

Supplementary material

Marine sublittoral benthos fails to track temperature in response to climate change in a biogeographical transition zone

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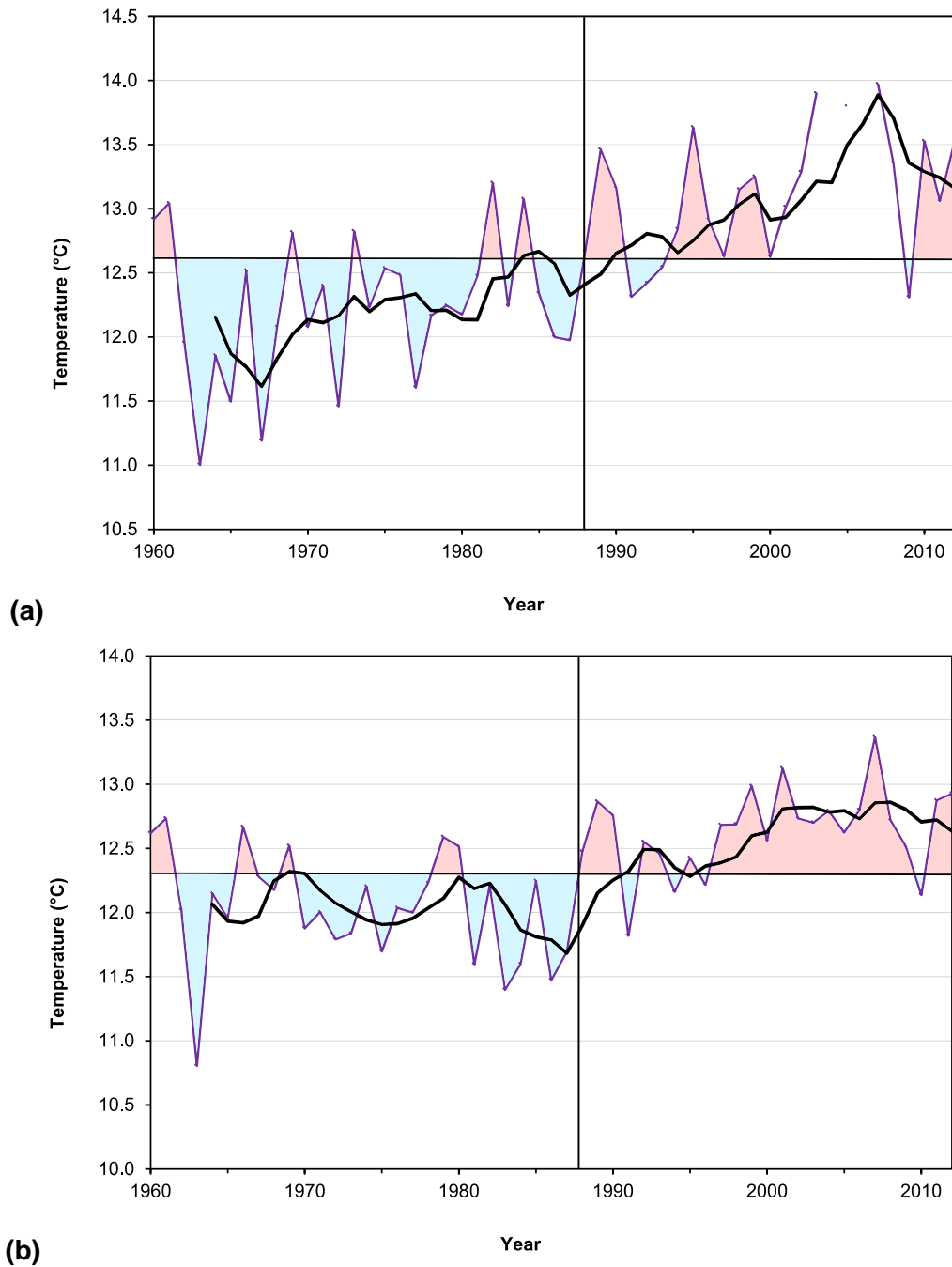


Figure S1. Long-term temperature trends in the western English Channel. (a) Annual mean sea surface temperature (SST) at station E1 (50°02'00" N, 4°22'00"W), off Plymouth (data source: Marine Biological Association of the United Kingdom and Plymouth Marine Laboratory). (b) Annual mean seabed temperature (SBT) at station Astan (48°46'24" N, 3°56'90"W), off Roscoff (data source: Station Biologique de Roscoff and SOMLIT, INSU-CNRS). The violet line indicates the observed annual mean temperatures and the bold black line the 5 year mean. The black horizontal line represents the long-term average temperature and the black vertical line the year separating a cooler period (before 1988) from a warmer period (after 1988). The data between 1987 and 2002 in (a) are calculated from monthly averaged satellite SSTs extracted from the AVHRR Pathfinder data set.

