54
E11 37°15'24.5"N 06°59'31.6"W	30/05/12	20.4	97.72	0.75	0.20	34.33	24.11	2.10	36.20	0.00	3862.42	495.36	556.67	0.64
E12 37°14'42.5"N 06°59'33.4"W	30/05/12	21.1	106.9 8	0.44	0.37	41.06	22.76	2.29	39.25	0.00	5975.27	115.67	1860.65	0.61
E13 37°14'07.4"N 07°00'13.9"W	29/05/12	21.9	127.2 4	0.37	0.32	45.37	27.25	2.85	4.95	0.00	615.58	379.84	1106.08	1.32
E14 37°14'22.7"N 06°59'49.3"W	29/05/12	24.4	n.d.	0.51	n.d.	27.79	24.38	3.51	2.22	0.00	n.d.	636.43	2173.49	1.81
E15 37°15'21.7"N 06°59'19.6"W	30/05/12	23.3	158.4 4	1.22	0.43	48.60	34.42	2.20	37.85	29.72	3650.70	341.11	856.78	0.45
E16 37°14'42.5"N 06°59'33.4"W	30/05/12	20.6	97.64	1.04	0.50	32.27	23.97	2.63	18.59	47.89	2109.00	396.14	910.86	1.02
E17 37°14'42.5"N 06°59'33.4"W	29/05/12	23.5	126.6 8	0.56	0.29	23.03	21.15	3.11	22.23	90.88	2832.28	346.54	904.76	1.66
E18 37°14'09.8"N 06°59'41.8"W	29/05/12	22.7	181.4 8	1.02	0.35	n.d.	48.06	3.78	18.63	130.68	1134.79	388.52	946.67	2.10
E19 37°14'07.2"N 07°00'13.8"W	29/05/12	21.7	197.8 0	0.59	0.34	26.08	20.97	3.30	6.00	125.56	293.95	725.69	1112.40	3.07

Veta la Palma, Doñana (VPalma) Sevilla, Spain	Sampling Date	Temp	Salin.	TN	TDN	TP	TDP	DOC	Chl a	HA (x10 <sup>6</sup> )	CA (x10 <sup>3</sup> )	BP	ArP	VA (x10 <sup>9</sup> )
G3 36°58'29.8"N 06°14'01.2"W	26/06/12	33.5	34.29	0.59	0.24	9.04	2.88	2.45	n.d.	47.42	51.20	1346.34	1003.16	0.82
G4 36°58'28.9"N 06°13'55.1"W	26/06/12	29.3	30.90	0.53	0.26	9.81	2.53	2.49	n.d.	83.24	2126.28	615.37	617.96	0.99
A7 36°54'39.0"N 06°15'15.8"W	26/06/12	31	33.73	0.56	0.24	17.81	12.27	3.11	n.d.	65.91	1314.23	656.83	1378.58	1.14
B6 36°55'33.3"N 06°14'43.2"W	26/06/12	31.2	14.42	0.38	0.26	n.d	11.30	0.74	n.d.	28.75	1480.18	1234.22	1474.39	0.36
B3 36°56'41.6"N 06°14'39.0"W	27/06/12	27	17.05	0.42	0.27	4.20	1.48	0.77	n.d.	0.00	2309.43	917.73	1193.58	0.26
D6 36°55'34.2"N 06°13'37.7"W	27/06/12	29.4	22.55	0.22	0.18	8.43	1.70	1.17	n.d.	0.00	175.35	2018.31	712.51	0.47
C2 36°57'20.3"N 06°13'57.0"W	27/06/12	29	22.57	0.35	0.09	4.35	0.61	1.11	n.d.	25.12	1801.25	1046.37	1001.69	0.27
C3 36°56'40.1"N 06°13'30.3"W	27/06/12	29.2	17.79	0.42	0.10	4.74	0.51	0.74	n.d.	13.44	3965.91	961.33	932.40	0.20
C6 36°55'28.5"N 06°14'11.1"W	27/06/12	30.8	21.14	0.41	0.21	7.27	3.27	0.99	n.d.	26.00	960.64	1014.36	1385.32	0.30
A1 36°58'02.9"N 06°14'31.9"W	27/06/12	31.8	25.27	0.49	0.25	6.58	1.20	n.d.	n.d.	24.68	1273.53	1076.62	980.81	0.63
Cabo de Gata (CGata) Almeria, Spain	Sampling Date	Temp	Salin.	TN	TDN	TP	TDP	DOC	Chl a	HA (x10 <sup>6</sup> )	CA (x10 <sup>3</sup> )	BP	ArP	VA (x10 <sup>9</sup> )

