

# BSB Oceanography

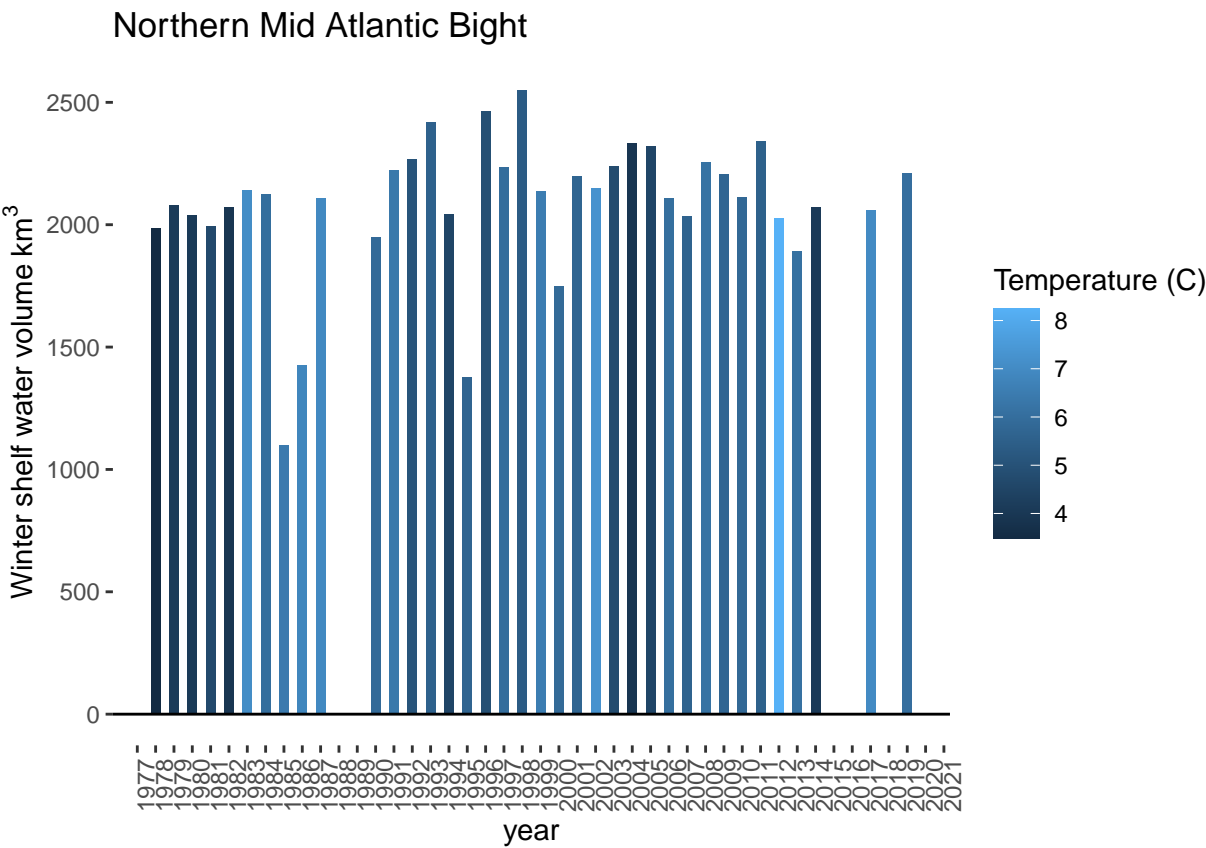
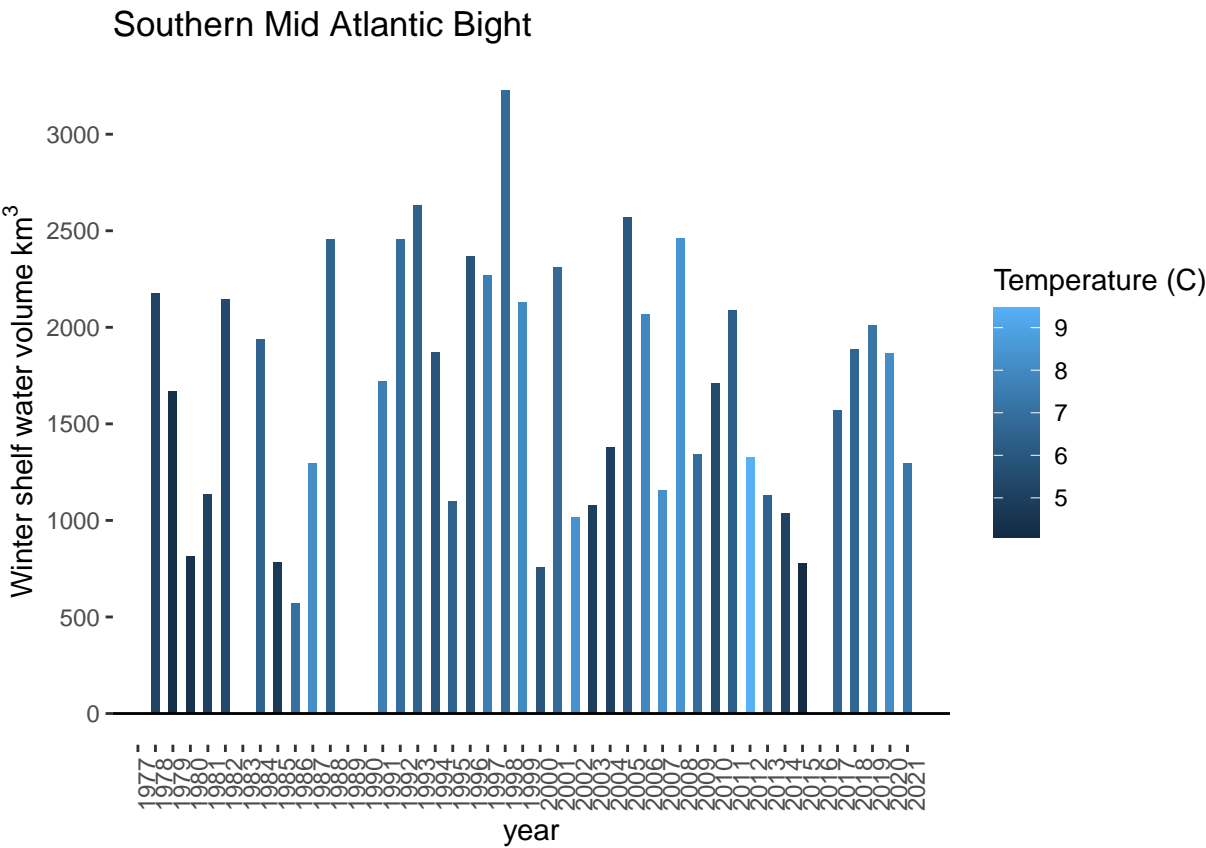
Ricky Tabandera

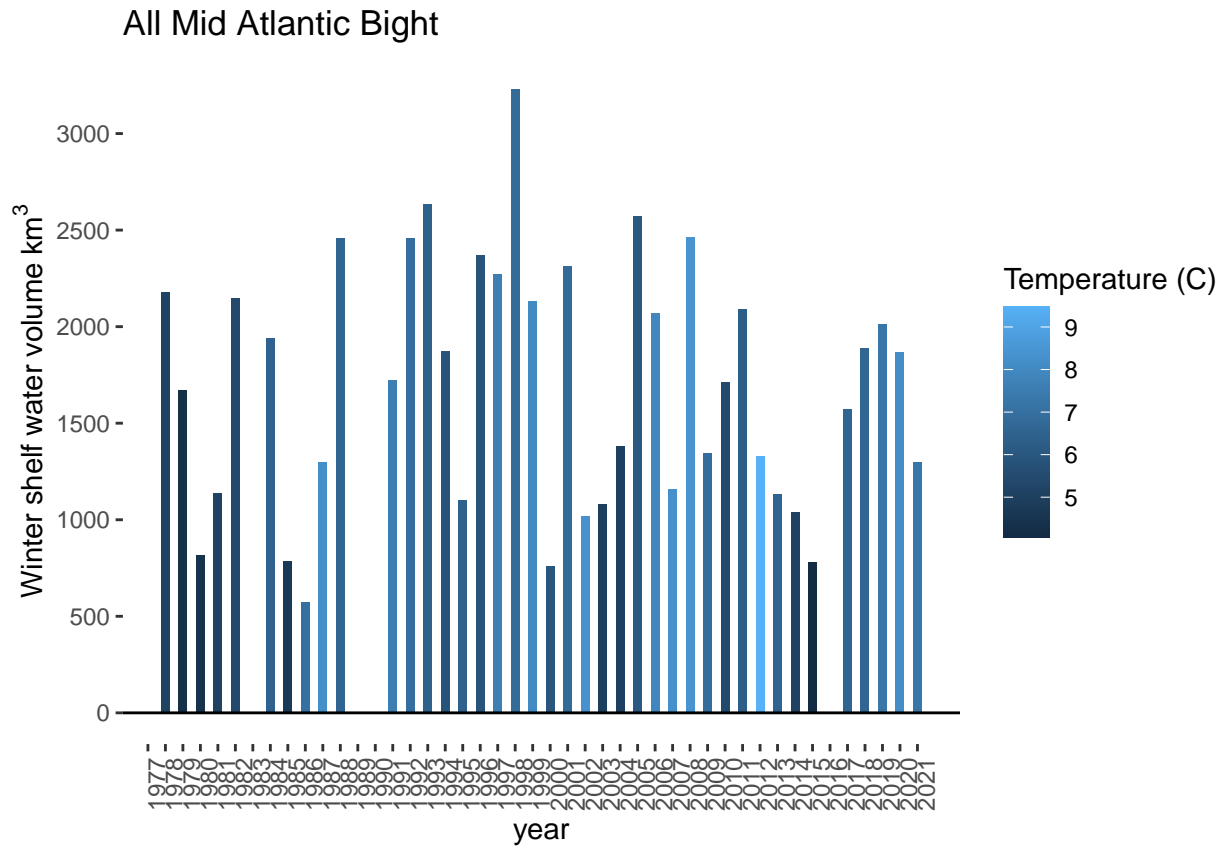
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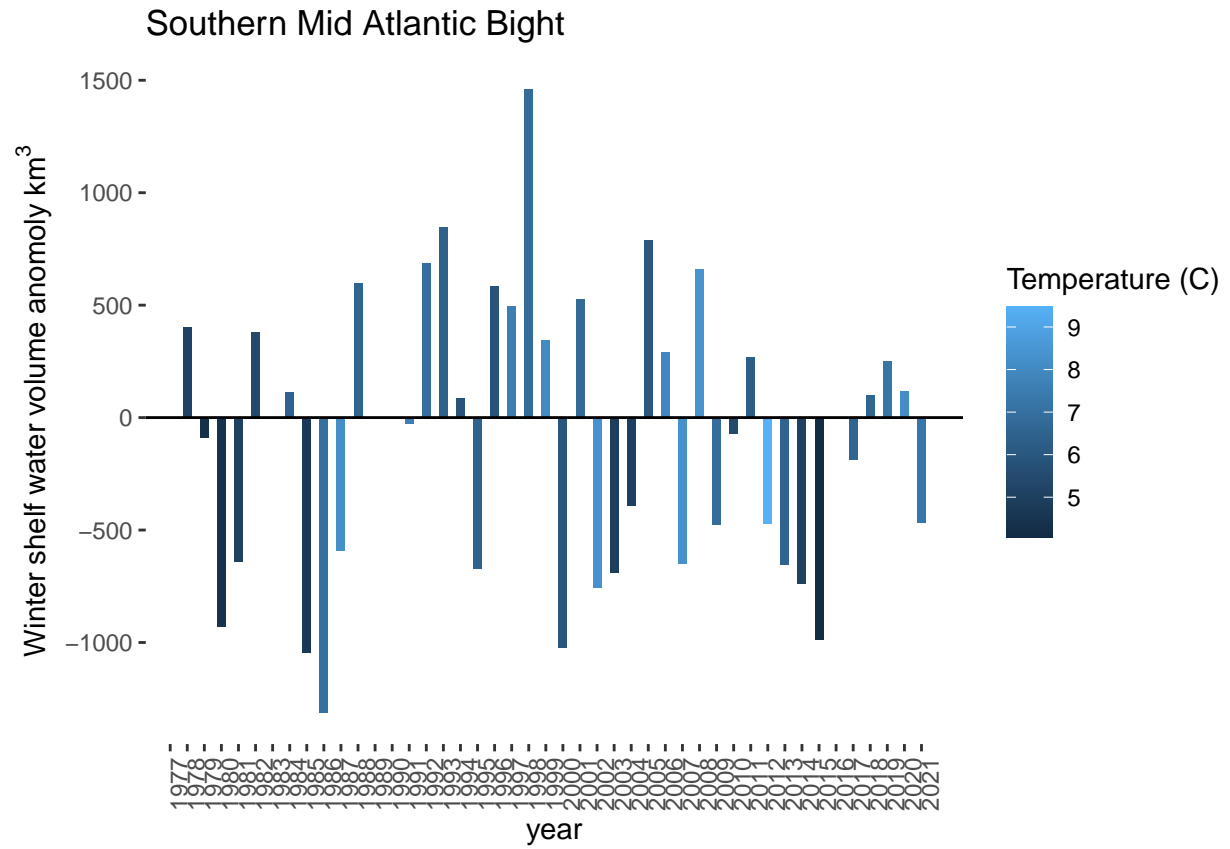
