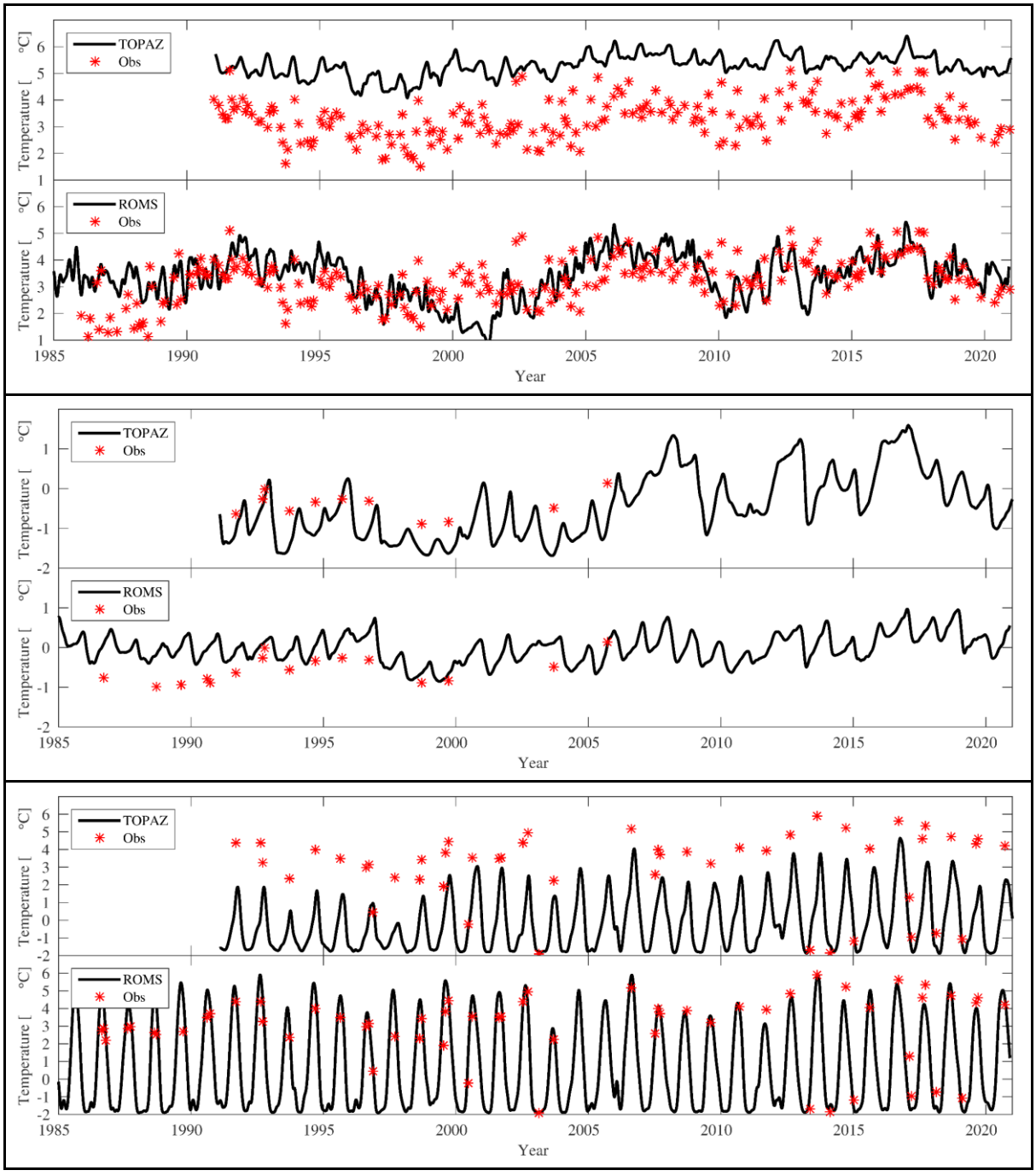
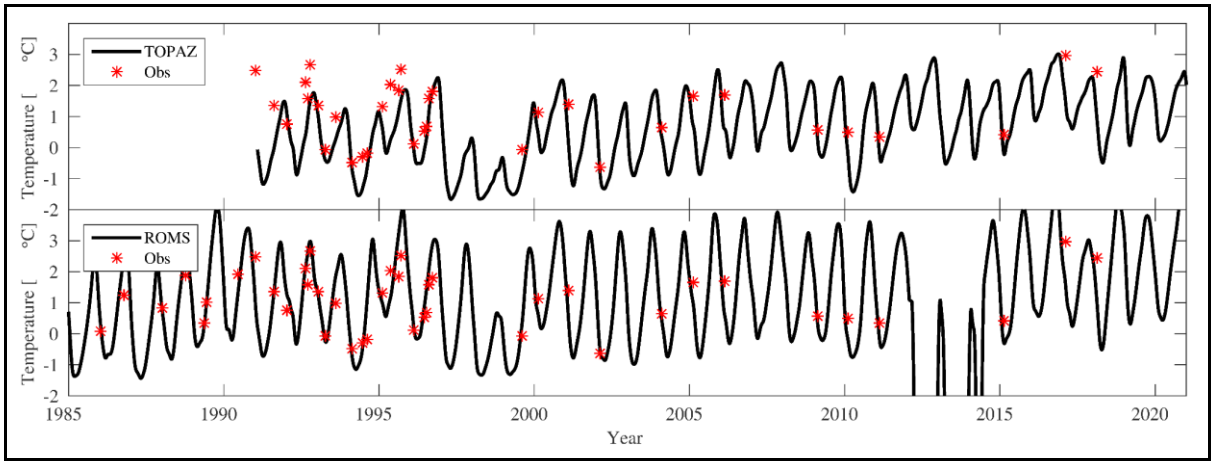