1 36°46'05.6"N 02°13'36.7"W	04/07/12	27.2	36.08	n.d	0.18	n.d.	0.51	0.24	0.26	8.78	4.01	1960.29	327.38	0.04
2 36°46'02.3"N 02°13'38.6"W	04/07/12	24.9	51.8	0.23	0.18	1.58	1.05	0.38	n.d.	8.05	9.51	2185.20	866.06	0.09
3 36°45'40.4"N 02°13'01.3"W	04/07/12	25.4	65.46	n.d.	0.31	3.55	1.35	0.87	n.d.	8.75	7.58	2347.09	468.45	0.09
4 36°45'40.4"N 02°13'01.2"W	04/07/12	25.9	73.02	0.23	0.13	2.04	0.97	0.44	n.d.	6.74	10.58	2438.50	634.15	0.07
5 36°45'17.7"N 02°12'51.9"W	04/07/12	27.6	92.76	0.34	0.25	1.74	0.58	0.55	n.d.	9.51	5.10	1554.77	1084.31	0.09
6 36°45'17.7"N 02°12'51.9"W	04/07/12	26.3	115.6 6	n.d.	0.18	1.20	2.28	0.65	n.d.	2.26	1.33	1554.77	1012.07	0.12
El Hondo (Hondo) Alicante, Spain	Sampling Date	Temp	Salin.	TN	TDN	TP	TDP	DOC	Chl a	HA (x10 <sup>6</sup> )	CA (x10 <sup>6</sup> )	BP	ArP	AV (x10 <sup>9</sup> )
Laguna35 38°11'25.1"N 00°45'00.7"W	12/06/12	24.7	14.33	0.45	0.19	2.37	2.05	2.07	26.95	n.d.	n.d.	612.22	1092.28	0.40
Reserva 38°11'25.2"N 00°45'00.7"W	12/06/12	26.3	15.15	0.81	0.23	1.40	1.31	1.99	28.68	n.d.	n.d.	913.68	1179.17	0.37
Levante 38°11'25.1"N 00°45'00.7"W	12/06/12	26.9	4.3	0.45	0.16	6.76	3.40	1.40	149.63	n.d.	n.d.	735.01	1499.63	0.86
Poniente 38°10'15.3"N 00°44'25.9"W	12/06/12	24.6	14.49	0.90	0.29	9.73	8.96	3.05	67.54	n.d.	n.d.	1268.27	460.93	1.10
Norte 38°11'22.1"N 00°45'09.6"W	12/06/12	24.2	15.83	0.27	0.15	2.55	2.50	1.53	17.86	n.d.	n.d.	948.05	382.72	0.35

