





Region	minimum	5 th percentile	Median	95th percentile	maximum
Veneto	0.5	0.5	2.3	4.3	4.4
Emilia Romagna	0.6	0.7	1.1	4.5	4.9
Marche	0.5	0.6	2.0	4.8	4.9
Abruzzo	0.6	0.7	1.1	4.4	4.9
Molise	0.8	0.8	2.3	3.4	3.5
Puglia	0.5	0.8	2.4	4.6	4.9

Table SM I. Summary of descriptive statistics of distance (Km) to coast of sampling points for each region: minimum, 5th percentile, median, 95th percentile and maximum.

Region	minimum	5 th percentile	Median	95 th percentile	maximum
Veneto	5	5	10	10	22
Emilia Romagna	5	5	5	6	14
Marche	5	6	10	11	14
Abruzzo	5	6	8	9	19
Molise	5	5,4	13	13,8	16
Puglia	0	0	11,5	13	54

Table SM II. Summary of descriptive statistics of water depth (m) of sampling points for each region: : minimum, 5th percentile, median, 95th percentile and maximum.

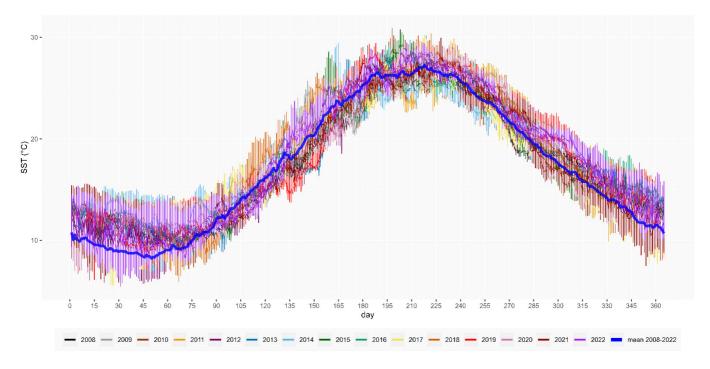


Figure SM 1. Average daily SST of all sampling points considered in the Adriatic Sea, for each year, over the entire study period (2008 - 2022).

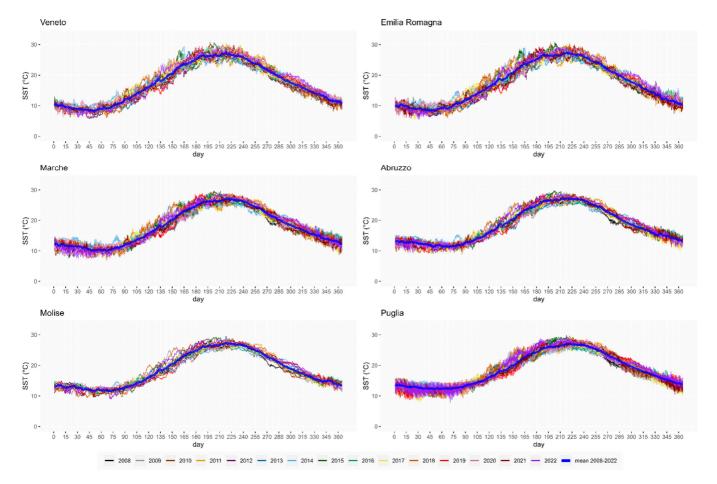


Figure SM 2. Average daily SSTs of all sampling points considered for each year and region over the entire study period (2008 - 2022).

