

Marine heatwaves in Siberian Arctic seas and adjacent region

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Supplementary materials

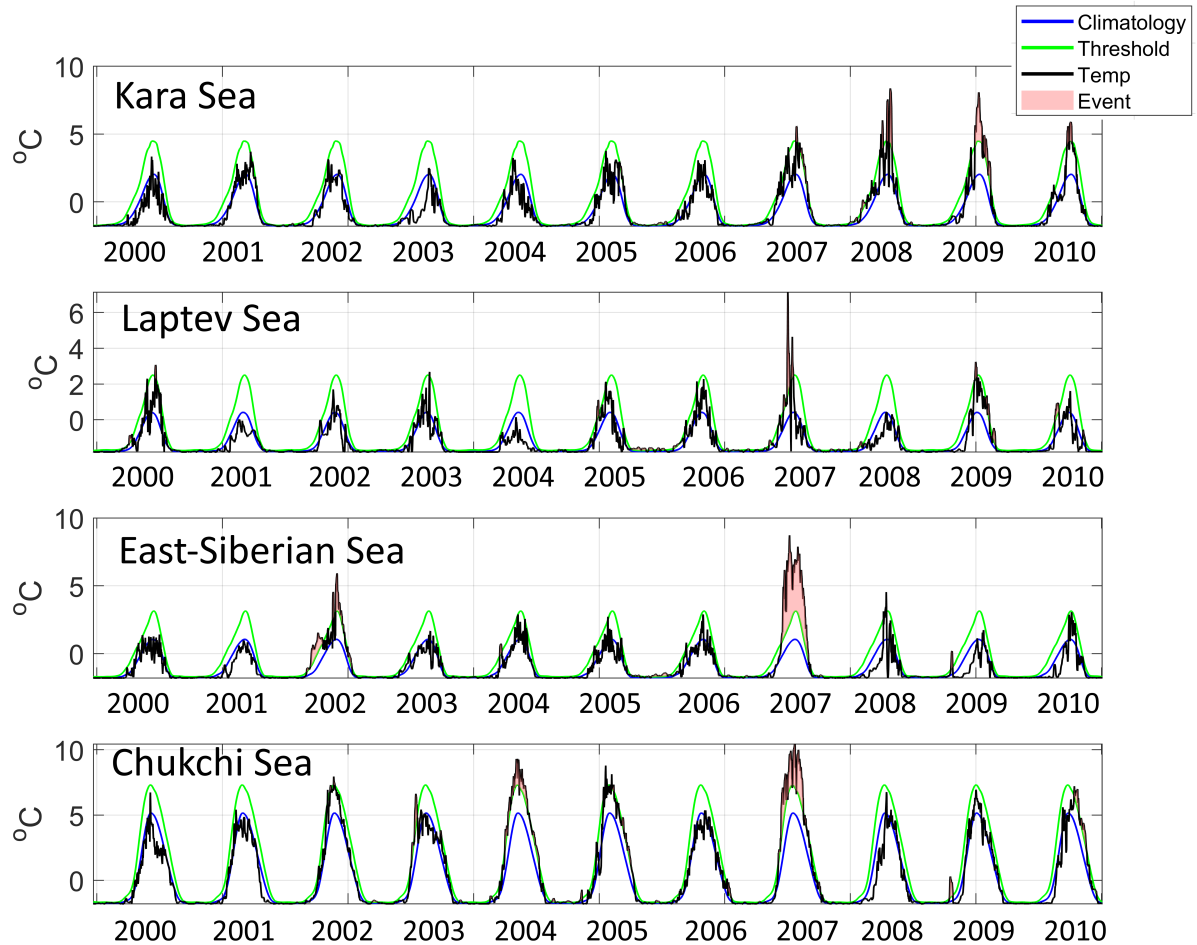


Figure S1. Temperature time series (black line) for the Siberian Arctic seas in 2000-2010 in the selected points (black stars in Figure 2) illustrate marine heatwaves, marked as pink shading between black and green lines. The blue line shows baseline temperature climatology and green line – threshold values defined based on the 90th percentile value for each day of the year.

