Coastal and regional marine heatwaves and cold-spells in the Northeast Atlantic

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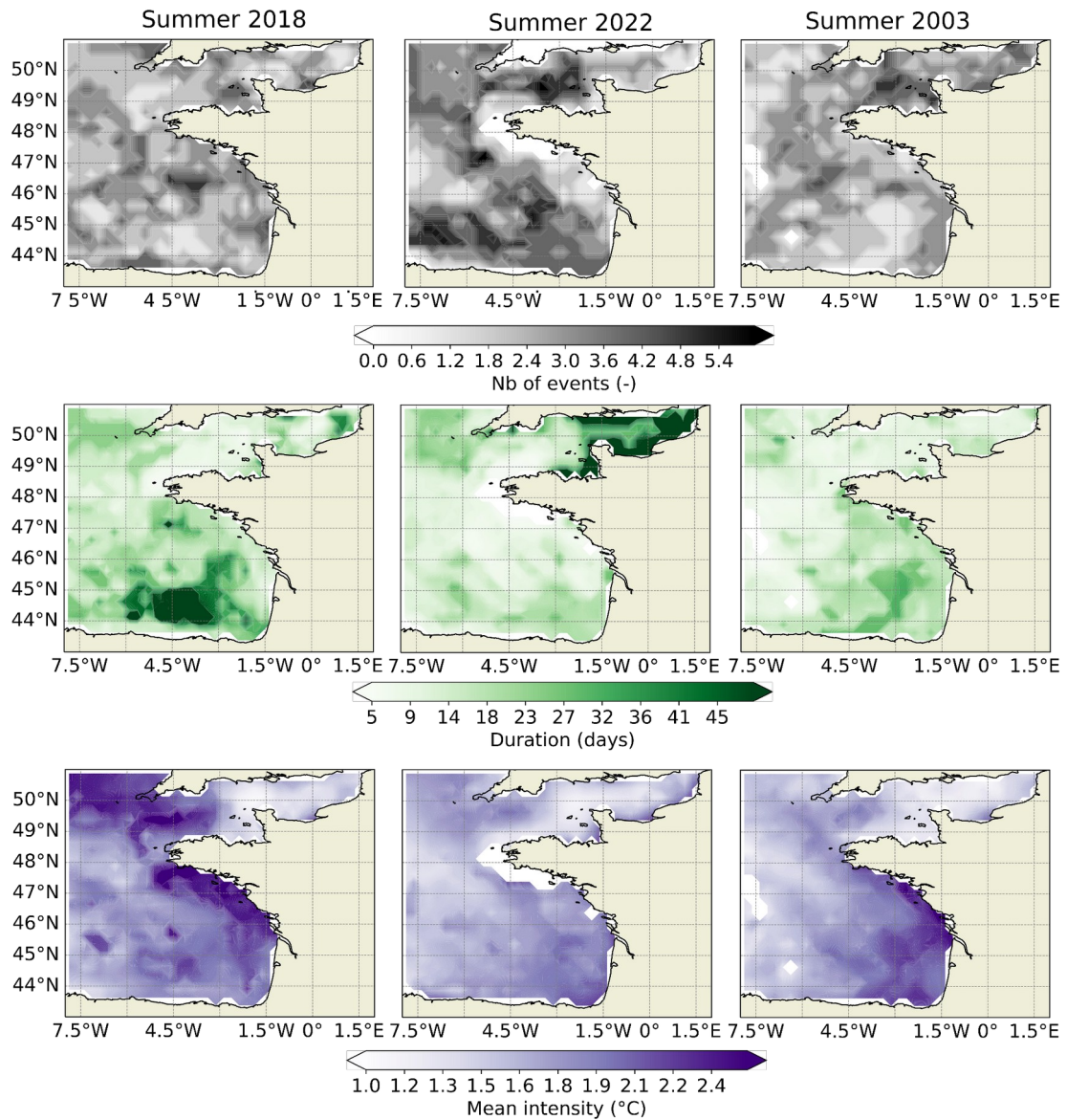
Supplementary files

