Supplement

(a)

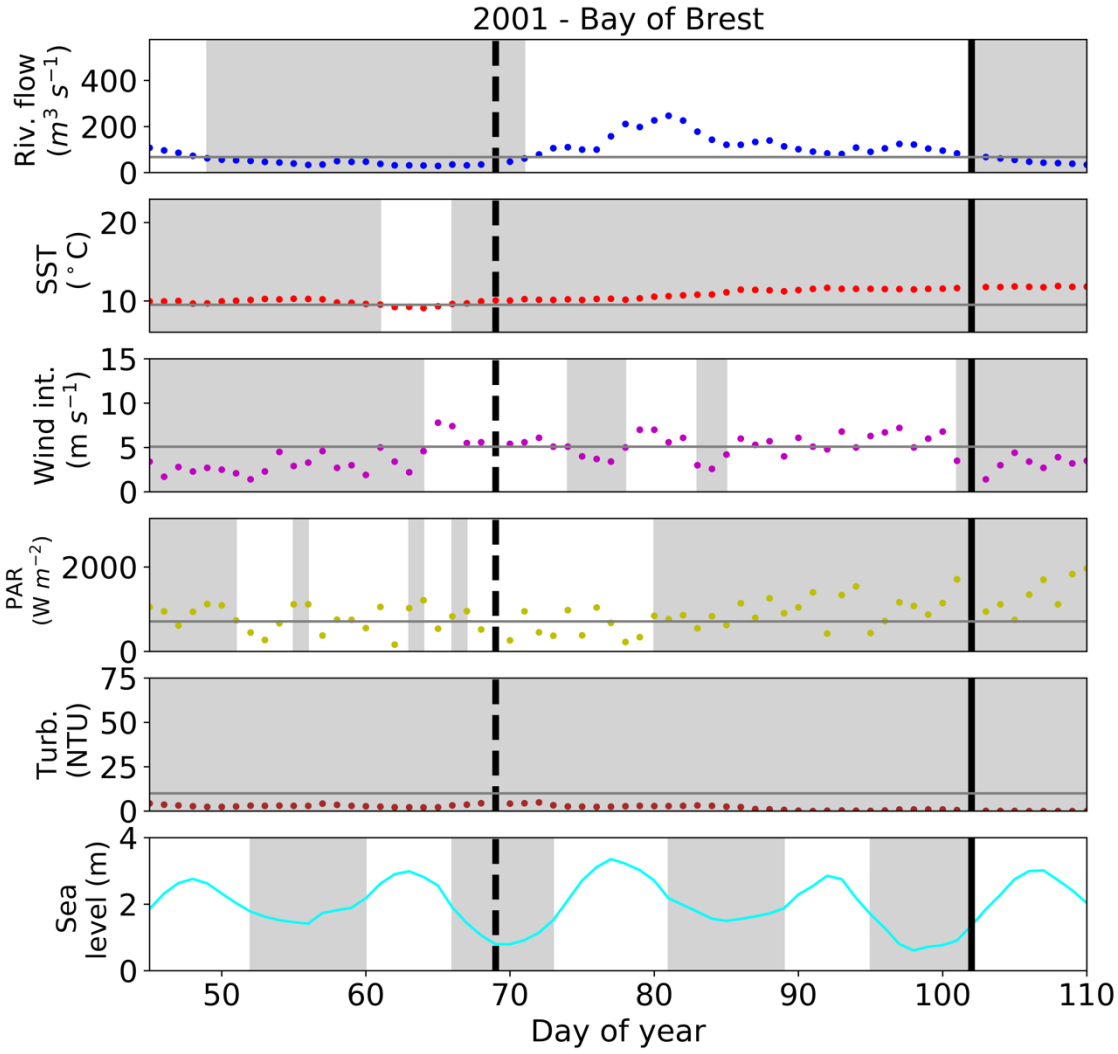
Years	*SST*	*PAR*	*Wind intensity*	*Turbidity*	*River Flow*
	(°C)	*(W m^{-2})*	*(m s^{-1})*	*(NTU)*	*(m^3 s^{-1})*
2001	*11.7*	*1187*	*4.7*	*0.3*	*71.9*
2002	*10.3*	*708*	*5.1*	*4.3*	*35.8*
2003	*10.9*	*1573*	*3.4*	*4.7*	*14.5*
2004	*9.3*	*1097*	*4.8*	*2.3*	*31.4*
2007	*10.8*	*937*	*4.7*	*34.4*	*90.9*
2010	*8.2*	*682*	*4.8*	*5.5*	*102.3*
2011	*9.4*	*985*	*4.6*	*3.6*	*38.4*
2012	*11.4*	*1310*	*3.7*	*4.6*	*13.7*
2013	*9.0*	*689*	*4.5*	*6.0*	*60.7*
2014	*10.0*	*934*	*5.2*	*15.4*	*95.1*
2015	*10.0*	*816*	*5.1*	*8*	*68.9*
2016	*10.1*	*816*	*5.1*	*9.4*	*93.3*
2017	*11.8*	*1615*	*4.4*	*10.3*	*16.8*
2019	*13.8*	*1605*	*3.9*	*8.2*	*25.9*

(b)

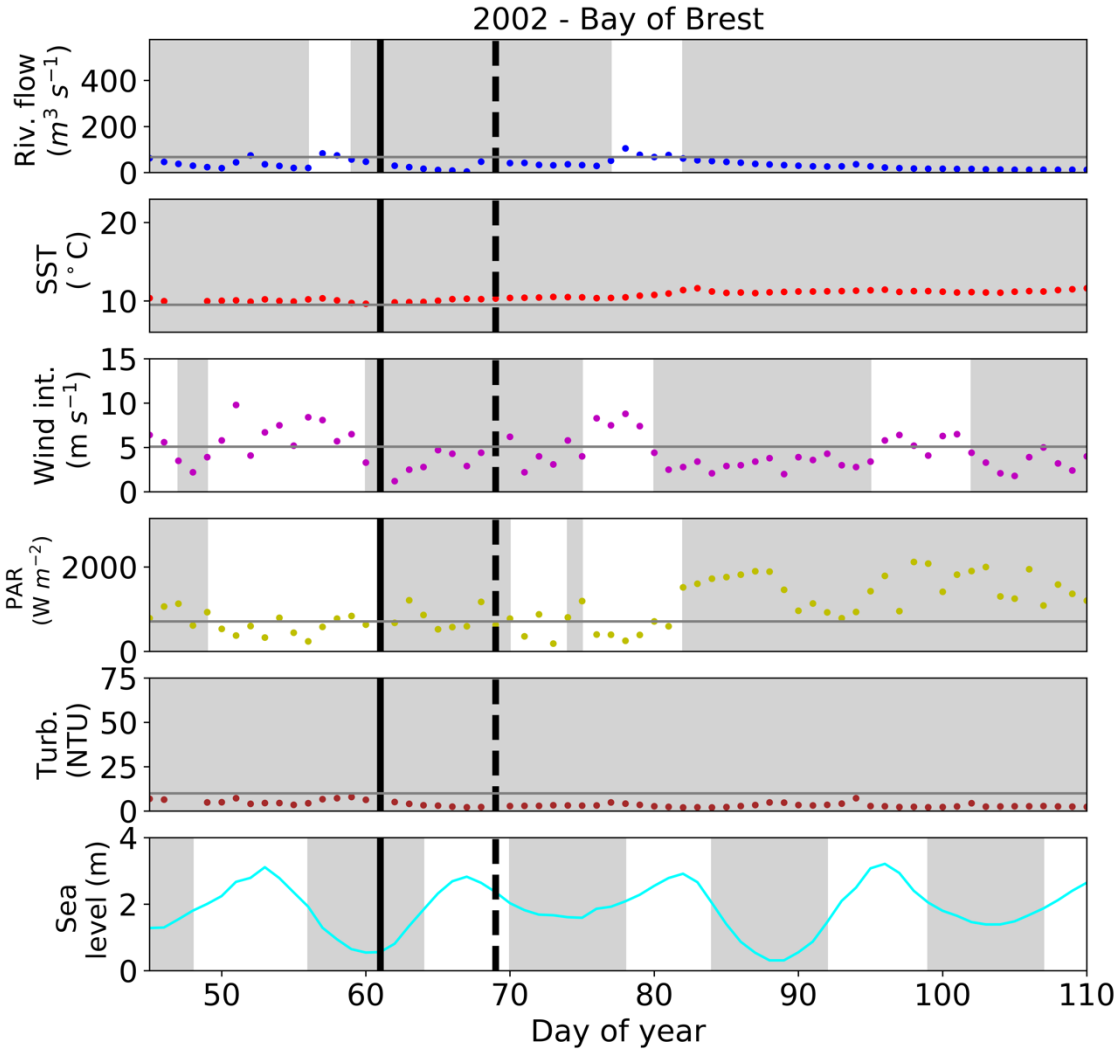
Years	*SST* (°C)	*PAR* ($W\ m^{-2}$)	*Wind intensity* ($m\ s^{-1}$)	*Turbidity* (NTU)	*Riv. F. V.* ($m^3\ s^{-1}$)	*Riv. F. L* ($m^3\ s^{-1}$)
2011	*9.2*	*1009*	*3.4*	*8.3*	*97.7*	*676.7*
2012	*9.6*	*830*	*2.2*	*19.2*	*40.8*	*613.0*
2013	*8.6*	*884*	*3.7*	*13.2*	*188.0*	*1519.8*
2014	*10.8*	*1212*	*3.0*	*7.6*	*207.6*	*1509.5*
2015	*10.3*	*905*	*3.3*	*9.8*	*158.8*	*1421.1*
2016	*9.6*	*1082*	*3.9*	*11.1*	*169.6*	*1656.1*
2017	*11.4*	*1482*	*3.3*	*6.9*	*38.7*	*955.7*
2018	*8.9*	*929*	*3.9*	*16.4*	*177.6*	*1589.0*
2019	*11.4*	*1522*	*2.8*	*8.7*	*48.3*	*525.5*

Table S1: Medians of the main environmental parameters over the 15 days preceding the IPGP and the 15 days after the IPGP in the (a) Bay of Brest and (b) Bay of Vilaine.