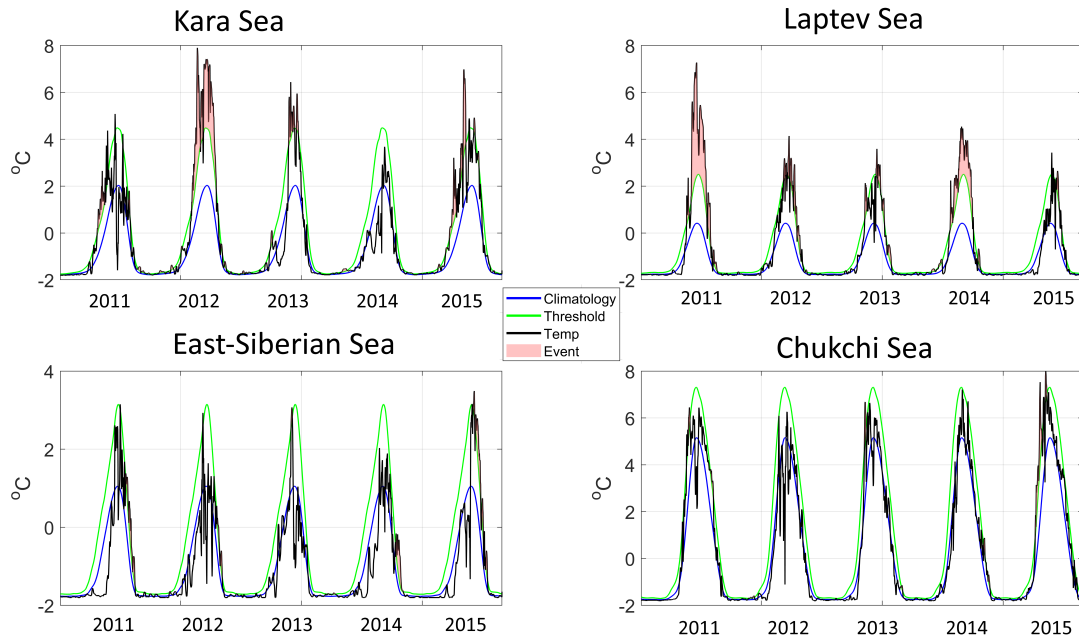


Figure S2. Temperature time series (black line) for the Siberian Arctic seas in 2011-2015 in the selected points (black stars in Figure 2) illustrate marine heatwaves, marked as pink shading between black and green lines. The blue line shows baseline temperature climatology and green line – threshold values defined based on the 90th percentile value for each day of the year.