## **Shelf water volume**

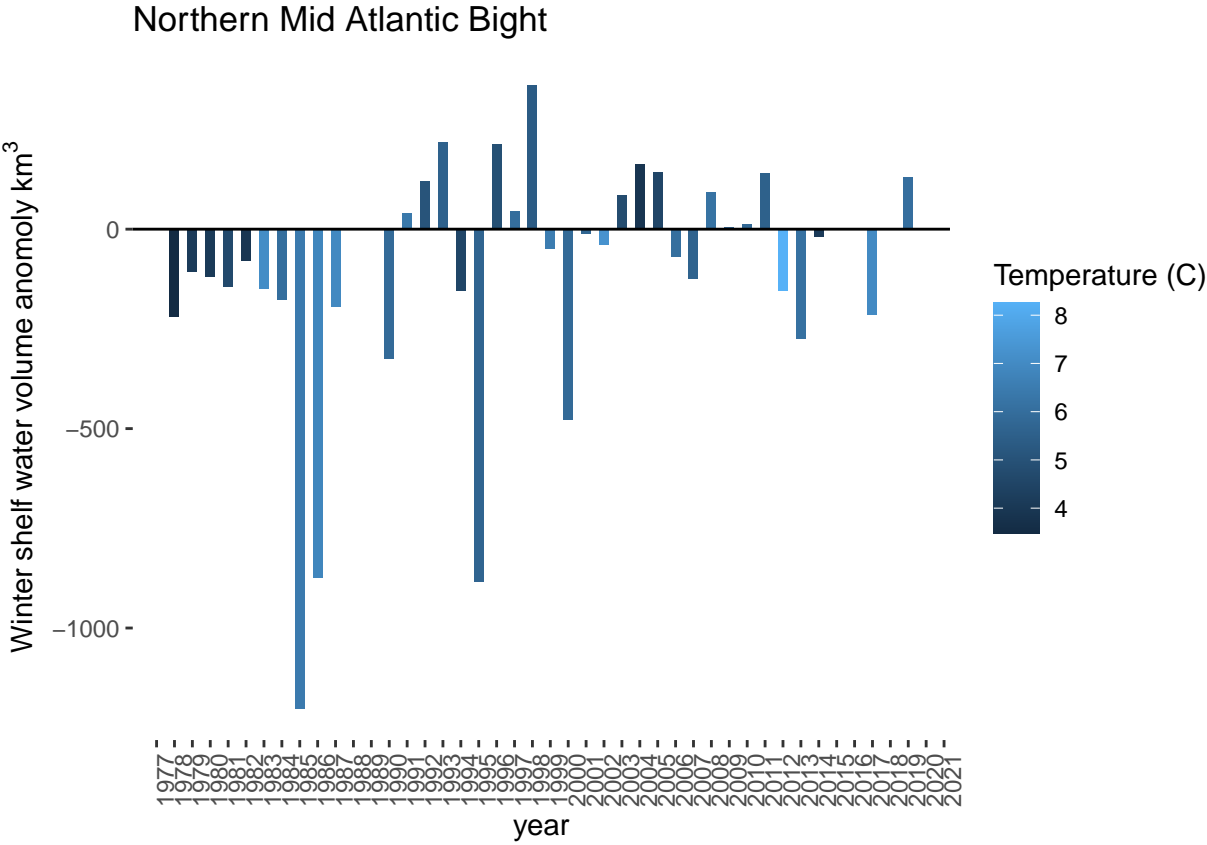
Shelf water volume which is a measure of the volume of water bounded inshore of a hydrodynamic feature called the shelf-slope front. In this analysis the shelf water is defined as all water