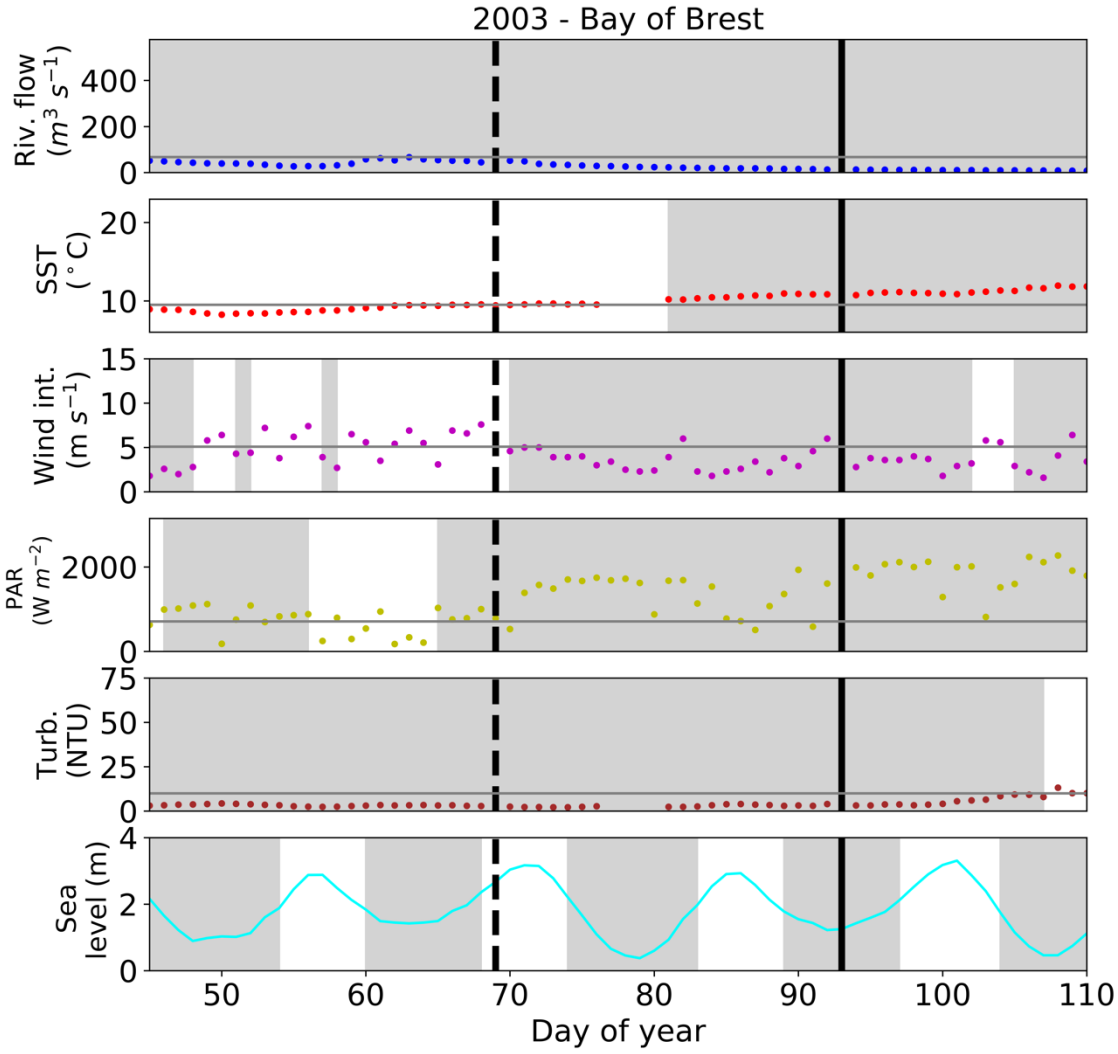
(a)


2001 - Bay of Brest
Riv. flow ($m^3\ s^{-1}$)
400
200
0
SST (°C)
20
10
Wind int. ($m\ s^{-1}$)
15
10
5
0
PAR ($W\ m^{-2}$)
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

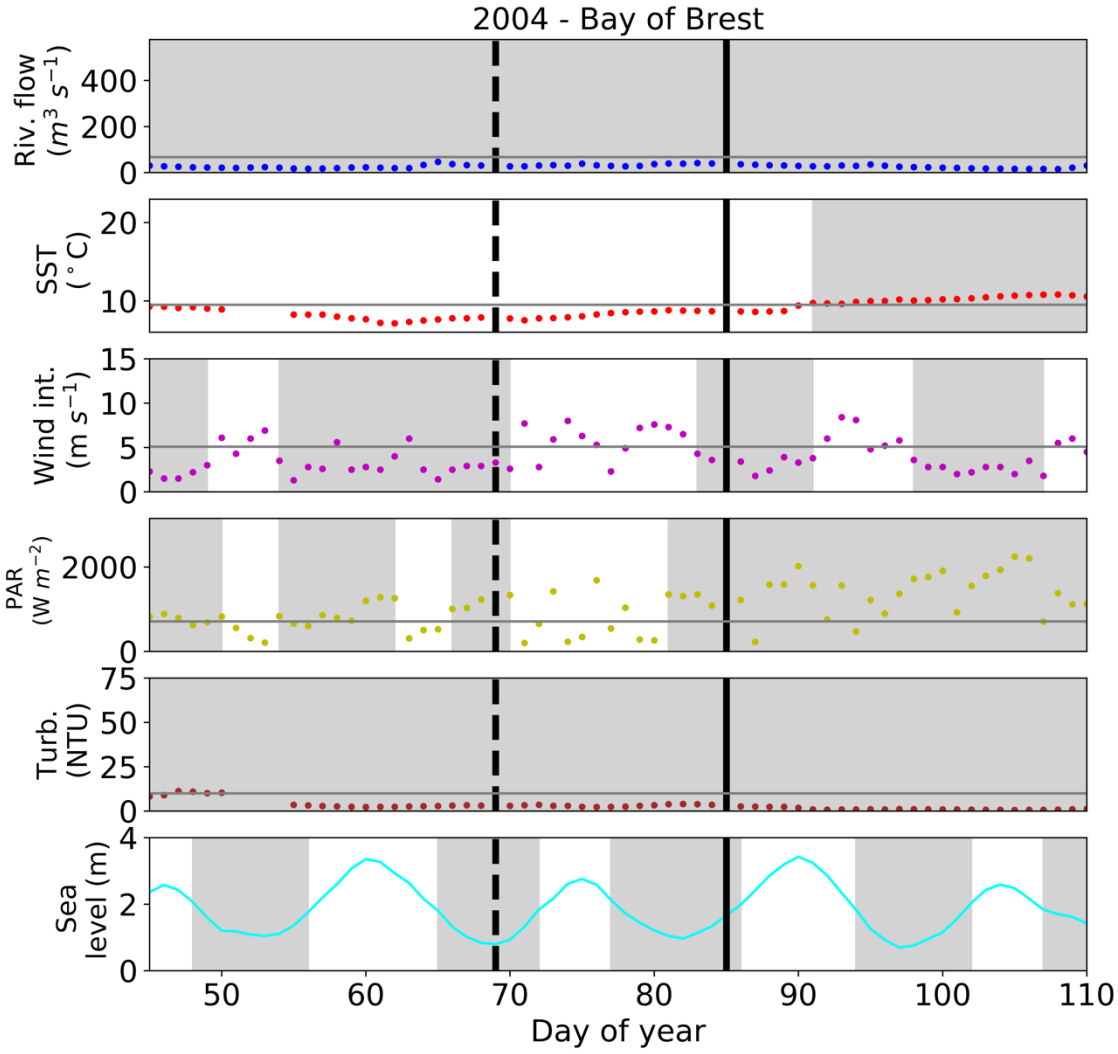
(b)


2002 - Bay of Brest
Riv. flow ($m^3\ s^{-1}$)
400
200
0
SST (°C)
20
10
Wind int. ($m\ s^{-1}$)
15
10
5
0
PAR ($W\ m^{-2}$)
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

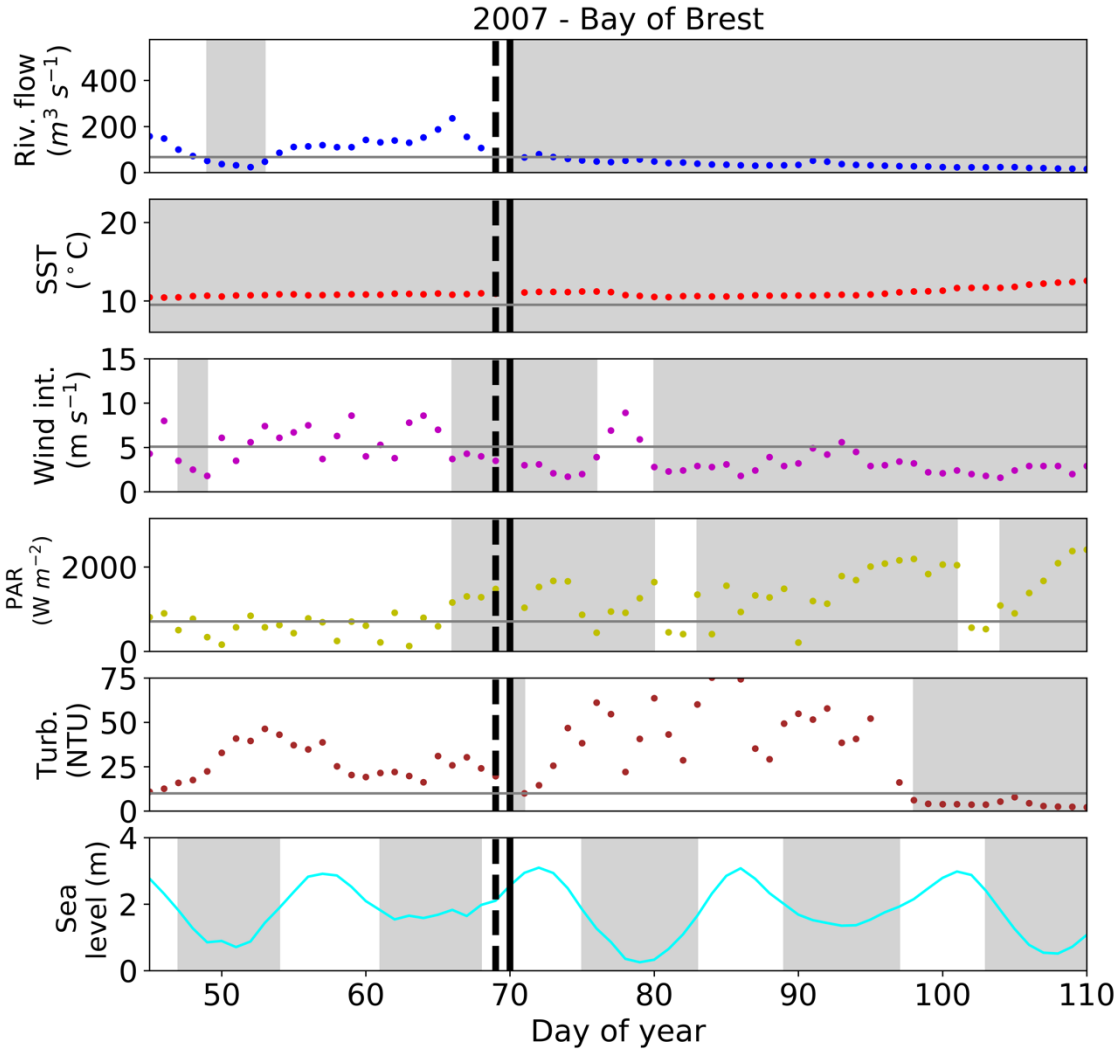
(c)