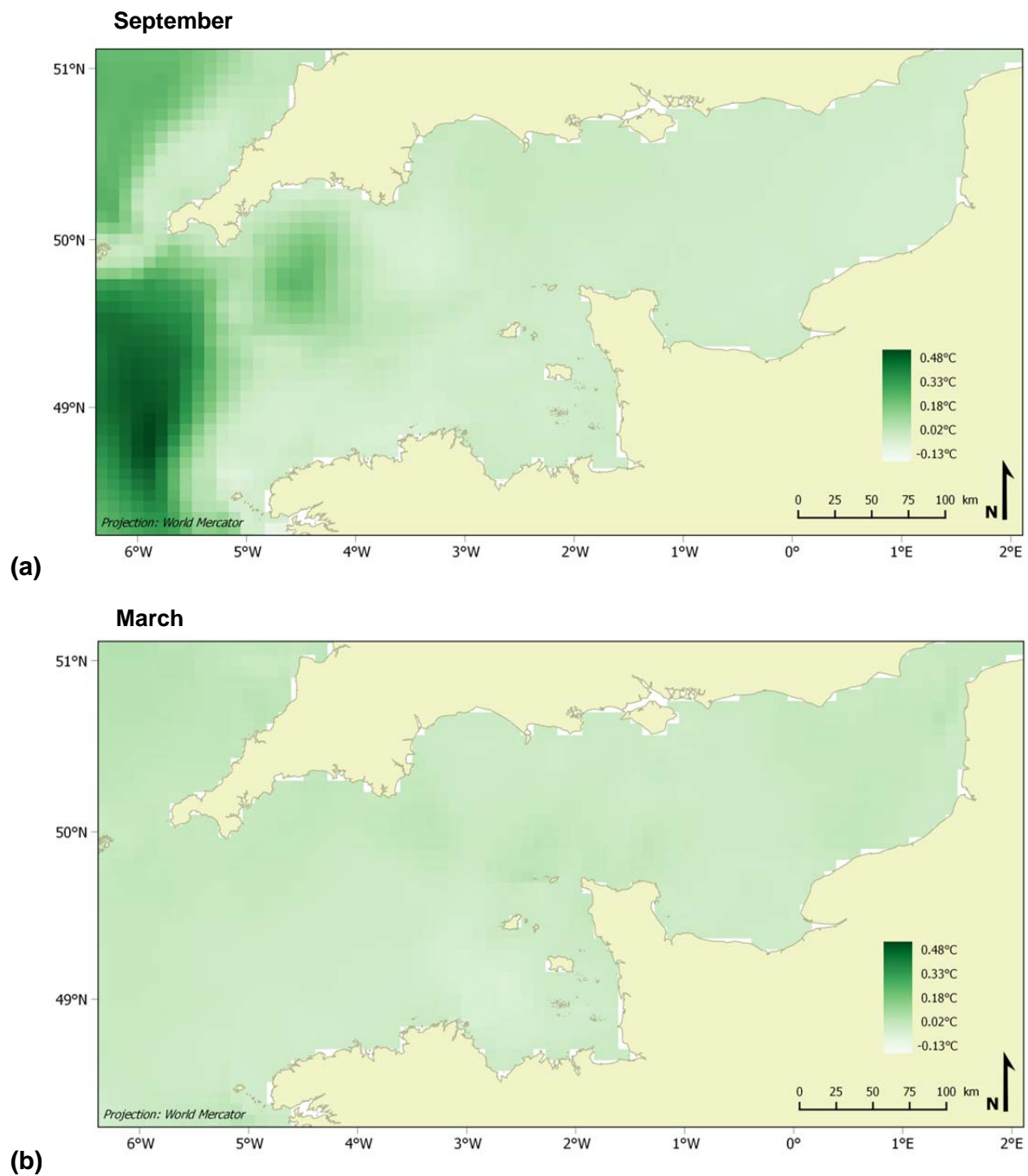


Figure S2. Differences between decadal changes in sea surface temperature and sea bottom temperature along the English Channel calculated (a) for the period 1985-2011 for the September and (b) for the period 1985-2012 for the March.

Table S1. Average longitudinal shifts in seabed isotherms between 1985-94 and 2002-12.

Temperature	Isotherms (°C)	Distance (kms)	Direction
Minimum			
	7.0	45	East
	7.5	34	East
	8.0	48	East
	8.5	54	East
	9.0	58	East
	9.5	23	East
	10.0	31	East
Maximum			
	13.0	16	West
	13.5	5	West
	14.0	4	West
	14.5	25	West
	15.0	41	West
	15.5	42	West
	16.0	85	West
	16.5	142	West
	17.0	113	West
	17.5	72	West