having salinity  $<34$ . It is hypothesized that fish are migrating from the self edge and using the shelf slope font as a way-point. The position of this front will vary inter-annually with the higher values indicating the front being pushed further towards the shelf break. As this font moves closer or further from the coast, the available susceptible habitat can expand or contract as black sea bass are known to concentrate slope ward of the front. Miller et al. 2016 Identified a negative impact on catches of both juveniles and adult black sea bass when shelf water volume exceeded  $4000 \text{ km}^3$

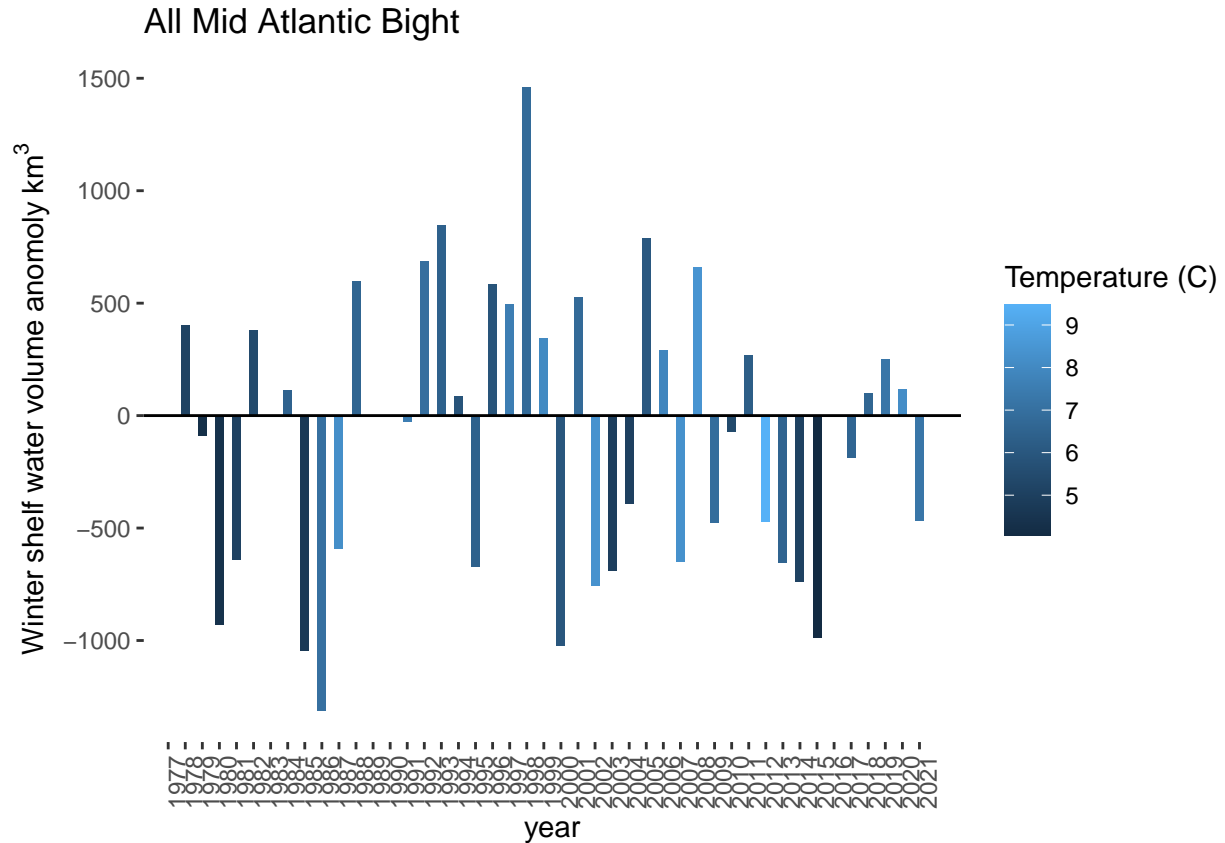
winter shelf water volume









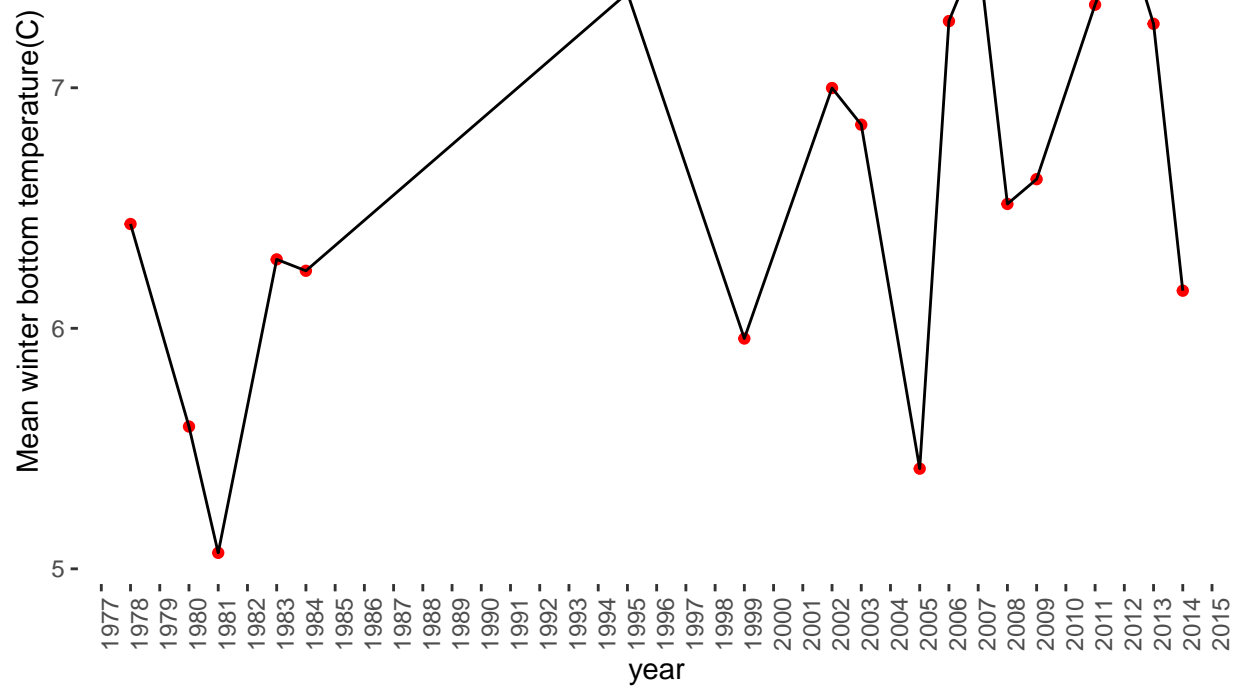