2003 - Bay of Brest
Riv. flow ($m^3\ s^{-1}$)
400
200
0
SST (°C)
20
10
Wind int. ($m\ s^{-1}$)
15
10
5
0
PAR ($W\ m^{-2}$)
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

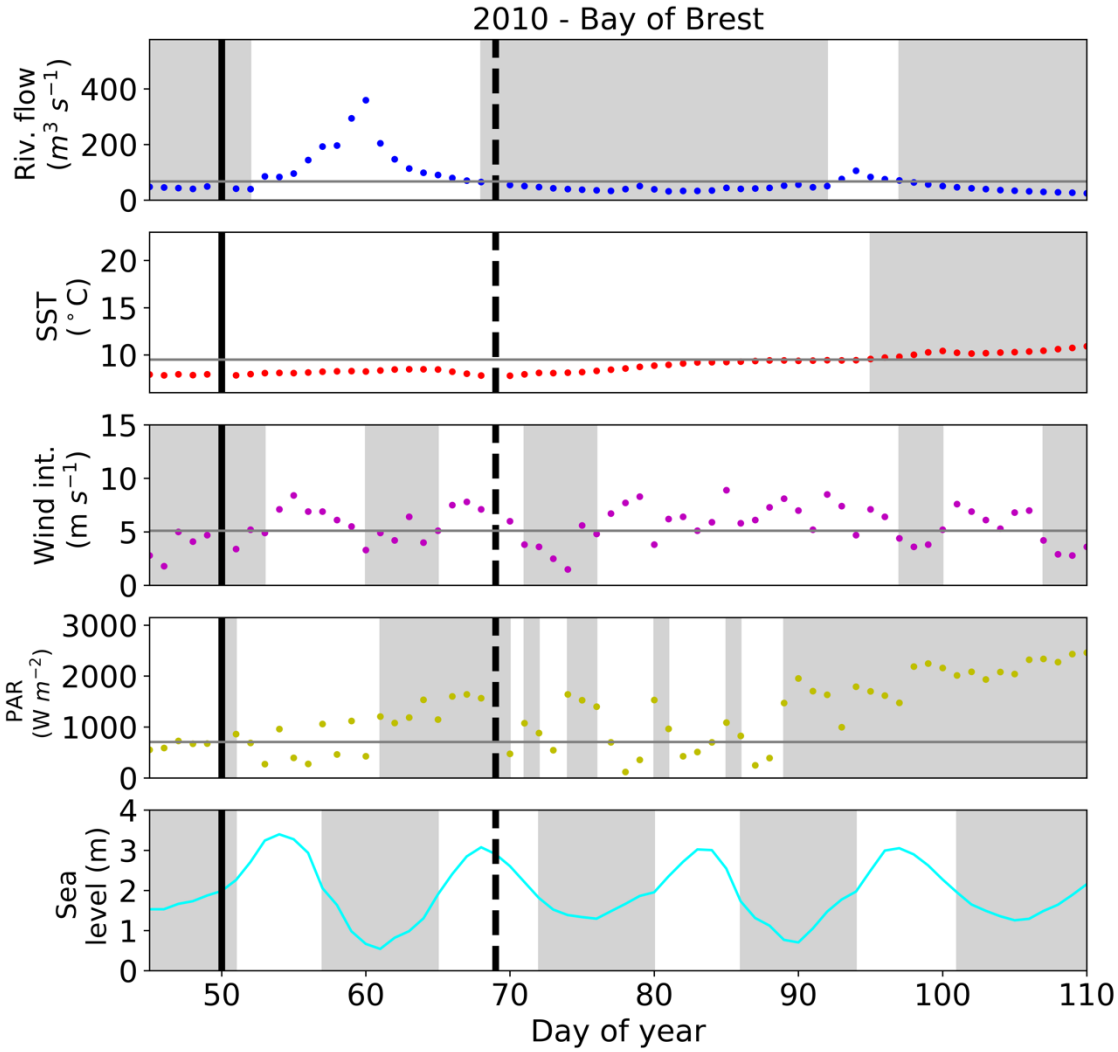
(d)


2004 - Bay of Brest
Riv. flow ($m^3\ s^{-1}$)
400
200
0
SST (°C)
20
10
Wind int. ($m\ s^{-1}$)
15
10
5
0
PAR ($W\ m^{-2}$)
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

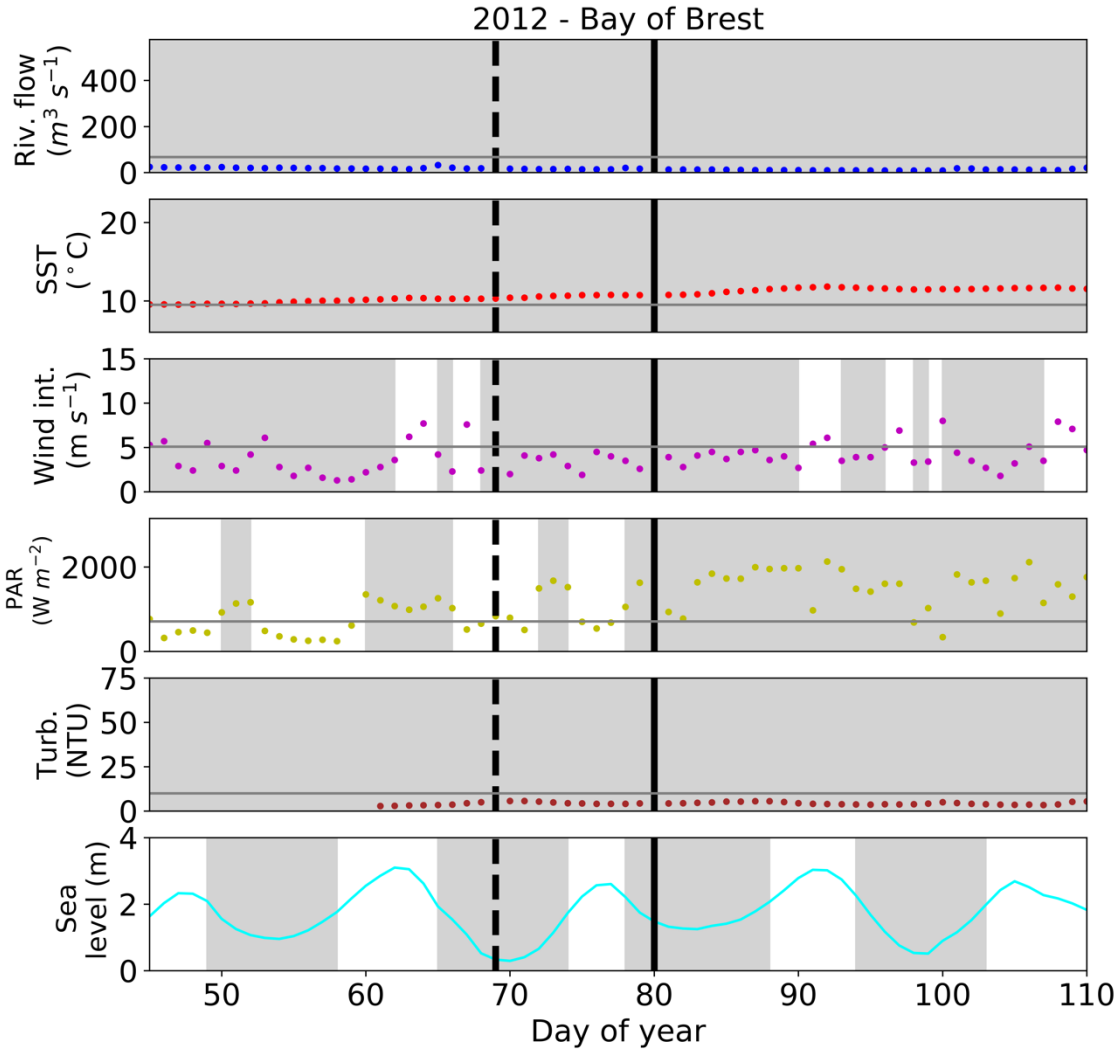
(e)


2007 - Bay of Brest
Riv. flow ($m^3\ s^{-1}$)
400
200
0
SST (°C)
20
10
Wind int. ($m\ s^{-1}$)
15
10
5
0
PAR ($W\ m^{-2}$)
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