Claudio 38°12'12.5"N 00°46'01.8"W	12/06/12	28.9	18.03	0.47	0.29	n.d	3.85	3.26	10.33	n.d.	n.d.	1292.39	316.25	0.36
Balserones 38°11'41.2"N 00°46'46.8"W	12/06/12	30.6	22.03	0.48	0.21	3.98	3.85	2.31	7.30	n.d.	n.d.	1515.10	1263.47	0.60
Santa Pola (SPola) Alicante, Spain	Sampling Date	Temp	Salin.	TN	TDN	TP	TDP	DOC	Chl a	HA (x10 <sup>6</sup> )	CA (x10 <sup>3</sup> )	BP	ArP	VA (x10 <sup>9</sup> )
Calderones 1 38°11'48.1"N 00°36'04.9"W	13/06/12	22.7	69.52	n.d.	0.08	4.50	1.37	1.09	10.24	27.43	190.08	2409.02	990.15	0.10
Seca 1 38°11'53.1"N 00°36'13.1"W	13/06/12	22	71.5	n.d.	0.10	1.37	1.00	0.89	10.79	7.35	208.72	2003.72	1473.45	0.12
Seca 2 38°12'01.0"N 00°36'19.6"W	13/06/12	25.3	85.62	0.14	0.10	5.86	5.24	0.92	21.98	27.86	208.10	2720.63	1297.21	0.13
Teniente 38°11'51.8"N 00°36'01.9"W	13/06/12	23.6	63.06	0.14	0.13	4.08	3.12	1.08	20.04	2.86	145.74	2828.60	1213.08	0.10
Charco-Lis 38°10'59.0"N 00°37'06.5"W	13/06/12	26.4	35.06	n.d.	0.08	5.06	2.66	0.51	1.59	252.35	1.44	2456.66	935.08	0.18
Canalets 38°11'11.3"N 00°36'49.3"W	13/06/12	26.1	54.16	0.08	0.06	7.96	7.81	0.77	9.41	28.89	0.23	2121.86	837.72	0.16
Calderones 2 38°11'12.6"N 00°36'49.0"W	13/06/12	25.4	59.48	0.15	0.09	11.33	2.16	0.77	19.05	14.66	3.94	2215.22	1569.87	0.19
Museo Sal 1 38°11'50.1"N 00°34'07.4"W	14/06/12	24.9	81.58	0.22	0.14	5.24	4.21	1.31	51.62	8.19	156.48	1368.96	1421.40	0.49
Museo Sal 2 38°11'50.1"N 00°34'07.4"W	14/06/12	23	113.1 6	0.53	0.32	6.22	2.58	2.03	201.83	247.20	1970.10	392.70	1025.08	1.11

Loma 1 38°10'08.5"N 00°37'26.9"W	14/06/12	25.2	97.3	0.14	0.12	15.94	8.64	1.11	12.23	6.87	19.12	1458.89	702.75	0.08
Loma 2 38°10'15.7"N 00°37'13.5"W	14/06/12	27.3	162.1 2	0.25	0.24	8.01	7.45	2.91	18.75	22.96	1.54	879.09	430.48	0.24
Charco Nuevo 38°10'13.3"N 00°37'40.7"W	14/06/12	25.9	35.6	n.d.	0.02	4.13	0.81	0.45	4.17	26.93	11.60	2335.95	565.39	0.02
Raspa 38°10'13.7"N 00°37'40.7"W	14/06/12	26.9	82.24	n.d.	0.11	14.22	11.22	0.87	32.70	46.30	111.81	3006.80	1025.79	0.02
Real 38°10'24.8"N 00°37'46.9"W	14/06/12	25.6	113.5 4	n.d.	0.11	7.20	n.d.	0.96	20.26	3.19	134.72	1235.89	860.48	0.02
Ebro Delta (EbroD) Tarragona, Spain	Sampling Date	Temp	Salin.	TN	TDN	TP	TDP	DOC	Chl a	HA (x10 <sup>6</sup> )	CA (x10 <sup>3</sup> )	BP	ArP	VA (x10 <sup>9</sup> )
0 40°35'13.3"N 00°40'09.9"E	23/07/12	24.7	84.64	n.d.	0.33	3.74	0.81	1.82	9.7	26.70	0.88	780.22	1772.99	0.34
1 40°34'30.7"N 00°39'34.8"E	23/07/12	23.8	46.62	0.42	0.32	2.66	2.20	0.71	6.49	15.46	10.95	2028.50	1354.13	0.15
2 40°34'5.20"N 00°39'41.5"E	23/07/12	25.0	137.1 6	n.d.	0.24	3.39	1.97	1.27	3.54	2.13	1.37	930.59	1859.58	0.36
3 40°34'29.3"N 00°40'20.0"E	23/07/12	28.7	80.7	0.47	0.34	7.70	4.51	1.26	5	15.07	2.82	1579.53	1752.18	0.26
4-1 40°35'13.3"N 00°40'10.0"E	23/07/12	24.8	40.58	0.34	0.14	n.d.	3.74	0.52	0.59	7.08	0.51	1787.79	533.72	0.15
4-2 40°34'54.6"N	23/07/12	29.5	84.74	0.37	0.24	5.50	2.12	n.d.	2.34	29.51	0.82	1049.38	1576.57	0.32