19
20 Figure S1: Summer (JJAS) number of events (first row), average duration (second row; in
21 days) and average intensity (third row; in °C) for the top 3 summer in term of total activity in
22 the domain 8W2E-46N51N (from left to right)

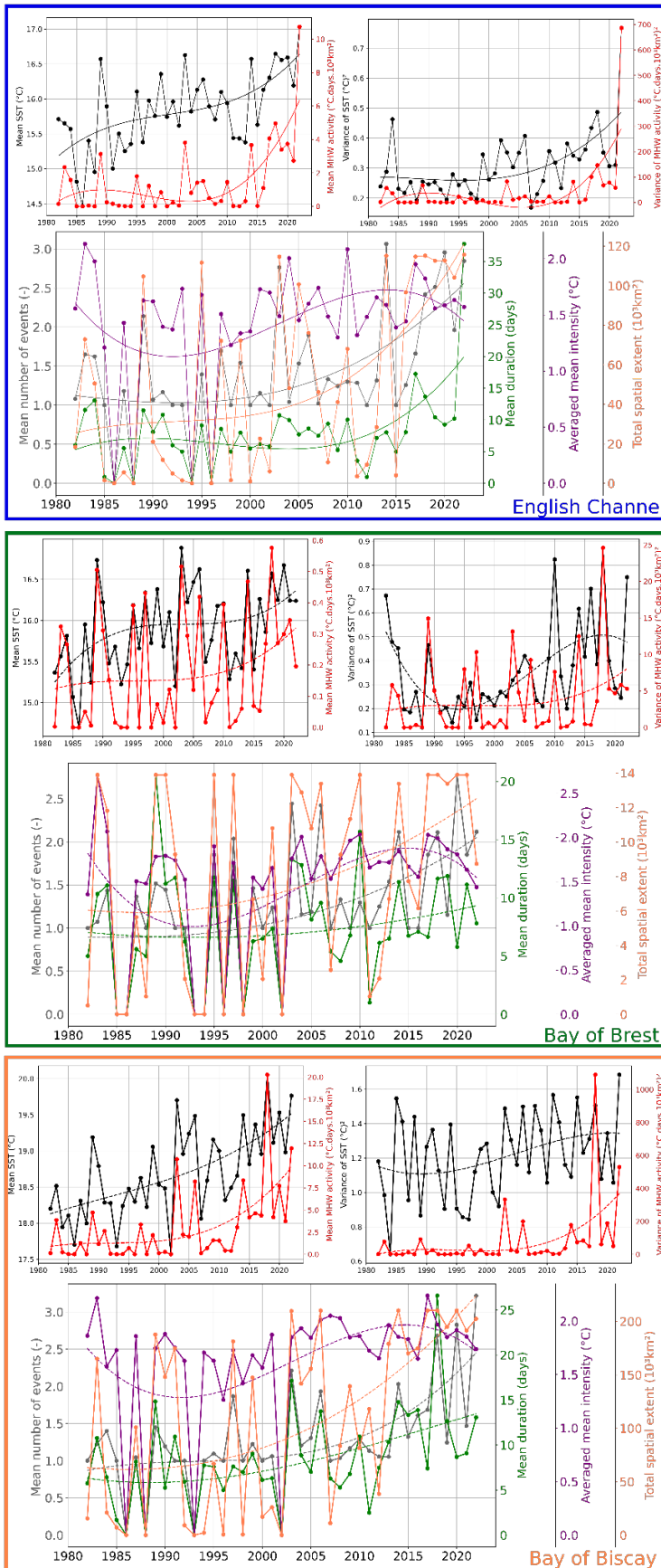



Figure S2: Time series of mean (Top) and variance (Middle) of SST (black curve) and MHW
activity (red curve) of summers (JJAS) in the period 1982-2022 and for the three subregions
the English Channel (left), the Bay of Brest (middle) and the Bay of Biscay (right).