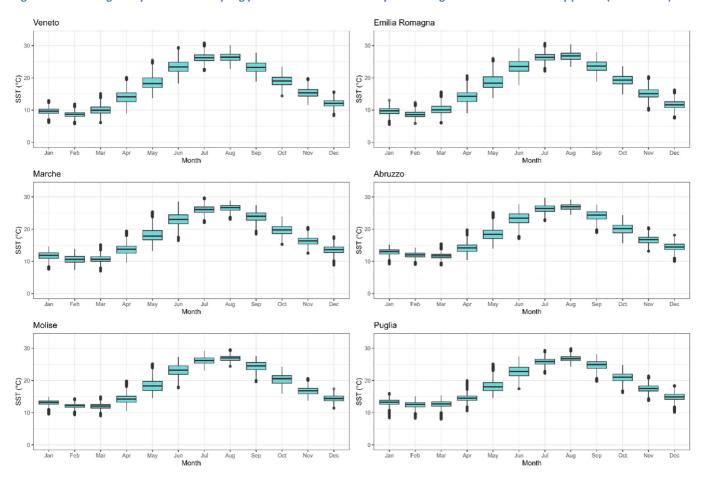
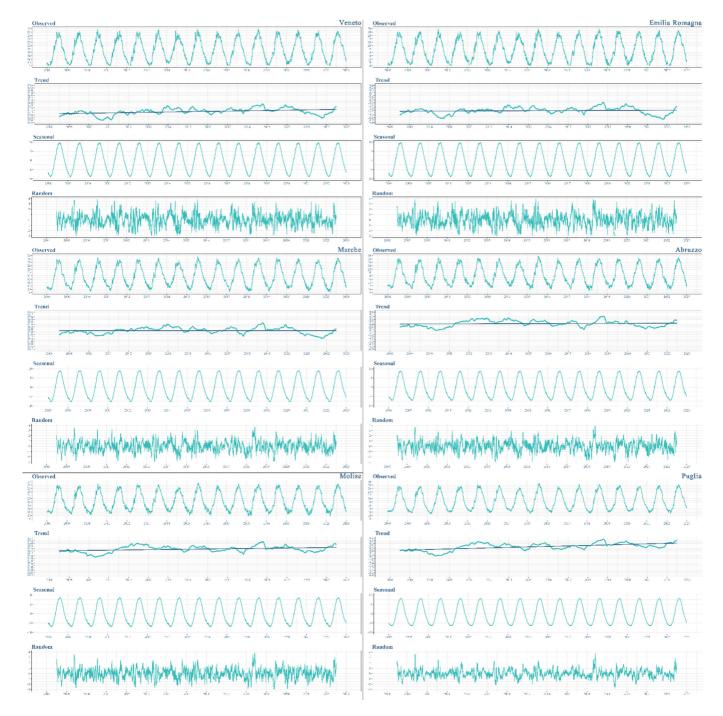


Figure SM 3. Box plot of detailed monthly distribution of SST for individual regions during the study period (2008-2022).



 $\label{lem:figure SM 4. Time series decomposition of daily average SST for individual \ regions. \\$

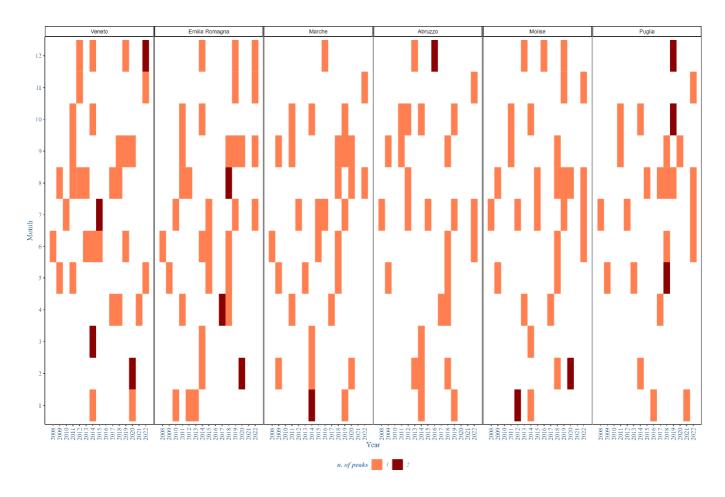


Figure SM 5. Number of MHWs for each region by year and month during the period 2008-2022.