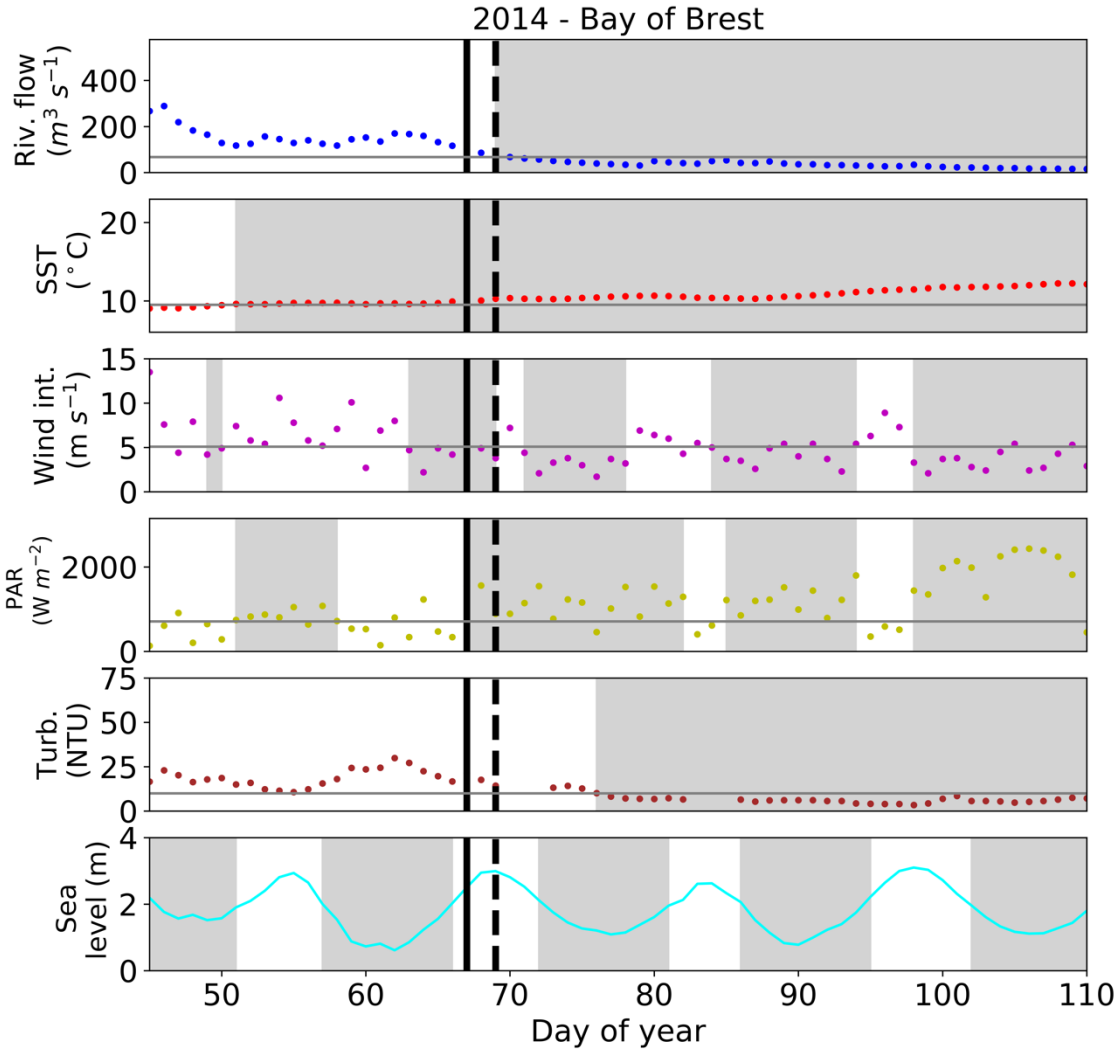
(f)


2010 - Bay of Brest
Riv. flow ($m^3\ s^{-1}$)
400
200
0
SST (°C)
20
15
10
Wind int. ($m\ s^{-1}$)
15
10
5
0
PAR ($W\ m^{-2}$)
3000
2000
1000
0
Sea level (m)
4
3
2
1
0
50
60
70
80
90
100
110
Day of year

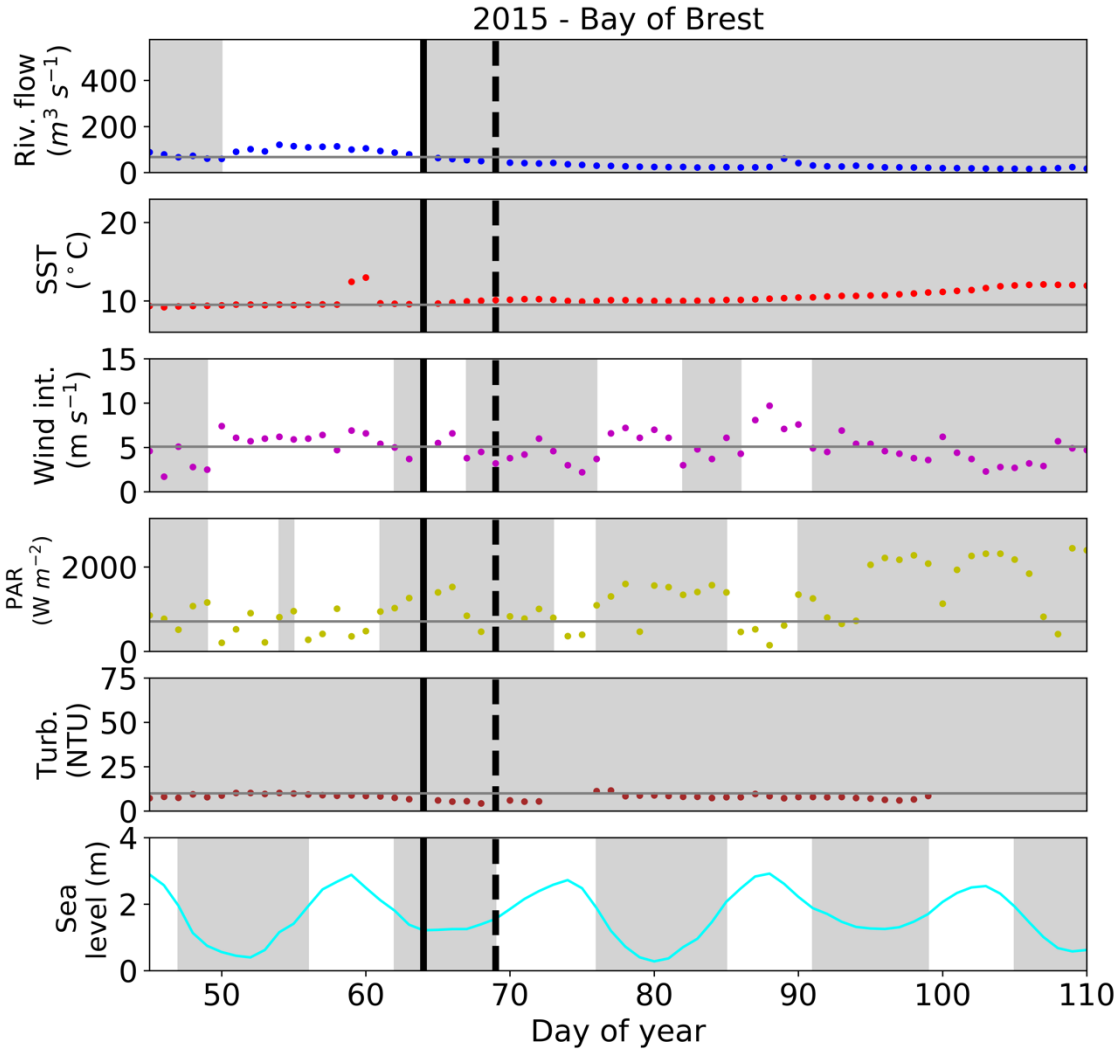
(g)


2012 - Bay of Brest
Riv. flow ($m^3\ s^{-1}$)
400
200
0
SST (°C)
20
10
Wind int. ($m\ s^{-1}$)
15
10
5
0
PAR ($W\ m^{-2}$)
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

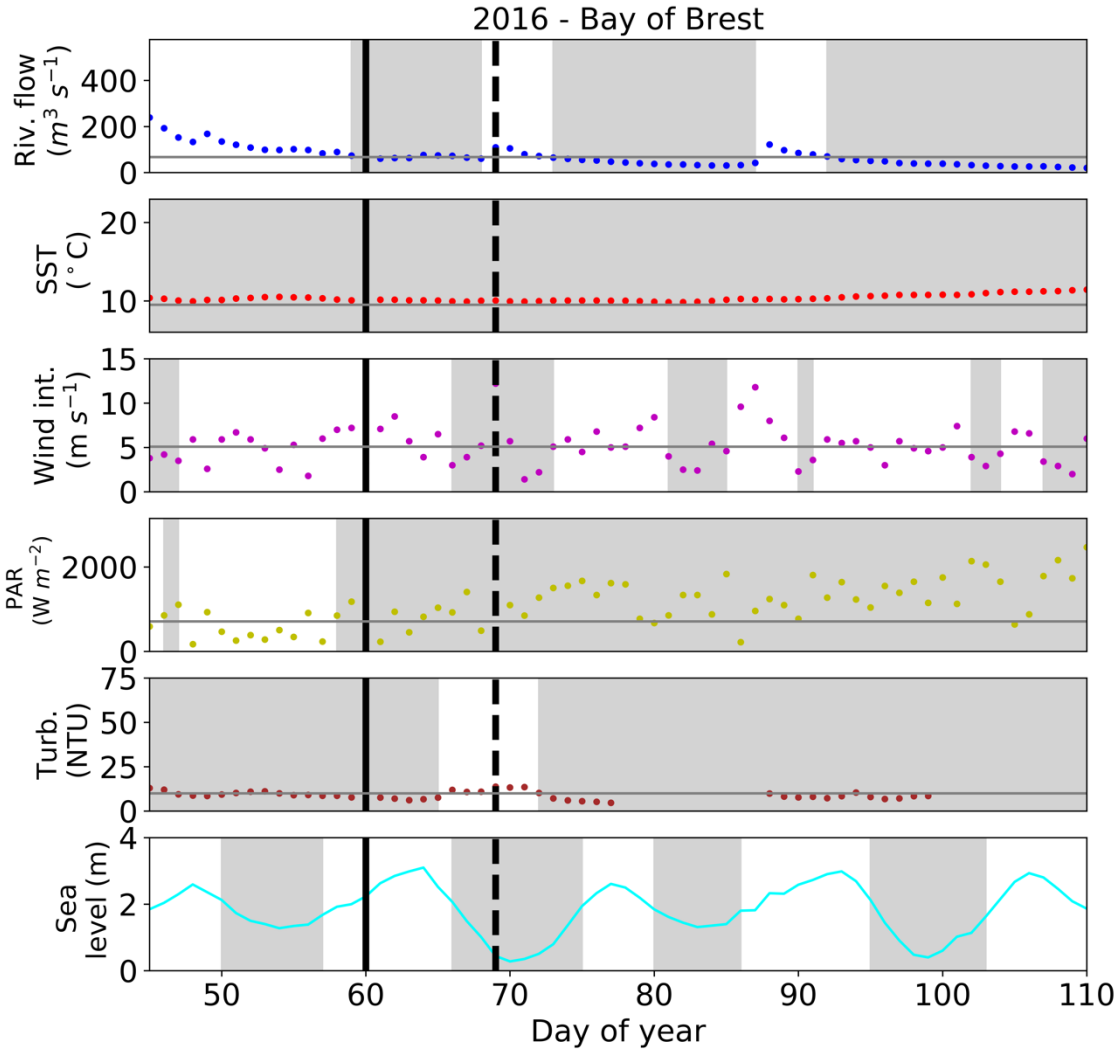
(h)