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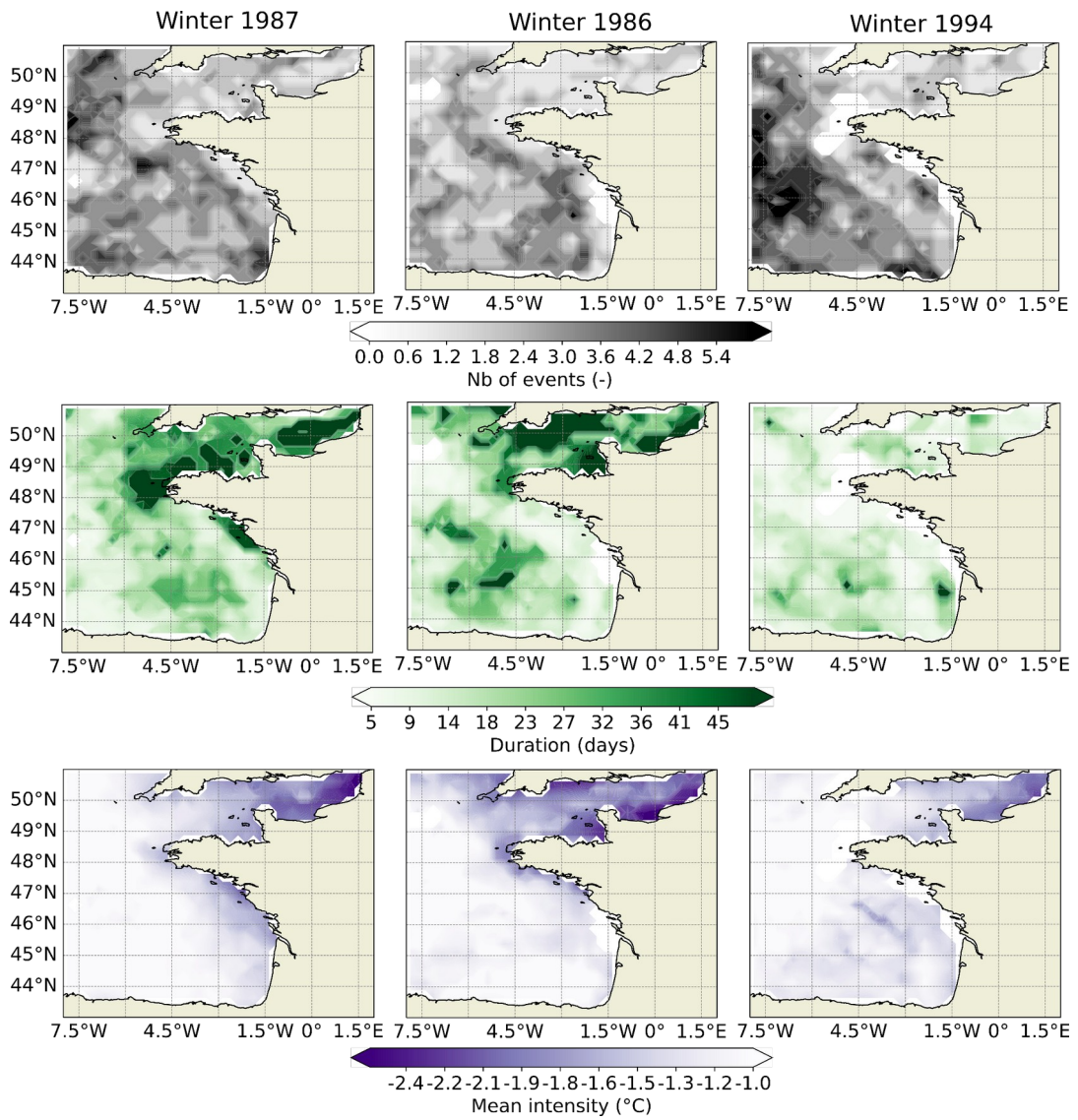
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31 Figure S3: Same as Figure S1 but for MCS in winter (DJFM).
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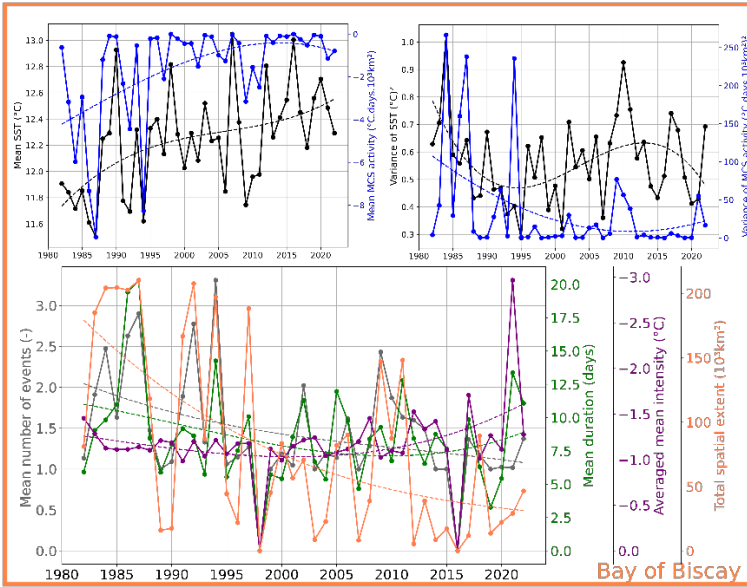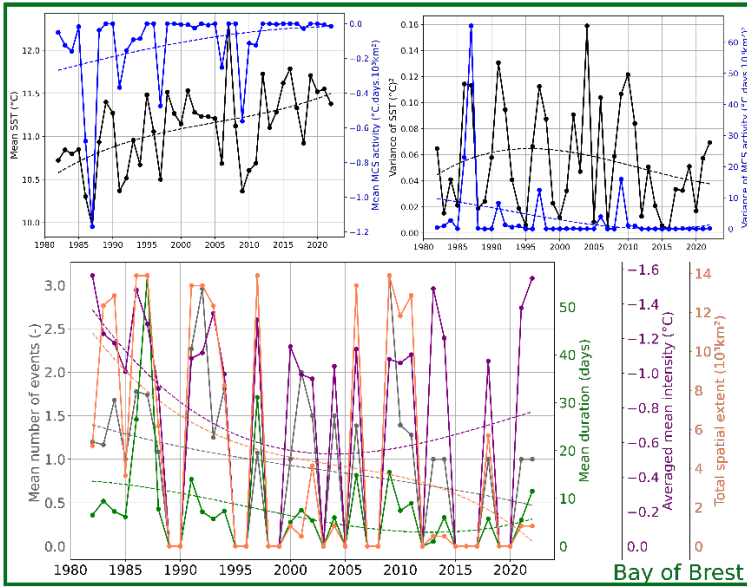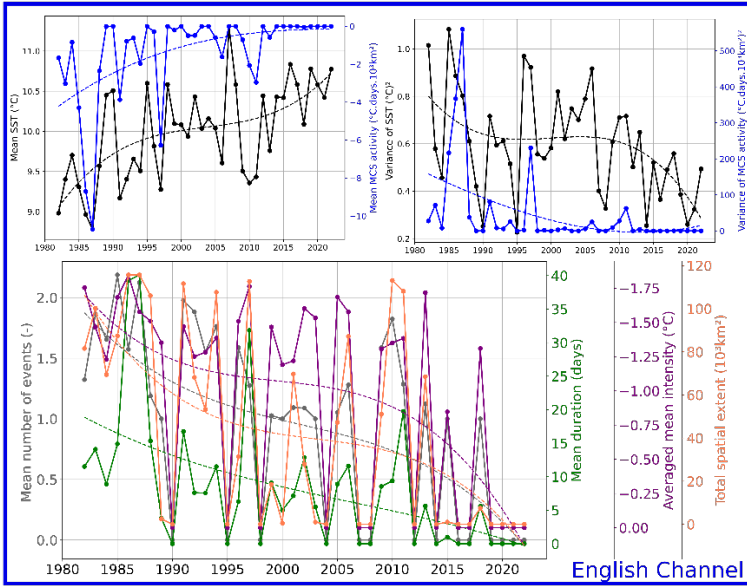
Figure S4: Same as Figure S2 but in winter (DJFM) and MCS (blue curve).