00°39'08.0"E															
5 40°34'23.7"N 00°40'33.5"E	23/07/12	30.1	82.78	0.40	0.33	7.50	2.35	2.70	0.62	95.54	0.98	n.d.	1581.64	0.09	
6 40°34'41.3"N 00°41'26.2"E	23/07/12	32.9	185.6 8	n.d.	0.59	6.73	4.89	3.12	2.89	6.51	0.40	431.96	973.47	1.62	
9 40°35'07.7"N 00°41'56.7"E	23/07/12	27.7	289.1	0.60	0.53	14.42	3.35	5.59	2.19	27.80	0.05	n.d.	1616.00	1.69	
10 40°35'07.5"N 00°41'56.6"E	23/07/12	27	343	0.66	0.62	13.96	4.66	5.76	3.06	47.09	0.03	n.d.	1581.72	1.57	
C1 40°35'02.5"N 00°41'59.8"E	23/07/12	27	200.1 2	0.46	0.40	7.20	4.66	2.65	0.39	83.43	0.04	532.63	925.43	1.54	
C3 40°35'07.9"N 00°41'56.4"E	23/07/12	28.1	225.6	0.51	0.48	10.04	4.66	4.16	0.04	79.48	0.02	346.83	1726.65	1.38	
C4 40°35'15.7"N 00°41'54.6"E	23/07/12	27.8	264.6 4	0.54	0.50	13.31	5.35	4.57	0.26	80.22	0.01	18.96	2289.87	1.21	
Salin-de-Giraud, Saintes-Maries- de-la-Mer (Camargue), France	Sampling Date	Temp	Salin.	TN	TDN	TP	TDP	DOC	Chl a	HA (x10 <sup>6</sup> )	CA (x10 <sup>3</sup> )	BP	ArP	VA (x10 <sup>9</sup> )	
Enfores 43°26'47.7"N 04°37'00.2"E	26/07/11	19.1	2.48	n.d.	0.13	5.27	3.12	n.d.	21.60	4.40	43.63	1051.65	908.91	n.d.	
Galabert 43°27'04.0"N 04°35'03.0"E	26/07/11	20.8	6.58	0.12	0.11	7.43	6.49	n.d.	11.96	3.53	23.02	1472.41	310.19	n.d.	
Vaccares_1 43°32'40.0"N 04°37'54.2"E	27/07/11	26.5	11.84	0.13	0.11	n.d.	2.22	n.d.	25.69	5.69	56.52	1672.42	229.02	n.d.	

Vaccares 2 43°33'27.4"N 04°29'26.5"E	27/07/11	26.9	16.94	0.19	0.16	5.09	4.73	n.d.	12.31	8.17	4.48	2142.63	213.83	n.d.
Launes 43°28'12.0"N 04°24'35.0"E	27/07/11	30.3	6.72	0.11	0.04	4.92	3.12	n.d.	16.13	6.95	257.81	2304.25	242.15	n.d.
Piemason 43°21'46.3"N 04°47'46.7"E	28/07/11	21.5	7.52	0.14	0.07	3.93	3.65	n.d.	7.34	6.47	1720.68	1073.26	120.12	n.d.
Verdier 43°31'55.6"N 04°41'59.0"E	27/07/11	25.4	0.22	0.08	0.05	4.56	3.83	n.d.	14.54	3.59	59.78	903.87	257.38	n.d.
Fangassier 43°26'23.9"N 04°36'53.4"E	26/07/11	24.3	194.7 5	0.39	0.35	7.43	4.38	n.d.	7.63	16.16	3.58	902.74	1409.63	n.d.
P. Rascallion 43°24'26.4"N 04°39'38.5"E	28/07/11	21.8	54.74	0.10	0.14	4.74	4.56	n.d.	3.07	9.35	11.93	1182.88	97.19	n.d.
G. Rascallion 43°25'05.6"N 04°37'18.3"E	27/07/11	22.2	49.4	0.13	n.d.	4.56	3.30	n.d.	2.08	9.72	9.90	828.7	55.72	n.d.
Dame 43°23'09.7"N 04°47'30.3"E	28/07/11	21.6	48.9	0.14	0.13	n.d.	4.74	n.d.	3.73	12.73	2.65	1069.27	105.13	n.d.
Cincs Francs 43°22'33.2"N 04°48'08.6"E	28/07/11	22.1	60.65	0.14	0.06	4.56	3.30	n.d.	11.43	7.57	166.92	1290.54	287.33	n.d.
Ursule 43°21'17.9"N 04°46'59.3"E	28/07/11	22.4	84.95	0.15	0.14	7.25	6.89	n.d.	12.27	19.51	3.09	1624.8	445.49	n.d.
Quentin 43°21'17.7"N 04°46'59.3"E	28/07/11	22	42.34	0.08	0.07	6.53	3.62	n.d.	2.31	6.78	1.29	1037.35	74.99	n.d.
Molentargius, Santa Guilla and Santa Catterine	Sampling Date	Temp	Salin.	TN	TDN	TP	TDP	DOC	Chl a	HA (x10 <sup>6</sup> )	CA (x10 <sup>3</sup> )	BP	ArP	VA (x10 <sup>9</sup> )