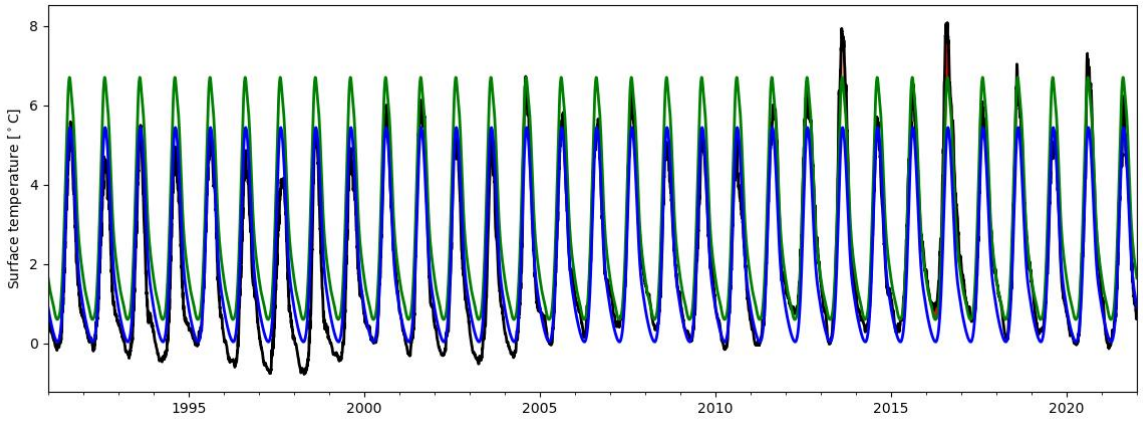
SUPPLEMENTARY FIGURES