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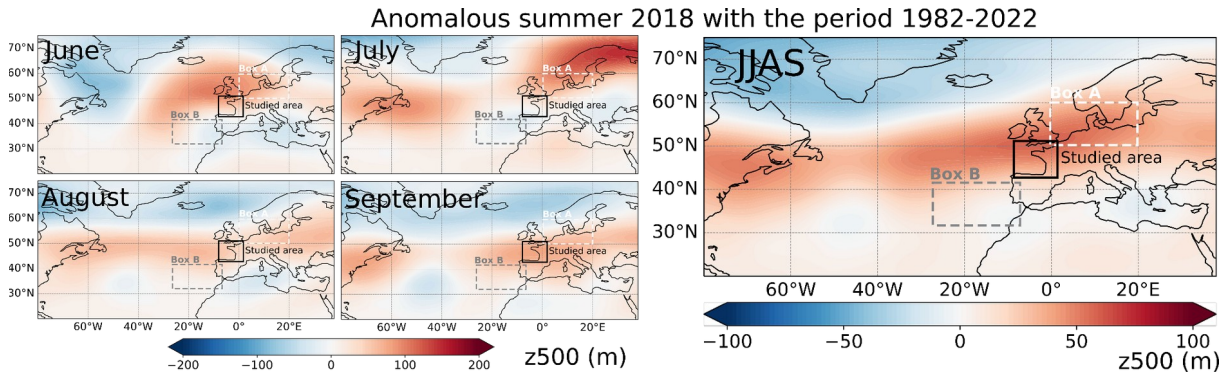
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39 Figure S5: Anomalous geopotential height at 500 hPa (left panel) in June (top-
40 right), July (top-right), August (bottom-left) and September (bottom-right) and June to September with the
41 period 1982-2022 (right panel). Box A is the domain 0E20E-50N60N and box B is the
42 domain 33W13W-31N41N.