(Sardinia),Italy															
Bianca_S23 39°12'33.8"N 09°08'39.3"E	09/07/13	29.5	75.2	---	0.14	6.04	3.20	1.10	37.49	6.53	67.69	843.84	73.34	n.d.	
Bianca_S20 39°12'35.9"N 09°08'43.2"E	09/07/13	28.8	50.36	0.12	0.11	2.04	1.89	0.52	6.09	4.14	93.02	921.97	108.43	n.d.	
Bianca_S21 39°12'37.9"N 09°08'45.6"E	09/07/13	31.7	58.24	0.13	0.11	8.96	6.81	0.49	9.09	5.58	109.47	1131.45	256.86	n.d.	
Quarto_S16 39°13'30.8"N 09°11'55.9"E	10/07/13	25.4	99.32	0.19	0.16	10.66	7.93	2.24	76.19	40.82	294.50	211.84	354.61	n.d.	
Minore_S04 39°14'26.0"N 09°09'10.9"E	10/07/13	27.8	1.79	0.11	0.04	n.d.	6.09	1.33	617.41	54.19	16.61	299.71	551.67	n.d.	
Maggiore_1 39°14'19.0"N 09°09'02.4"E	10/07/13	28.3	112.6	0.14	0.07	23.8	7.66	2.83	58.27	66.65	1055.02	504.18	546.84	n.d.	
Maggiore_2 39°14'14.8"N 09°09'23.6"E	10/07/13	28.1	97.56	0.08	0.05	26.95	10.39	2.74	56.56	58.61	1054.89	370.45	453.26	n.d.	
Quarto_S18 39°13'07.3"N 09°09'55.9"E	10/07/13	31.4	238.8 4	0.39	0.35	34.49	11.35	4.89	8.95	24.73	38.25	n.d.	995.17	n.d.	
Culatica 39°13'44.3"N 09°12'53.2"E	10/07/13	31.1	154.2	n.d.	0.14	12.09	n.d.	2.73	29.87	30.65	259.24	482.05	345.07	n.d.	
Quarto_S17 39°13'24.6"N 09°11'34.3"E	10/07/13	32.7	160.1 2	0.13	n.d.	20.57	8.08	3.14	6.67	42.66	29.09	611.26	351.98	n.d.	
Santa_Guilla_1 39°11'01.5"N 09°02'55.5"E	10/07/13	33.8	83.96	0.14	0.13	11.27	4.89	1.09	28.95	5.43	18.05	1502.96	221.18	n.d.	
Capoterra 39°09'42.0"N	10/07/13	31.2	15.64	0.14	0.06	6.58	0.81	0.34	12.78	7.29	116.52	2060.27	254.17	n.d.	