### Regional in-situ winter bottom temperature and salinity with anomaly

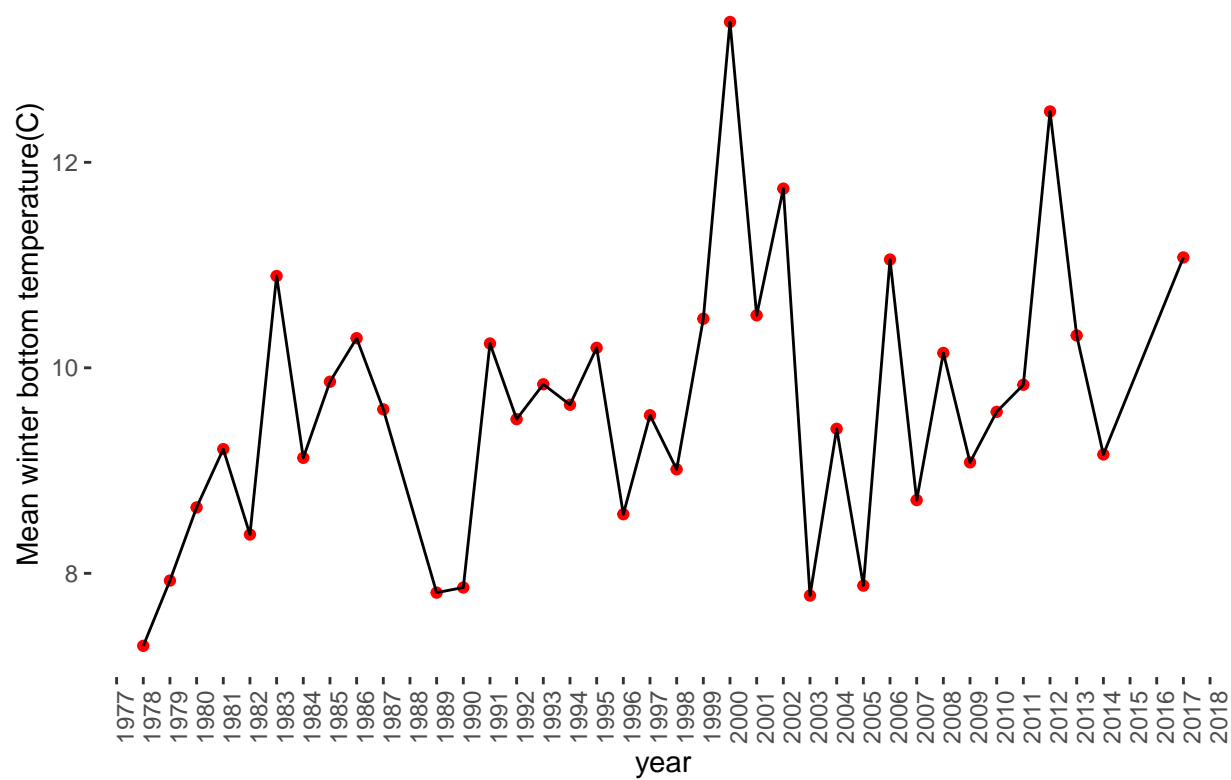
All available CTD data within 10m of the bottom between the northern and southern MAB region and as a whole. Regional time series were computed as follows: area-weighted regional