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46 Figure S6: Total monthly activity in the studied area, Northeast Atlantic (8W2E-43N51N) for
47 marine heatwaves in summer months (top) and for marine cold-spells in winter months
48 (bottom).

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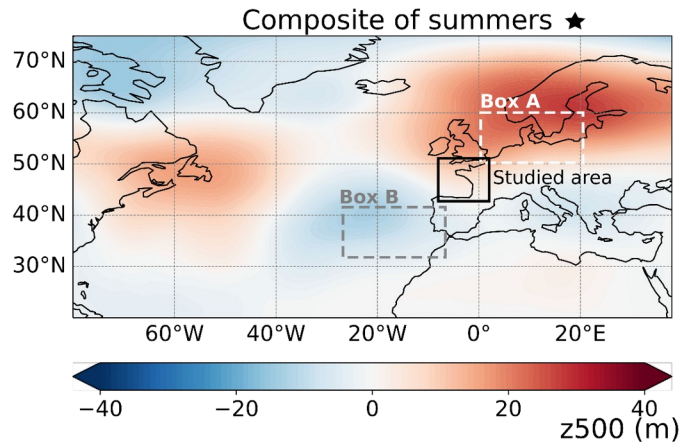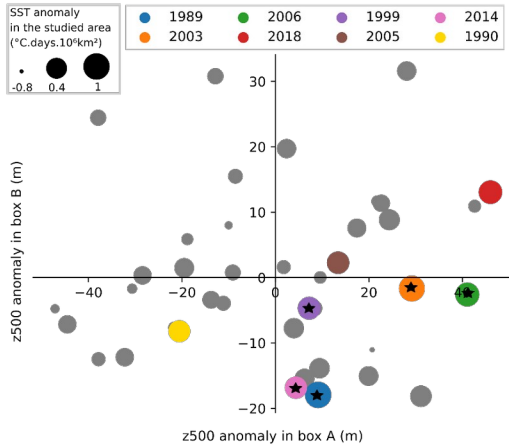
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51 Figure S7: Same as Figure 8 but with SST instead of marine heatwave activity. SST
52 anomalies are calculated with respect to the quadratic trend (black dotted line in the top panel
53 Figure 3). Coloured mark summer is for anomalous SST averaged of the studied area
54 exceeding 0.4 ºC.