2014 - Bay of Brest
Riv. flow ($m^3\ s^{-1}$)
400
200
0
SST (°C)
20
10
Wind int. ($m\ s^{-1}$)
15
10
5
0
PAR ($W\ m^{-2}$)
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

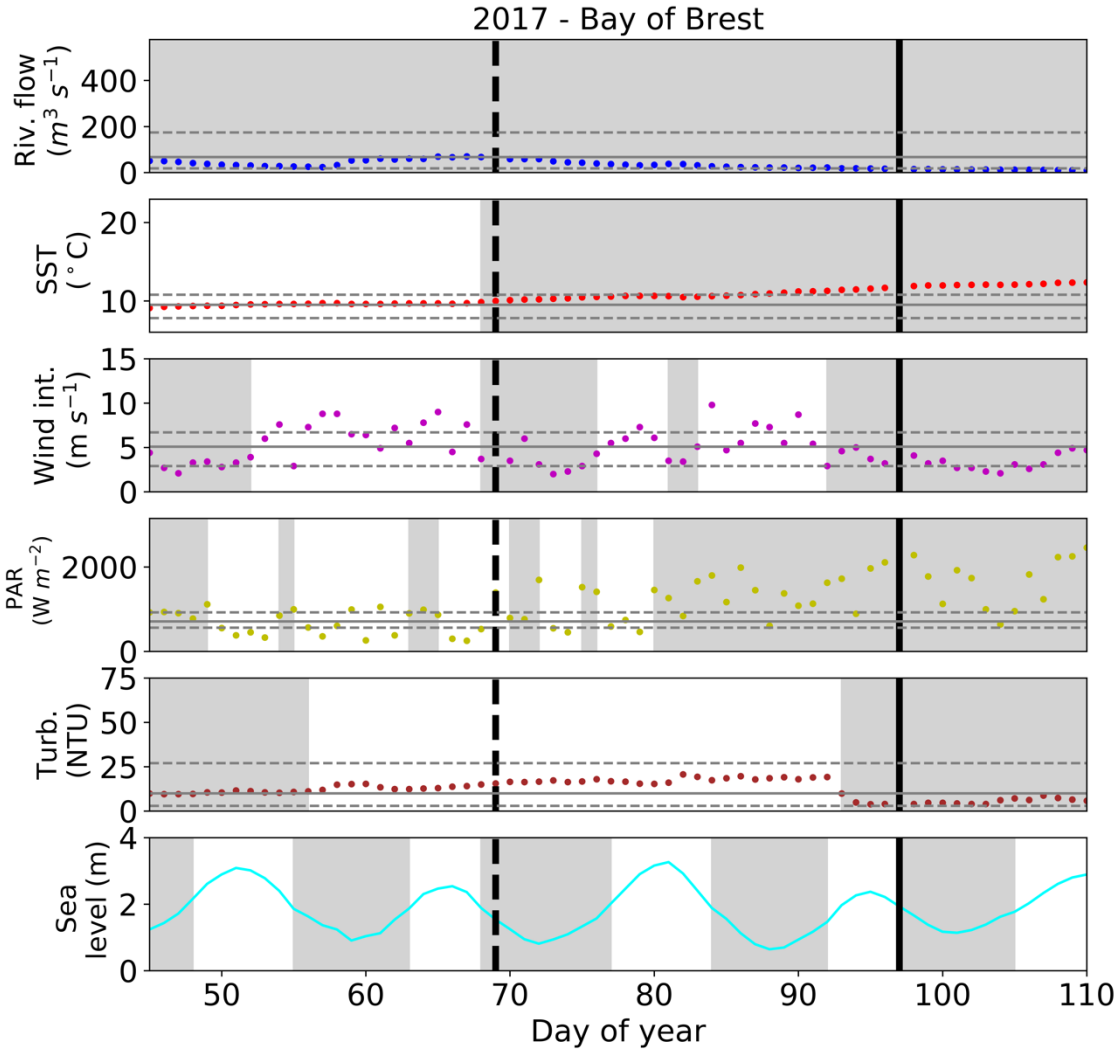
(i)


2015 - Bay of Brest
Riv. flow ($m^3\ s^{-1}$)
400
200
0
SST (°C)
20
10
Wind int. ($m\ s^{-1}$)
15
10
5
0
PAR ($W\ m^{-2}$)
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

(j)


2016 - Bay of Brest
Riv. flow ($m^3\ s^{-1}$)
400
200
0
SST (°C)
20
10
Wind int. ($m\ s^{-1}$)
15
10
5
0
PAR ($W\ m^{-2}$)
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

(k)


2017 - Bay of Brest
Riv. flow ($m^3\ s^{-1}$)
400
200
0
SST (°C)
20
10
Wind int. ($m\ s^{-1}$)
15
10
5
0
PAR ($W\ m^{-2}$)
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

(l)