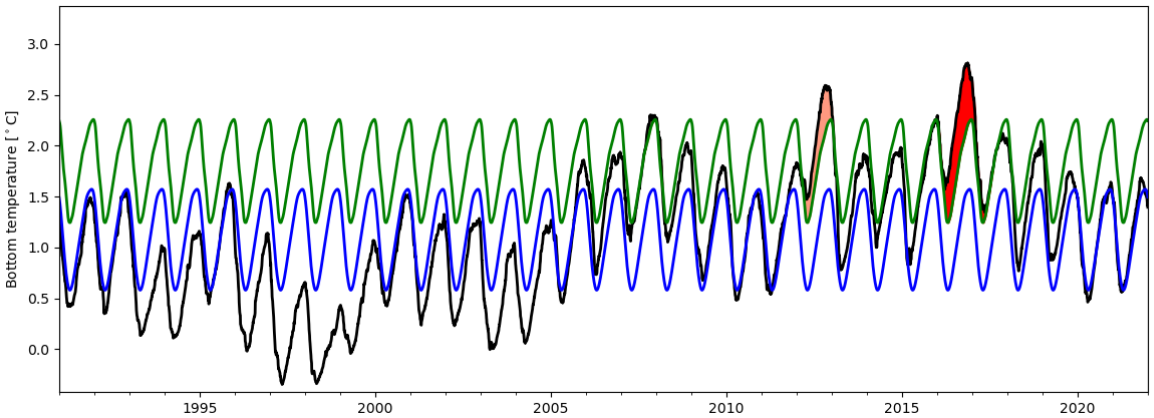




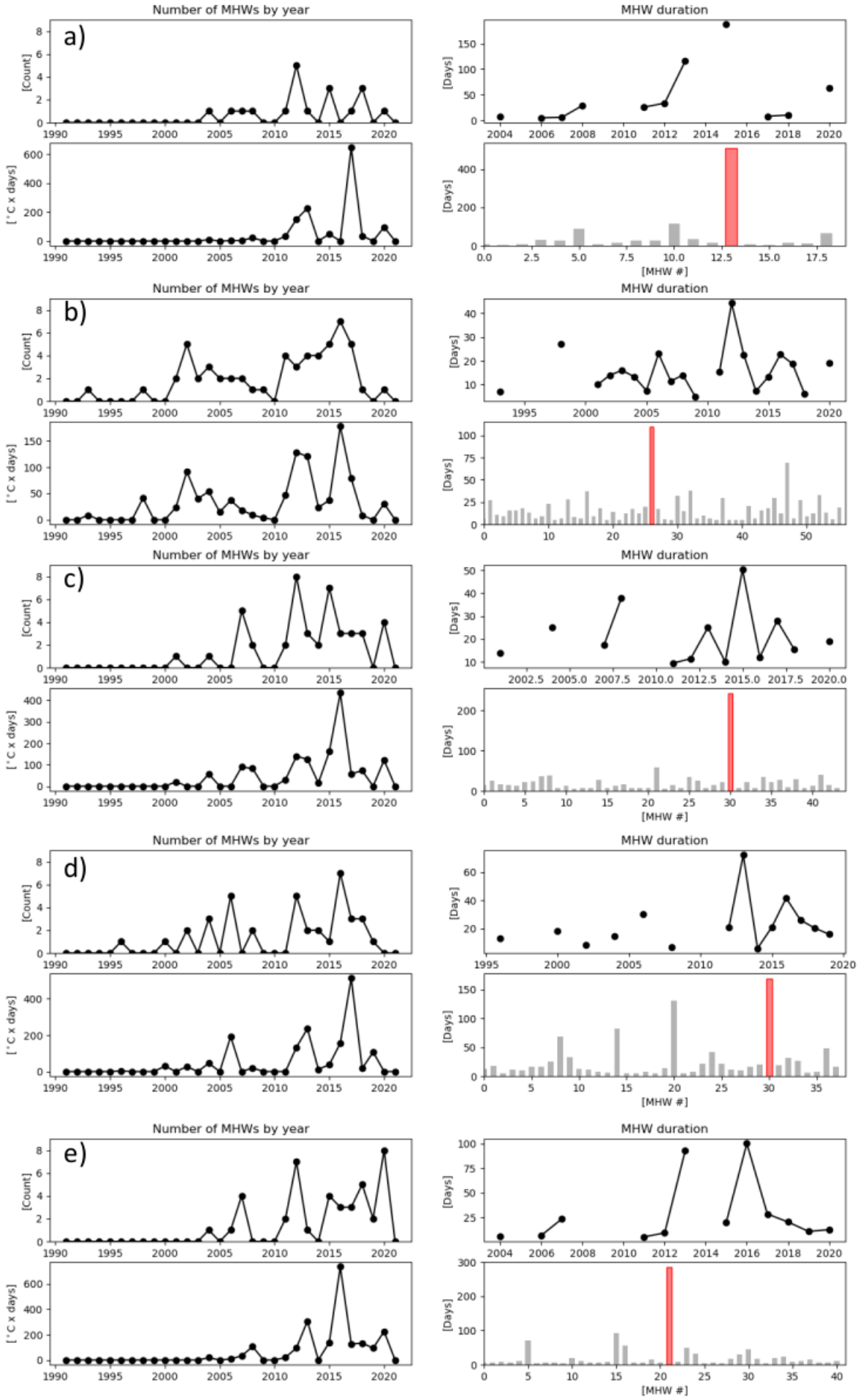
Supplementary Figure S1: Comparison between modelled (black lines) and observed (red stars) bottom temperature in the Bear Island Trough (top panel), Northeast Basin (second panel from top), Spitsbergen Bank (third panel from top) and the Pechora Sea (bottom panel). Please note the different scale on the y-axis in the different panels.