09°01'35.7"E															
Santa Guilla_2 39°10'20.2"N 09°01'49.9"E	10/07/13	33	51.68	0.15	0.14	4.2	0.85	0.89	12.03	8.56	61.07	1219.99	317.84	n.d.	
Thyna, Sfax (Tunisia)	Sampling Date	Temp	Salin.	TN	TDN	TP	TDP	DOC	Chl a	HA (x10 <sup>6</sup> )	CA (x10 <sup>6</sup> )	BP	ArP	VA (x10 <sup>9</sup> )	
Tyna 34°38'16.3"N 10°40'05.6"E	12/06/13	24.5	40.56	0.05	0.05	45.76	40.94	0.41	1.89	4.51	2.43	1145.99	211.76	n.d.	
AVP_11 34°38'43.1"N 10°42'51.9"E	12/06/13	25.6	54.2	0.20	0.10	7.58	2.67	0.83	37.42	26.29	9882.82	740.2	455.90	n.d.	
PE_C1_1 34°38'14.5"N 10°40'07.9"E	12/06/13	25.9	95.48	0.34	0.20	18.11	6.59	1.99	57.89	49.09	4202.70	806.08	459.60	n.d.	
AVP_15 34°38'24.4"N 10°41'0.89"E	12/06/13	26.6	62.76	0.37	0.14	17.42	3.14	1.19	84.85	35.21	38105.50	632.76	554.42	n.d.	
PE_C3 34°38'43.0"N 10°42'51.6"E	12/06/13	28.3	134.1 6	0.66	0.25	24.72	5.57	2.60	66.16	85.83	3550.32	212.1	376.68	n.d.	
AVP_4 34°40'47.9"N 10°44'43.8"E	12/06/13	28	47	0.12	0.09	n.d.	13.96	0.66	2.35	6.15	0.29	690.84	300.06	n.d.	
AVP_17 34°40'50.6"N 10°44'36.1"E	12/06/13	27.5	70.84	0.44	0.15	23.49	6.83	1.51	94.58	55.24	37281.13	238.58	280.31	n.d.	
PE_C2 34°40'49.9"N 10°44'44.0"E	12/06/13	28.8	134.1 2	0.51	0.24	14.65	5.30	2.16	34.52	68.48	4187.92	91.26	493.02	n.d.	
PE_C5_F 34°40'53.2"N 10°44'36.6"E	12/06/13	29.6	138.6	0.63	0.28	n.d.	n.d.	2.37	59.87	0.00	0.00	219.01	426.46	n.d.	
PE_C5_B 34°38'30.8"N	12/06/13	29.8	94.08	0.59	0.22	n.d.	n.d.	1.85	n.d.	45.13	6074.59	209.07	362.04	n.d.	



**Table S2.** List of the best models ( $\Delta AIC < 2$ ) of GLM analysis for heterotrophic prokaryotic abundance, cyanobacteria abundance, heterotrophic bacterial production and heterotrophic archaeal production. The models included as continuous predictors: Salinity, Total Dissolved Nitrogen (TDN) and Total dissolved phosphorus (TDP) and as wetland site as categorical variable. The symbols + and – denotes the positive or negative effects, respectively.

Dependent Variable	Pred. Var. 1	Pred. Var. 2	Pred Var. 3	Pred Var. 4	Degrees Freedom	AIC	L.Ratio Chi <sup>2</sup>	p-values
Heterotrophic Prokaryotic Abundance	(+) TDN	Site	---	---	8	106.3354	41.96024	0.000001
	(+) TDN	(-)TDP	Site	---	9	107.7155	42.58012	0.000003
	(+) Salinity	(+) TDN	Site	---	9	108.2298	42.06589	0.000003
Cyanobacteria Abundance	(+)TDN	(-)TDP	Site	---	9	278.0048	90.12917	0.000000
Heterotrophic Bacterial Production	(-) TDN	Site	---	---	9	691.0962	89.88757	0.000000
	(-) TDN	(-) TDP	Site	---	10	693.0527	89.93105	0.000000
	(-) Salinity	(-) TDN	Site	---	10	693.0688	89.91494	0.000000
Heterotrophic Archaeal Production	(+)TDN	Site	---	---	9	-12.1555	102.1138	0.000000
	(-) Salinity	(+) TDN	Site	---	10	-11.7585	103.7169	0.000000
	(+) TDN	(-) TDP	Site	---	10	-11.3435	103.3019	0.000000
	(-) Salinity	(+) TDN	(-) TDP	Site	11	-10.8216	104.7800	0.000000