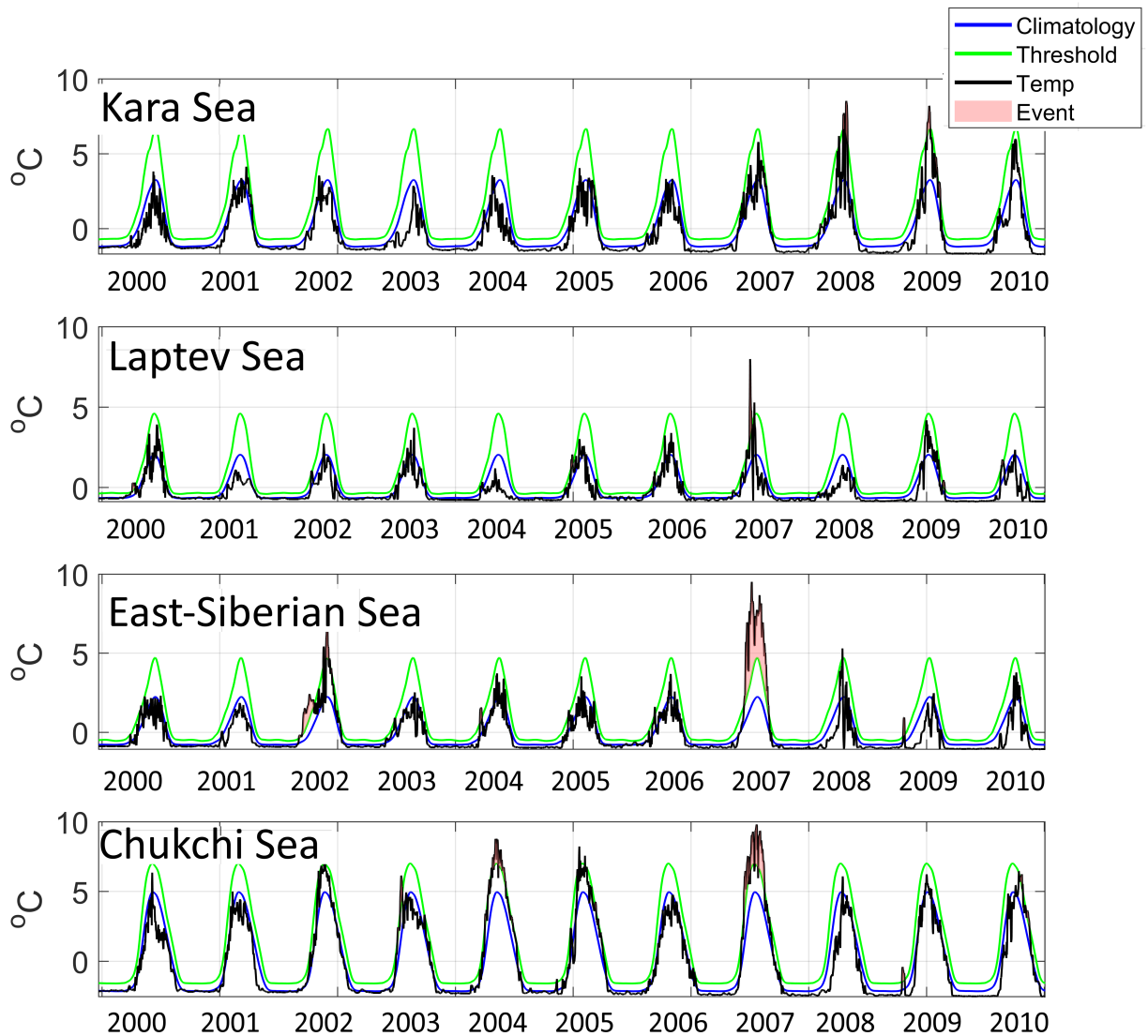


Figure S3. Temperature time series (black line) for the Siberian Arctic seas in 2000-2010, based on data with eliminated linear climate trend, in the selected points (black stars in Figure 2) illustrate marine heatwaves, marked as pink shading between black and green lines. The blue line shows detrended baseline temperature climatology and green line – threshold values defined based on the 90th percentile value for each day of the year.