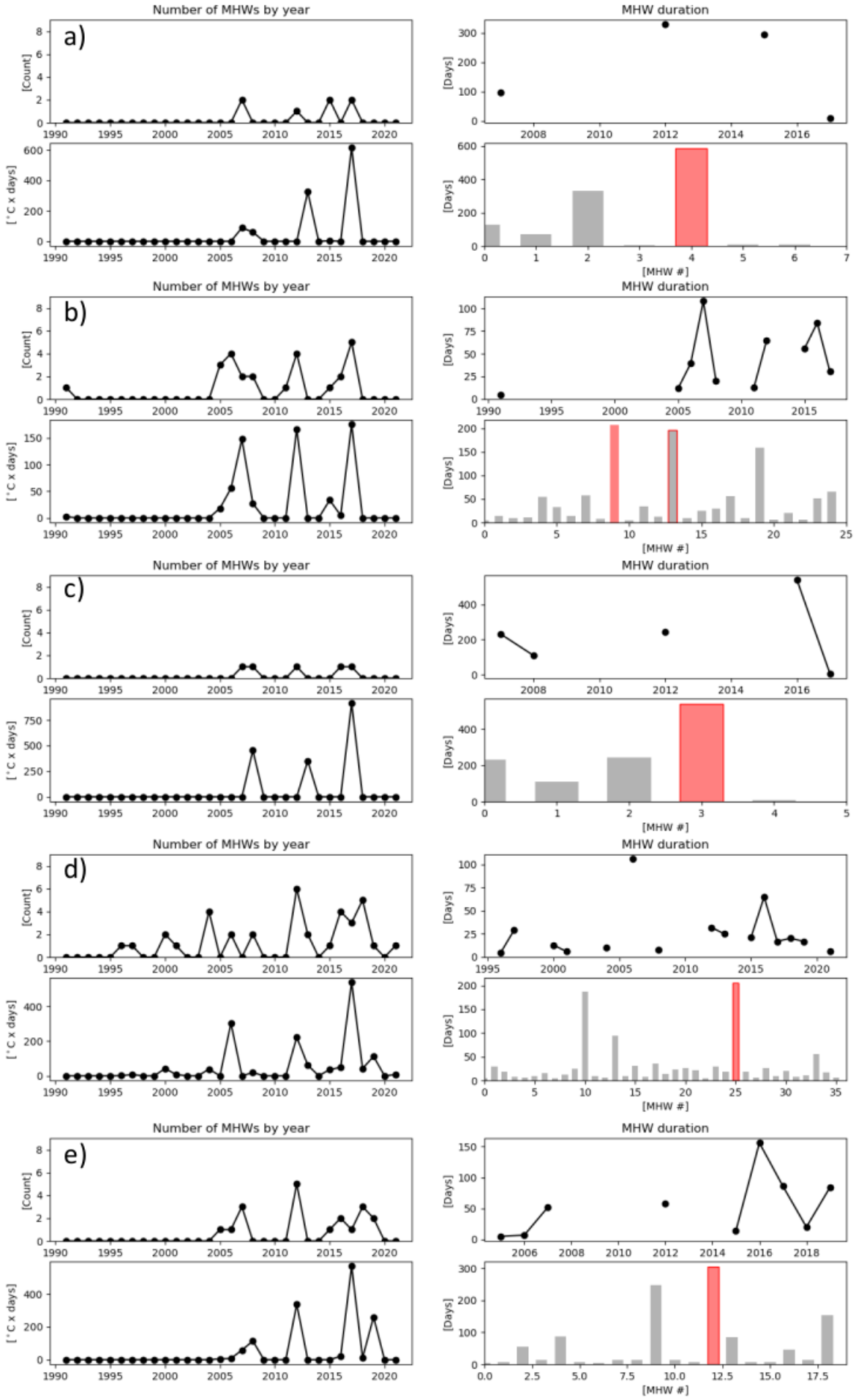
Supplementary Figure S2: Temperature timeseries from near the surface averaged over the full Barents Sea region (see Fig. 1). Blue: Average climatological cycle. Green: Average 90th percentile. Black: Daily temperature. Marine heatwaves are shaded in pink. Strongest marine heatwave in the timeseries is shaded in dark red. From the TOPAZ reanalysis.



Supplementary Figure S3: Same as Supplementary Figure S2 but showing for the near bottom layer.


a)
Number of MHWs by year
[Count]
[°C x days]
MHW duration
[Days]
[MHW #]
b)
c)
d)
e)

Supplementary Figure S4: Near-surface marine heatwave statistics. Top left: number of marine heatwaves per year. Top right: total marine heatwave duration per year. Bottom left: cumulative degree days per year. Bottom right: marine heatwave duration per event. Most severe event is shown in red. a) Whole Barents Sea. b) Bear Island Trough. c) North-eastern Barents Sea. d) Spitsbergen Bank. e) Pechora Sea. Based on the TOPAZ reanalysis.


a)
Number of MHWs by year
[Count]
[°C x days]
MHW duration
[Days]
[MHW #]
b)
Number of MHWs by year
[Count]
[°C x days]
MHW duration
[Days]
[MHW #]
c)
Number of MHWs by year
[Count]
[°C x days]
MHW duration
[Days]
[MHW #]
d)
Number of MHWs by year
[Count]
[°C x days]
MHW duration
[Days]
[MHW #]
e)
Number of MHWs by year
[Count]
[°C x days]
MHW duration
[Days]
[MHW #]

Supplementary Figure S5: Same as Supplementary Figure S4, but showing statistics for near-bottom marine heatwaves.