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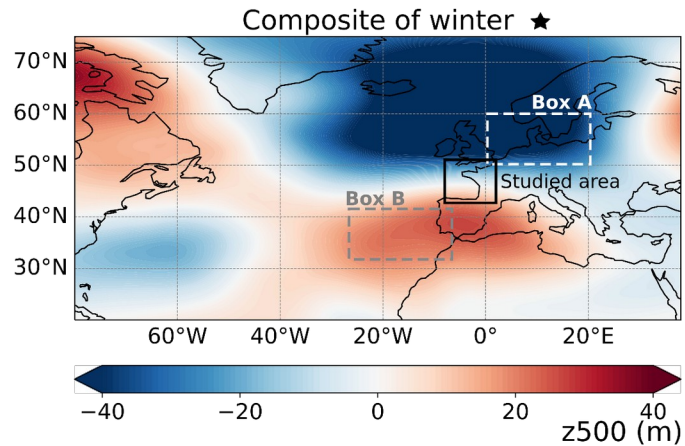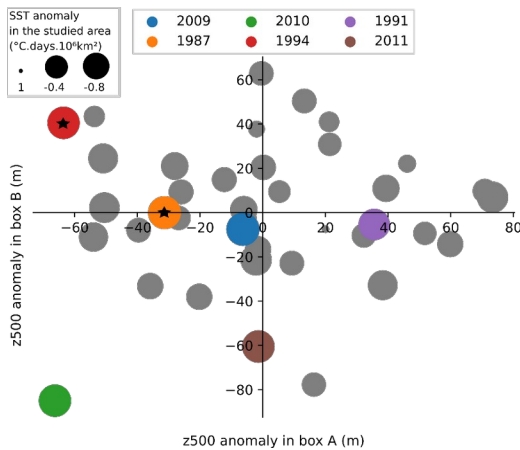
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57 Figure S8: Same as Figure 9 but with SST instead of marine cold-spells activity. SST
58 anomalies are calculated with respect to the quadratic trend (black dotted line in the top panel
59 Figure 6). The colored mark winter is for anomalous SST averaged of the studied area below -
60 0.4 ºC. Box A is the domain 0E20E-50N60N and box B is the domain 33W13W-31N41N.

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Buoy names	Coordinates	Start acquisition
CARNot	1.56°E, 50.74°N	2004
GREENwich	0.04°E, 50.41°N	2006
SMILe	0.30°W, 49.34°N	2015
CHANnel	2.86°W, 49.90°N	1991
L4_Q	4.13°W, 50.15°N	2009
SEVEn stones	6.07°W, 50.09°N	1995
ASTAn	3.93°W, 48.77°N	2015
IROIse	4.55°W, 48.35°N	2000
SMARt	4.33°W, 48.31°N	2016
MOLIt	2.65°W, 47.46°N	2008
ARCAchon	1.23°W, 44.63°N	2017
BILBao	3.14°W, 43.41°N	2004
GIJOn	5.68°W, 43.64°N	2004

Table S1: Characteristics of the 13 *in situ* measurement buoys. Buoys indicated in blue are located in the English Channel, in green in the Bay of Brest and in orange in the Bay of Biscay.