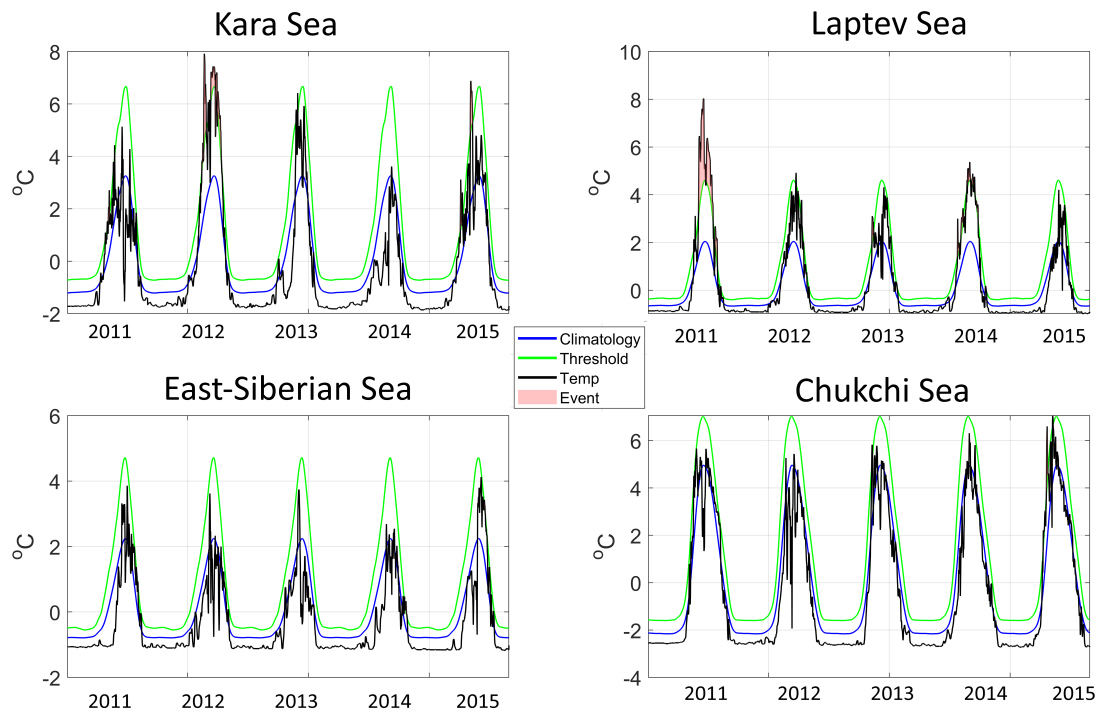


Figure S4. Temperature time series (black line) for the Siberian Arctic seas in 2011-2015, based on data with eliminated linear climate trend, in the selected points (black stars in Figure 2) illustrate marine heatwaves, marked as pink shading between black and green lines. The blue line shows detrended baseline temperature climatology and green line – threshold values defined based on the 90th percentile value for each day of the year.