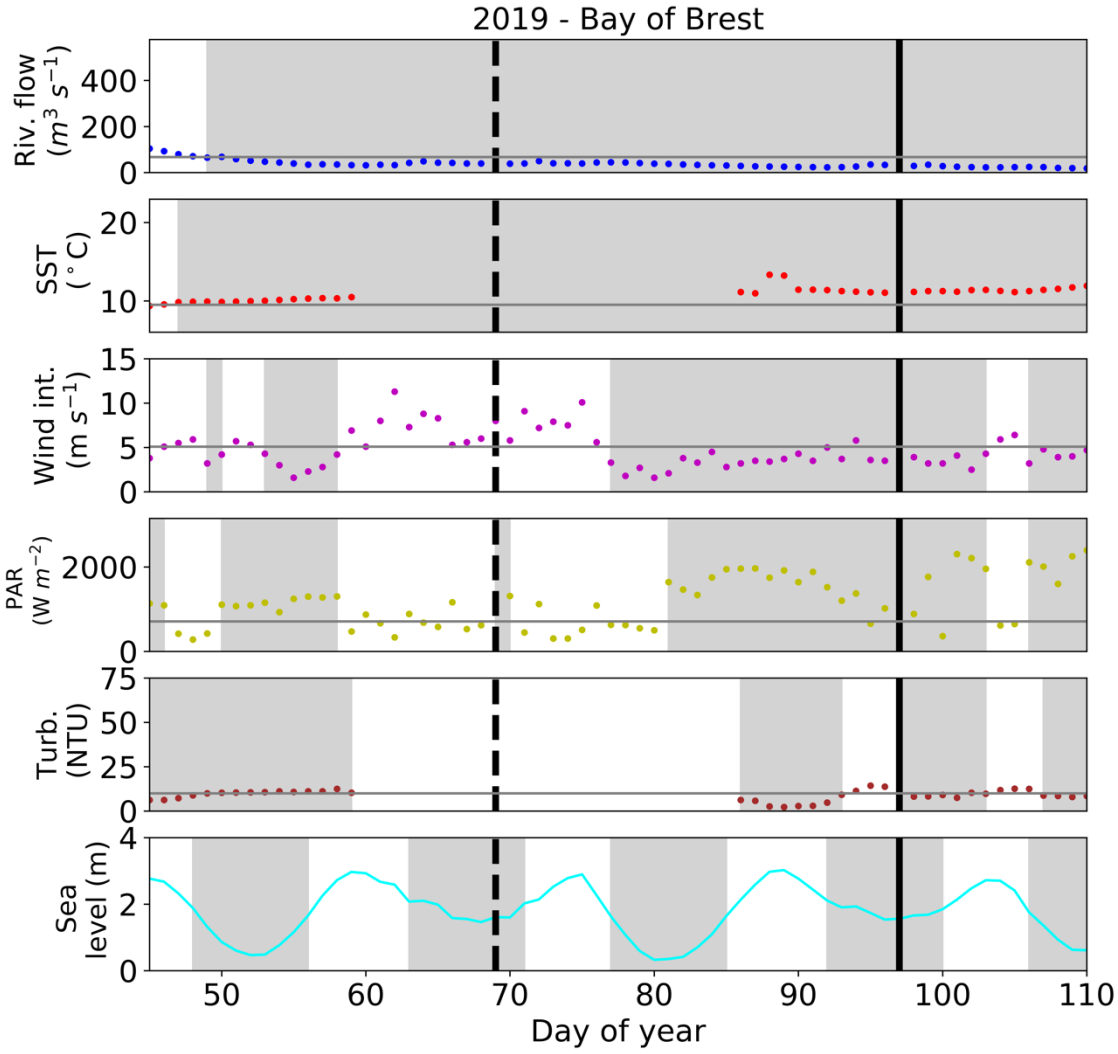
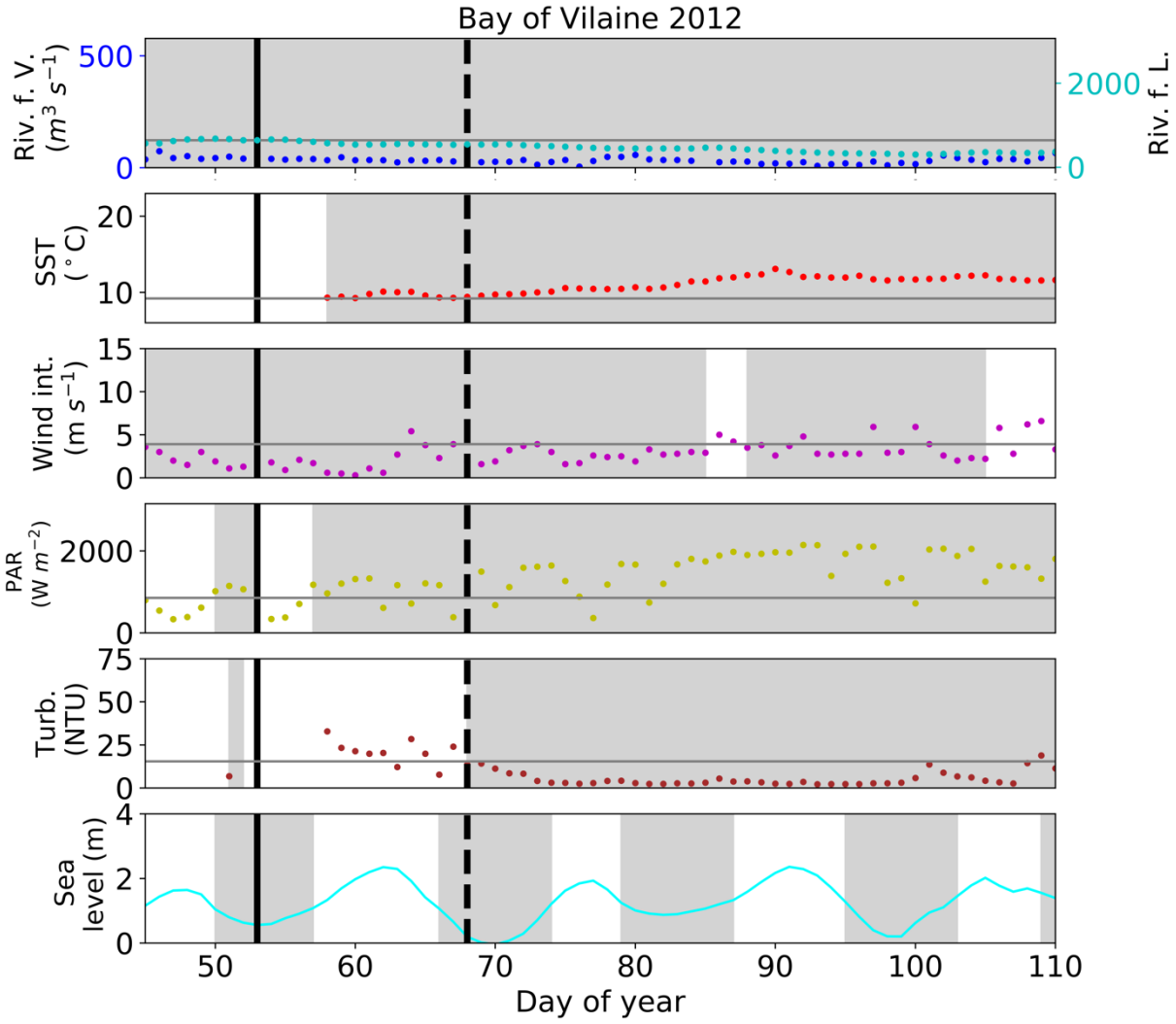
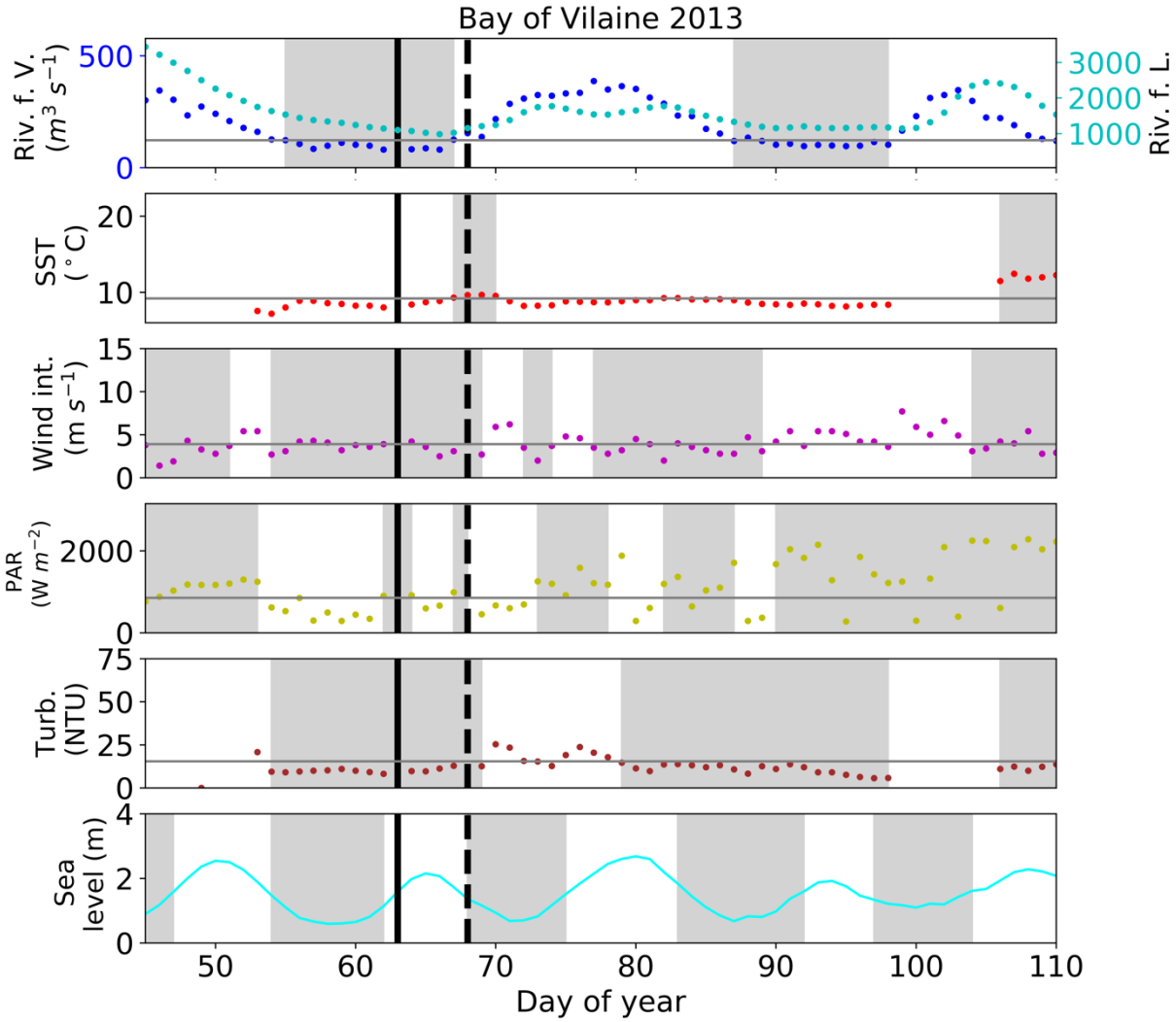


Figure S1: Evolution of the Chl-*a* fluorescence and the environmental drivers: River flow of the Aulne, Sea Surface Temperature, wind intensity, PAR, turbidity and sea level for a mean IPGP in the Bay of Brest (a) 2001 (b) 2002 (c) 2003 (d) 2004 (e) 2007 (f) 2010 (g) 2012 (h) 2014 (i) 2015 (j) 2016 (k) 2017 (l) 2019. The mean IPGP is represented by a dotted black line and the IPGP of the year is represented by a straight black line. Thresholds of each environmental driver are represented by gray vertical lines corresponding to the mean conditions $\pm$15 days around the IPGP date. Gray areas are time periods favorable to IPGP.