**Table S3.** List of the best models ( $\Delta AIC < 2$ ) of GLM analysis for heterotrophic prokaryotic abundance, cyanobacteria abundance, heterotrophic bacterial production and heterotrophic archaeal production. The models included as continuous variables: Salinity, Total Dissolved Nitrogen (TDN), Total Dissolved phosphorus (TDP), and Dissolved Organic Carbon (DOC) and as categorical variable: Site. The symbols + and – denotes the positive or negative effects, respectively. Since DOC data were not available for Camargue this site was removed in this analysis.

Dependent Variable	Pred. Var. 1	Pred. Var. 2	Pred Var. 3	Pred Var. 4	Deg. Freed	AIC	L.Ratio	p-values
Heterotrophic Prokaryotic Abundance	(-) Salinity	(+) DOC	---	---	2	89.1651	29.49407	0.000000
	(-) Salinity	(-) TDP	(+) DOC	---	3	89.9604	30.69872	0.000001
	(+) DOC	---	---	---	1	91.0347	25.62444	0.000000
	(-) Salinity	(+) TDN	(+) DOC	---	3	91.1576	29.5015	0.000002
Cyanobacteria Abundance	(+) TDN	(-) TDP	Site	---	9	248.2544	84.96543	0.000000
	(-) TDP	(+) DOC	Site	---	9	249.6883	83.53152	0.000000
	(+) Salinity	(+) TDN	(-) TDP	Site	10	249.8648	85.35494	0.000000
	(+) TDN	(-) TDP	(+) DOC	Site	10	249.9678	85.25201	0.000000
Heterotrophic Bacterial Production	(-) DOC	Site	---	---	8	569.437	100.126	0.000000
	(+) Salinit	(-) DOC	Site	---	9	570.5377	101.0253	0.000000
	(+) TDP	(-) DOC	Site	---	9	571.1877	100.3753	0.000000
	(+) TDN	(-) DOC	Site	---	9	571.337	100.226	0.000000
Heterotrophic Archaeal Production	(+) TDN	Site	---	---	8	-28.7444	83.45753	0.000000
	(+) TDN	(-) TDP	Site	---	9	-27.4973	84.21043	0.000000
	(-) Salinity	(+) TDN	Site	---	9	-27.1726	83.88567	0.000000
	(+) TDN	(-) DOC	Site	---	9	-26.7457	83.45884	0.000000

**Table S4.** List of the best models ( $\Delta AIC < 2$ ) of GLM analysis for virus abundance. The models included as continuous predictors: Salinity, heterotrophic prokaryotic abundance (HPA) and cyanobacteria abundance (CyA) and as categorical variable: Site. The symbols + and – denotes the positive or negative effects on virus abundances.

Depen. Var.	Pred. Var. 1	Pred. Var. 2	Pred Var. 3	Pred Var. 4	Degrees Freedom	AIC	L.Ratio	p-values
Virus abundance	(+) Salinity	(+) HPA	Site		6	29.68761	72.61037	0.000000
	(+) Salinity	(-) CyA	(+) HPA	Site	7	31.25900	73.03898	0.000000

**Table S5.** List of the best models ( $\Delta AIC < 2$ ) of GLM analysis for bacterial and archaea production. The models included as continuous variables: Salinity, Virus abundance (VA), Total dissolved nitrogen (TDN) and as categorical variable: Site. The symbols + and – denotes the positive or negative effects, respectively.

Depen. Var.	Pred. Var. 1	Pred. Var. 2	Pred Var. 3	Pred Var. 4	Degrees Freedom	AIC	L.Ratio	p-values
Heterotrophic bacterial production	(-) Salinity	(-) VA	Site		7	459.9913	77.67171	0.000000
	(-) Salinity	(-)TDN	(-)VA	Site	8	461.9466	77.71634	0.000000
Heterotrophic archaeal production	(+) TDN	Site			6	-29.8003	37.05512	0.000002
	(+) Salinity	TDN	Site		7	-27.8334	37.08825	0.000005