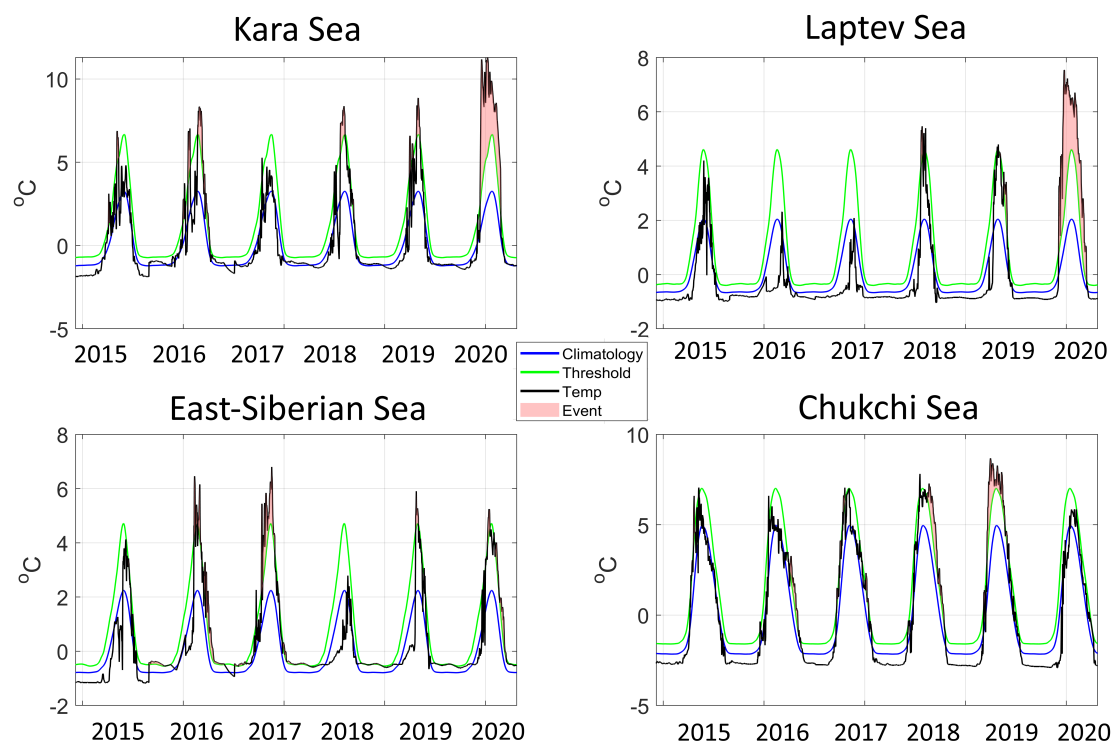
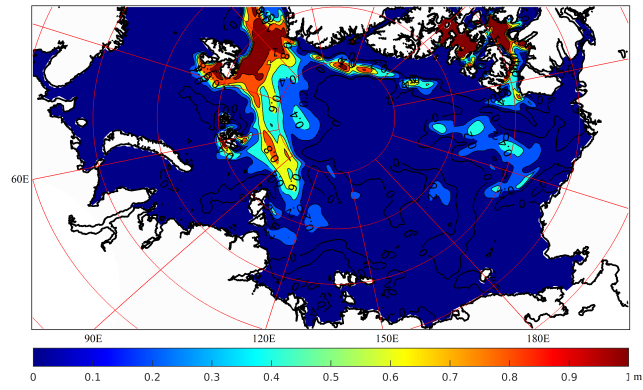
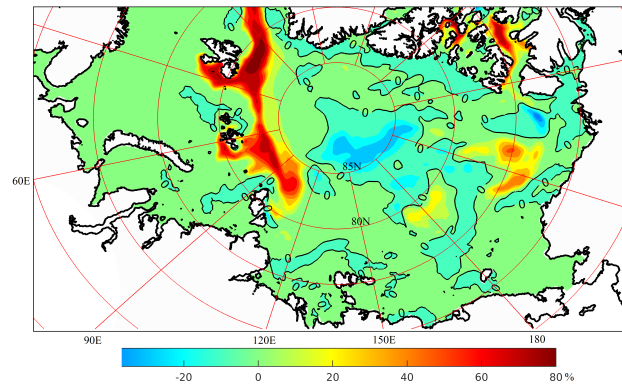


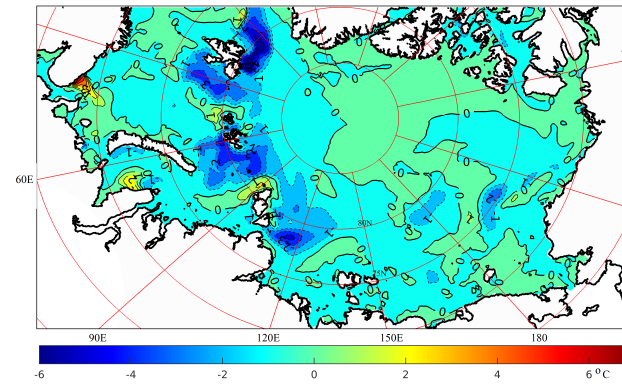
Figure S5. Temperature time series (black line) for the Siberian Arctic seas in 2015-2020, based on data with eliminated linear climate trend, in the selected points (black stars in Figure 2) illustrate marine heatwaves, marked as pink shading between black and green lines. The blue line shows detrended baseline temperature climatology and green line – threshold values defined based on the 90th percentile value for each day of the year.



(a)



(b)



(c)

Figure S6. The difference between simulated fields (exp.B33-A0) in September 2020: a) ice thickness; b)ice concentration; c)sea surface temperature