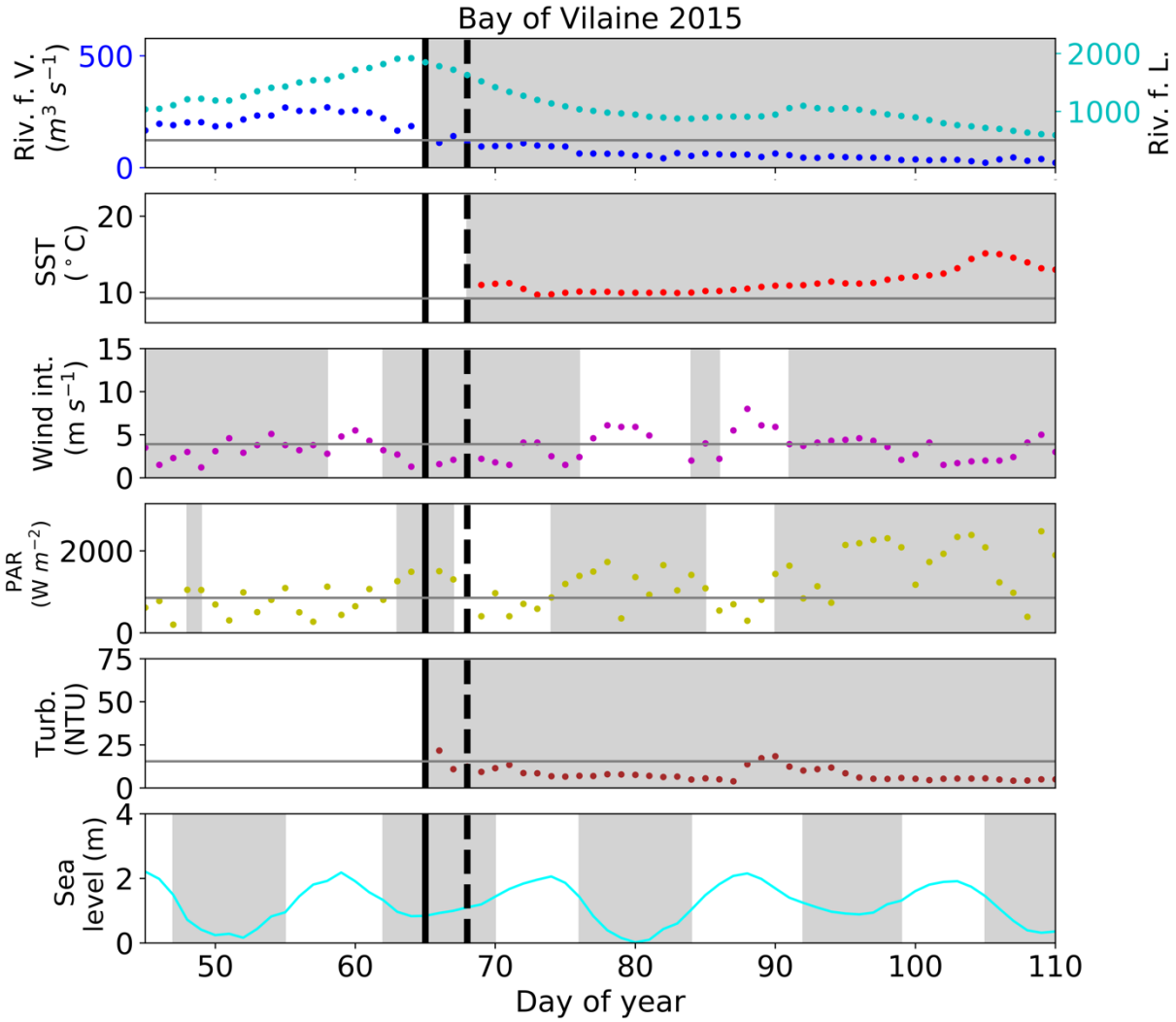
(a)


Bay of Vilaine 2012
Riv. f. V. (m^3 s^{-1})
500
0
2000
0
Riv. f. L.
SST (°C)
20
10
Wind int. (m s^{-1})
15
10
5
0
PAR (W m^{-2})
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

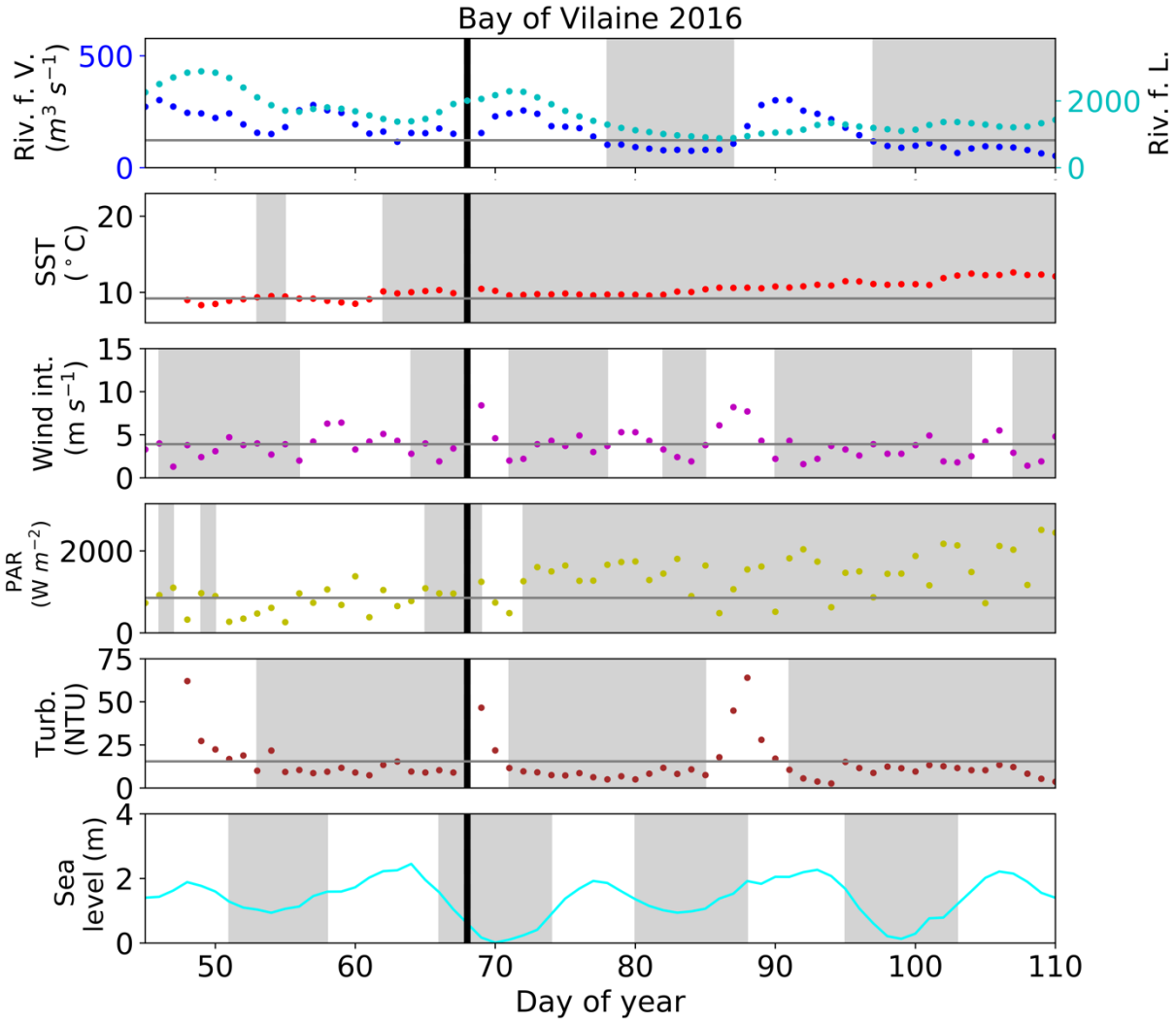
(b)


Bay of Vilaine 2013
Riv. f. V. (m^3 s^{-1})
500
0
3000
2000
1000
Riv. f. L.
SST (°C)
20
10
Wind int. (m s^{-1})
15
10
5
0
PAR (W m^{-2})
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

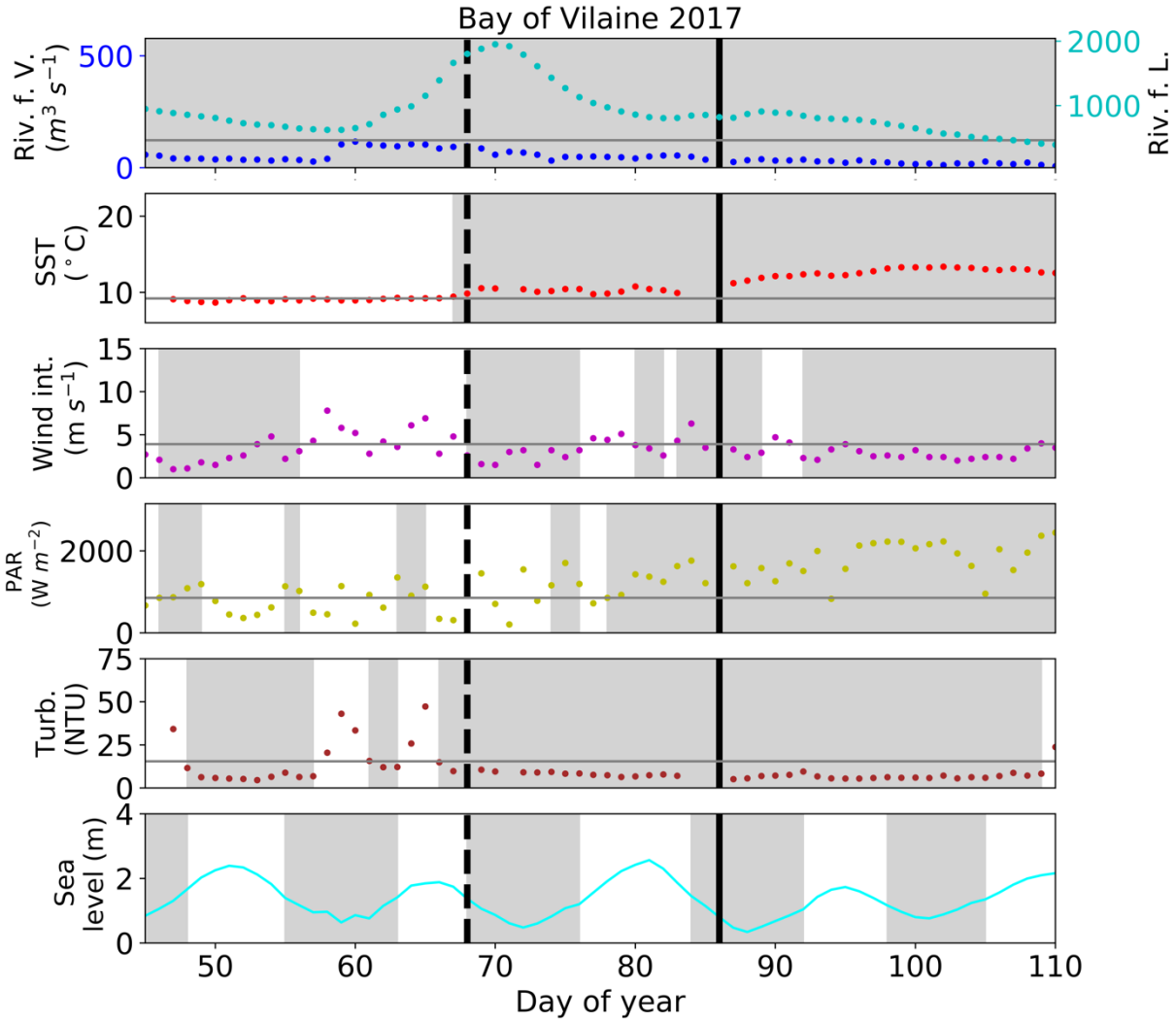
(c)


