

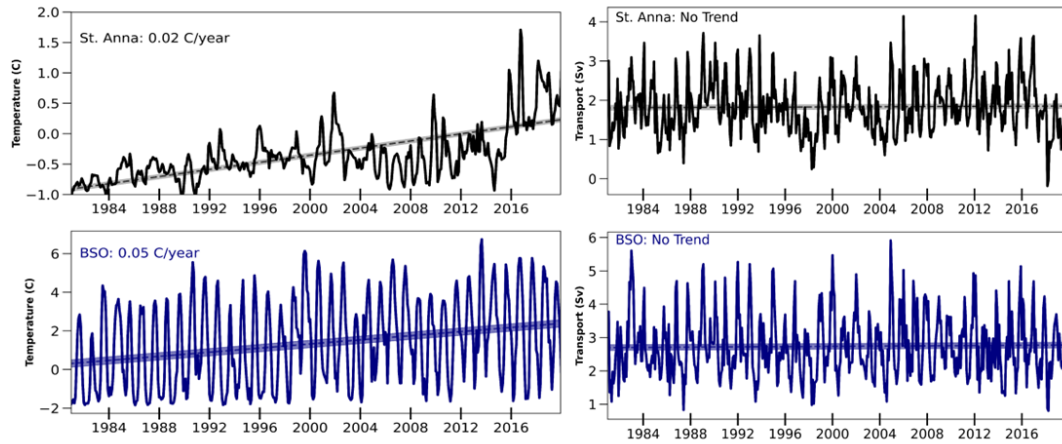


Figure S1. (left) Time series of the average temperature at the Barents Sea Opening and St. Anna Trough. A clear upward trend is evident at both openings. The ratio of the trends in average temperature is roughly equivalent to the ration in trends of heat transport through either opening. (right) Time series of the volume transport through the Barents Sea Opening and St. Anna Trough. There is no discernible trend in the volume transport through either opening.

Table S1. True Heat Convergence of the Barents Sea

Source	Heat Convergence (TW)
Smedsrud et al., (2010)	74
SODA4	77
GLORYS12	120

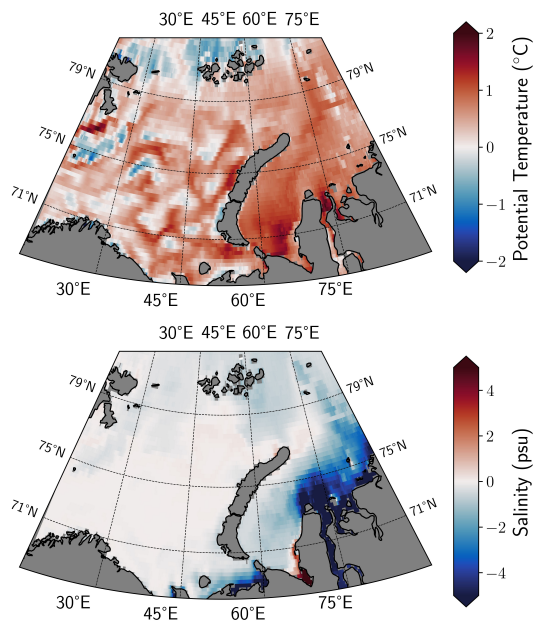


Figure S2. Difference between SODA4 and WOA23 time mean Potential Temperature (Top) and Salinity (Bottom). A warm bias is evident in the Kara Sea and NE Barents, with intermittent regions of cold bias in the southern Barents.

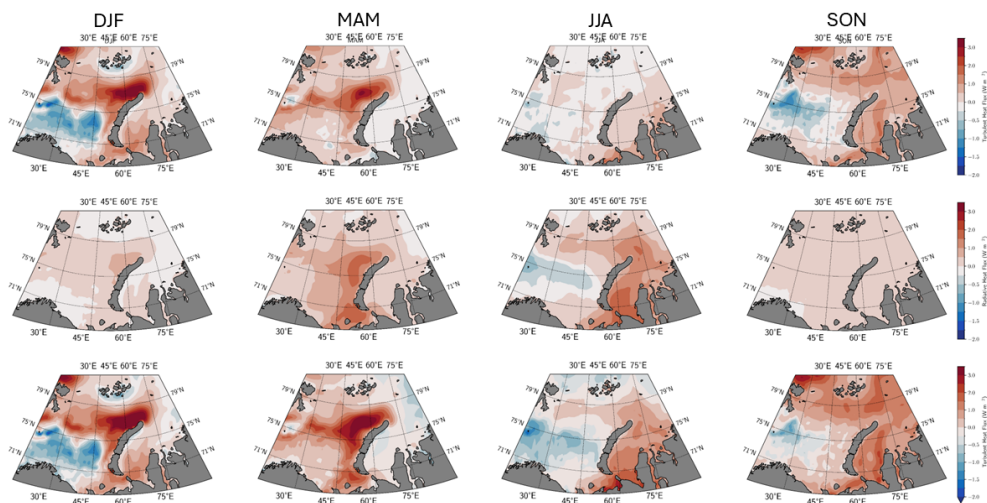


Figure S3. Change in decadal averaged Turbulent (top), Radiative (Middle), and total (bottom) from the 20s relative to the 80s for each season.