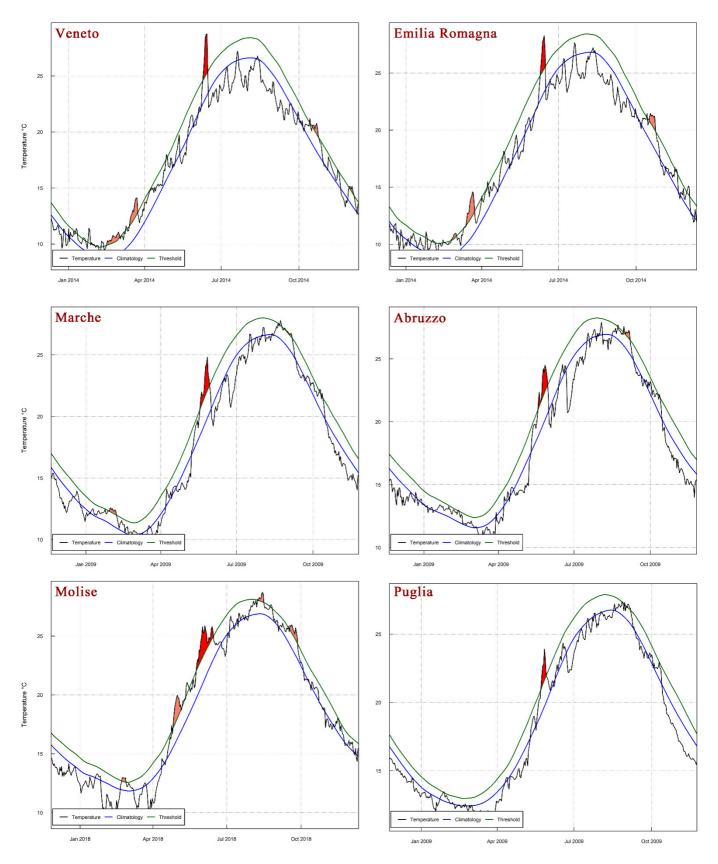


Figure SM 6. Maximum peak observed of MHWs for individual regions during the period 2008-2022. The black line represents the registered SST, the blue line is the climatology (average of the period across the years), the green line is the threshold (90th percentile of values in 11 days across all years). The red and orange areas highlight the overpass of the threshold.

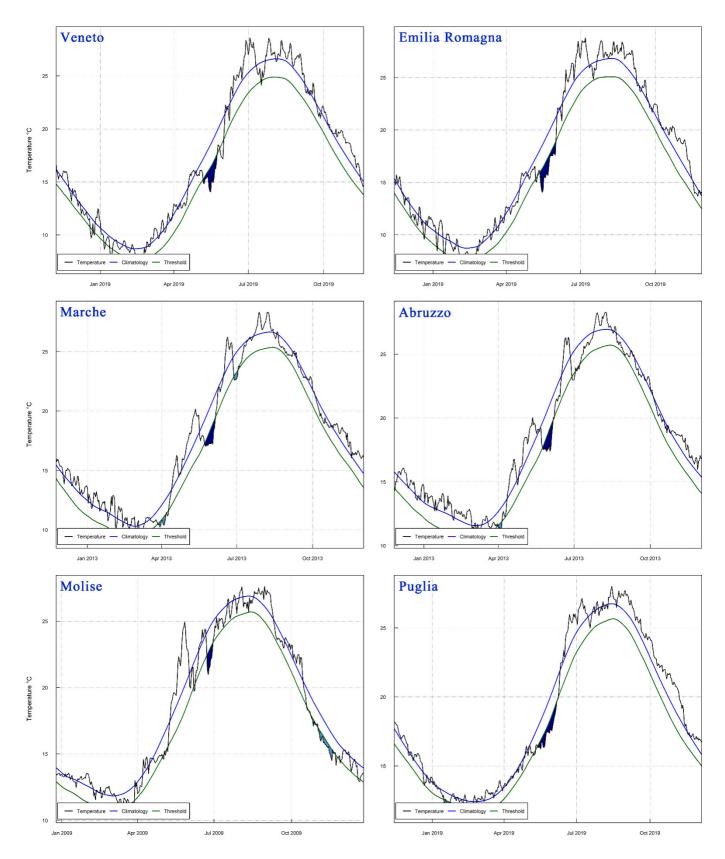


Figure SM 7. Maximum peak observed of MCSs for individual regions during the period 2008-2022. The black line represents the registered SST, the blue line is the climatology (average of the period across the years), the green line is the threshold (10th percentile percentile of values in 11 days across all years). The blue areas highlight the overpass of the threshold.

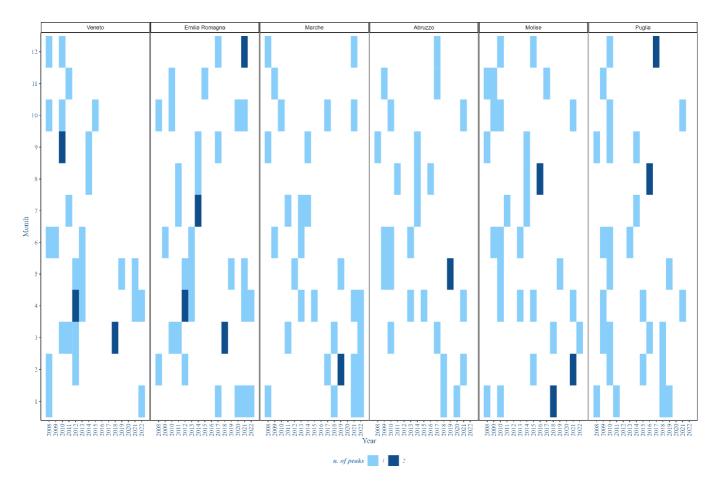


Figure SM 8. Number of peaks of MCSs for each region by Year and Month during the period 2008-2022.