Bay of Vilaine 2015
Riv. f. V. (m^3 s^{-1})
500
0
2000
1000
Riv. f. L.
SST (°C)
20
10
Wind int. (m s^{-1})
15
10
5
0
PAR (W m^{-2})
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

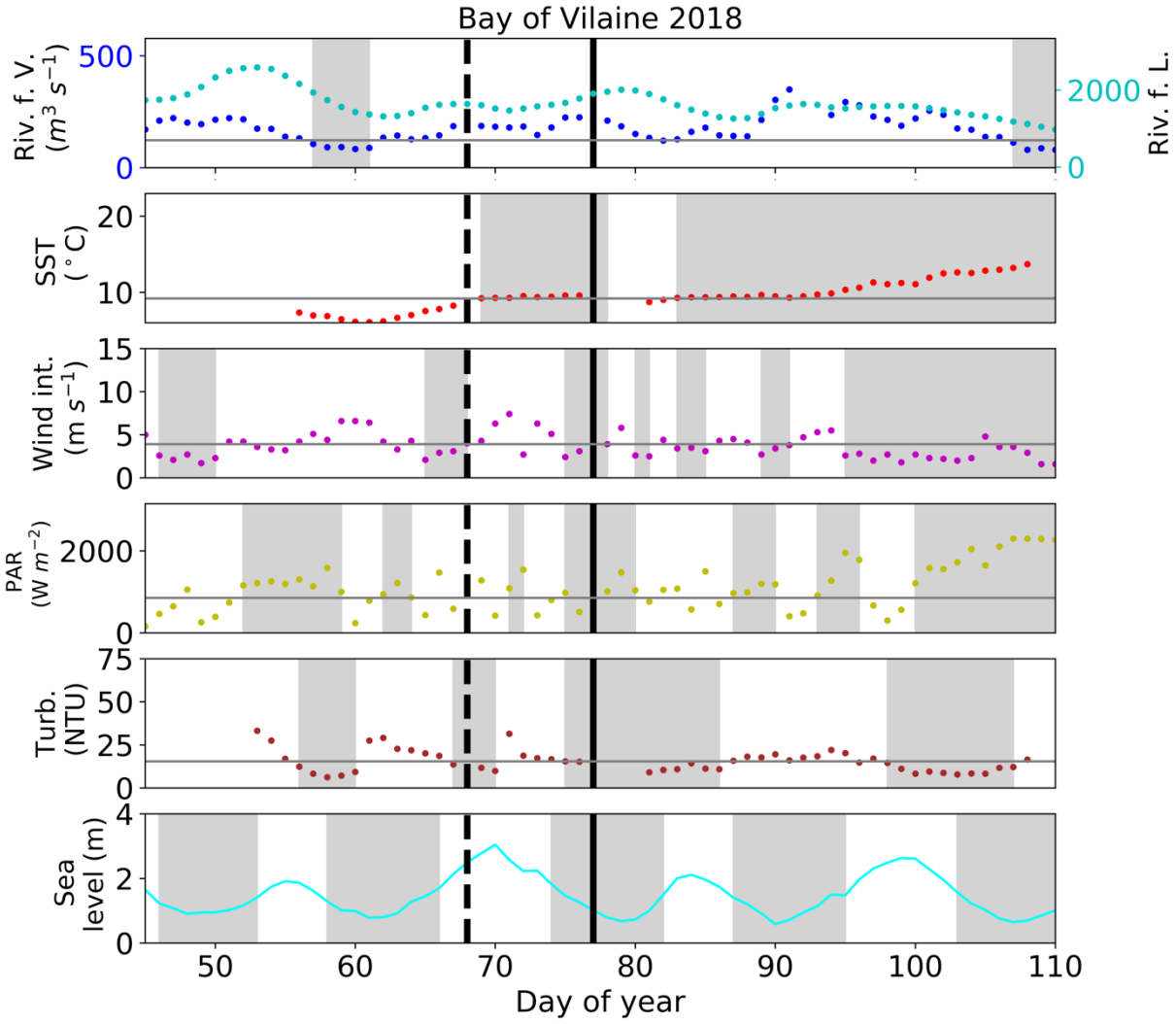
(d)


Bay of Vilaine 2016
Riv. f. V. (m^3 s^{-1})
500
0
2000
0
Riv. f. L.
SST (°C)
20
10
Wind int. (m s^{-1})
15
10
5
0
PAR (W m^{-2})
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

(e)


Bay of Vilaine 2017
Riv. f. V. (m^3 s^{-1})
500
0
2000
1000
Riv. f. L.
SST (°C)
20
10
Wind int. (m s^{-1})
15
10
5
0
PAR (W m^{-2})
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

(f)


Bay of Vilaine 2018
Riv. f. V. (m^3 s^{-1})
500
0
2000
0
Riv. f. L.
SST (°C)
20
10
Wind int. (m s^{-1})
15
10
5
0
PAR (W m^{-2})
2000
0
Turb. (NTU)
75
50
25
0
Sea level (m)
4
2
0
50
60
70
80
90
100
110
Day of year

(g)

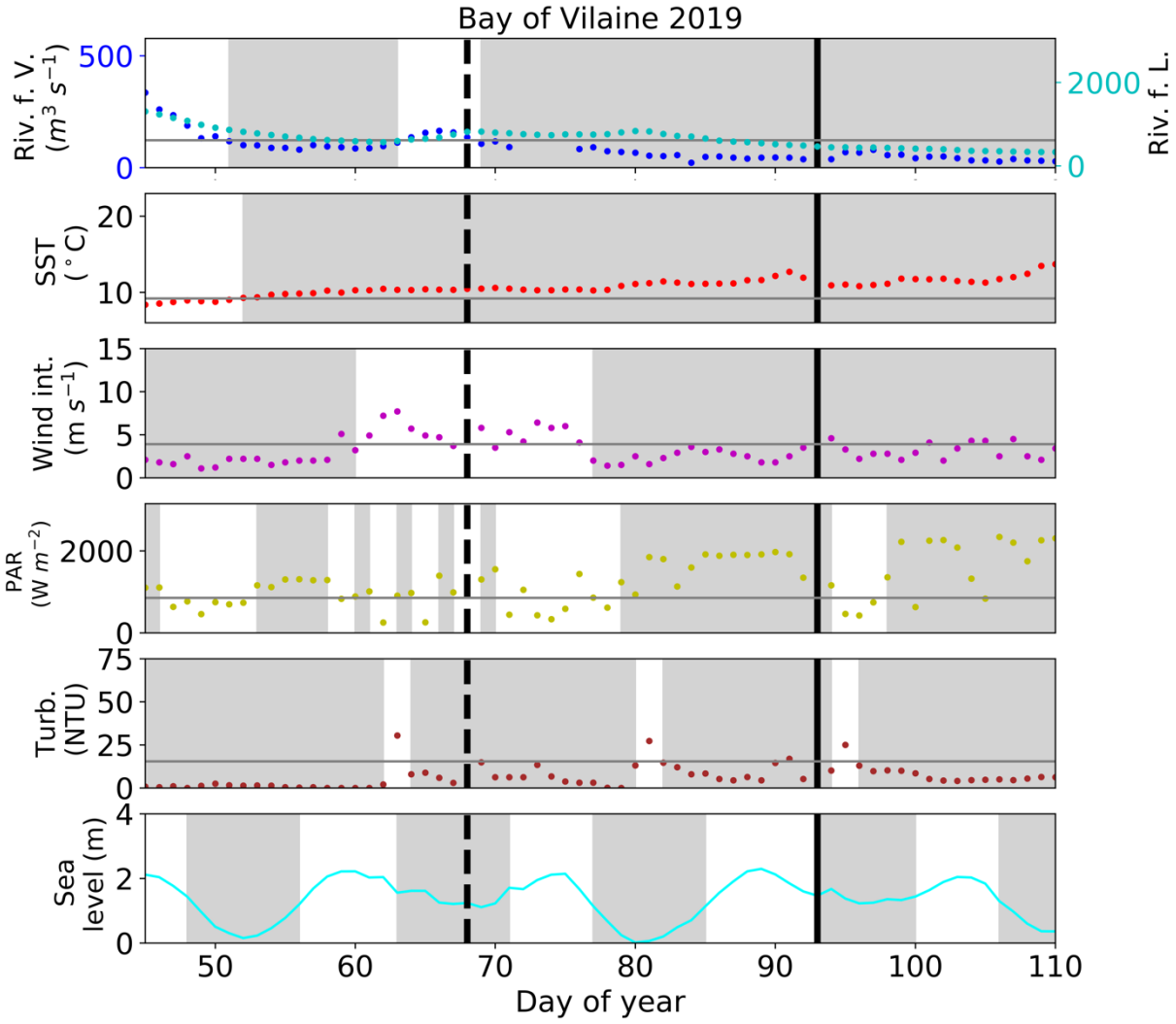


Figure S2: Evolution of the Chl-*a* fluorescence and the environmental drivers: River flow of the Vilaine and Loire, Sea Surface Temperature, wind intensity, PAR, turbidity and sea level for a mean IPGP in the Bay of Vilaine (a) 2012 (b) 2013 (c) 2015 (d) 2016 (e) 2017 (f) 2018 (g) 2019. The mean IPGP is represented by a dotted black line and the IPGP of the year is represented by a straight black line. Thresholds of each environmental driver are represented by grey vertical lines corresponding to the mean conditions ±15 days around the IPGP date. Grey areas are time periods favorable to IPGP.