mean values were computed for each survey in the OCDBS and a reference annual cycle was removed (fit to observations from 1981-2010) to get seasonal anomalies.

note: winter coverage is very sparse due to the winter ECOMON surveys ending. A better approach may be to use a two month span at the end of winter where coverage is better i.e. FEB-MAR rather than a whole winter.

## Western Gulf Of Maine

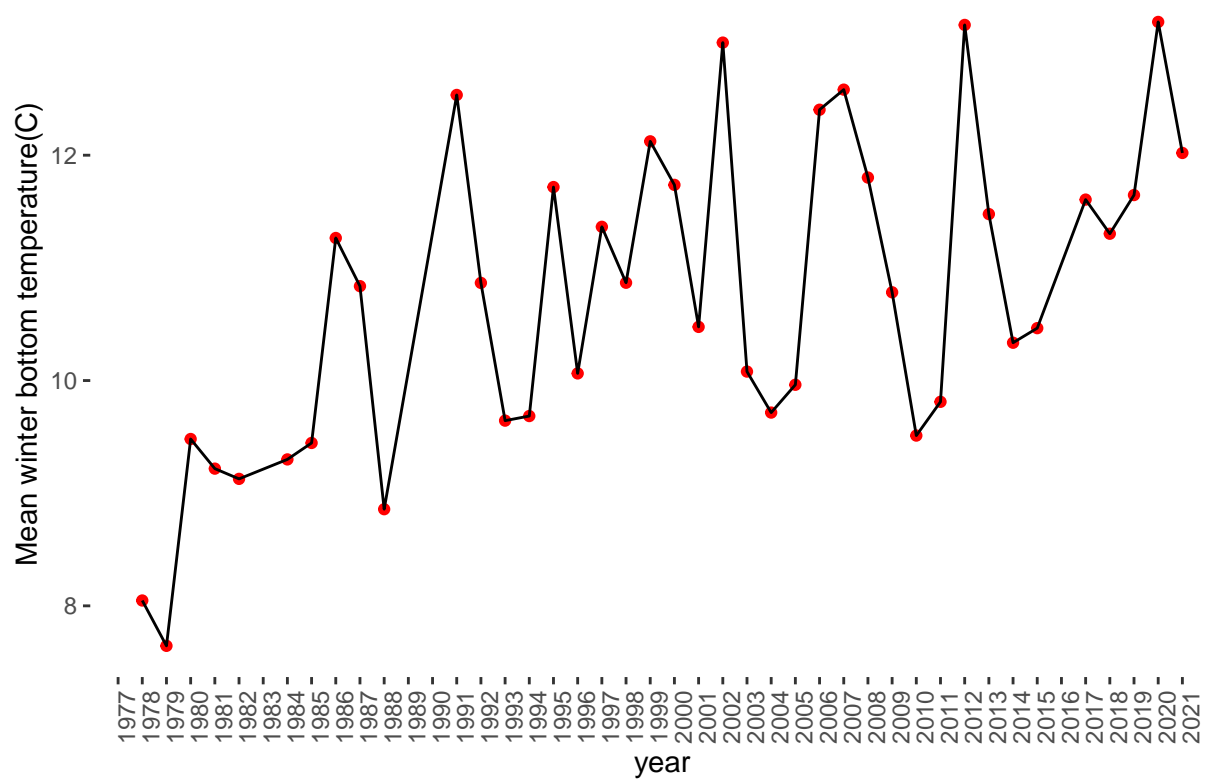


## Western Georges bank

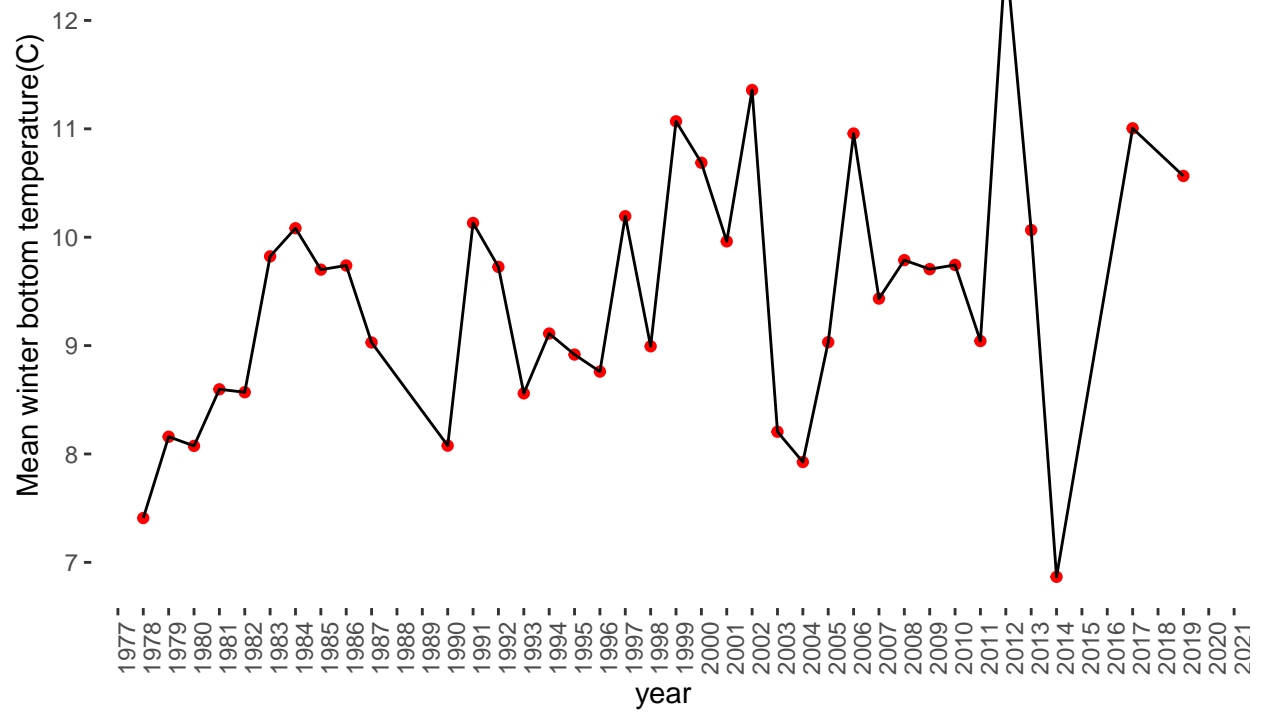


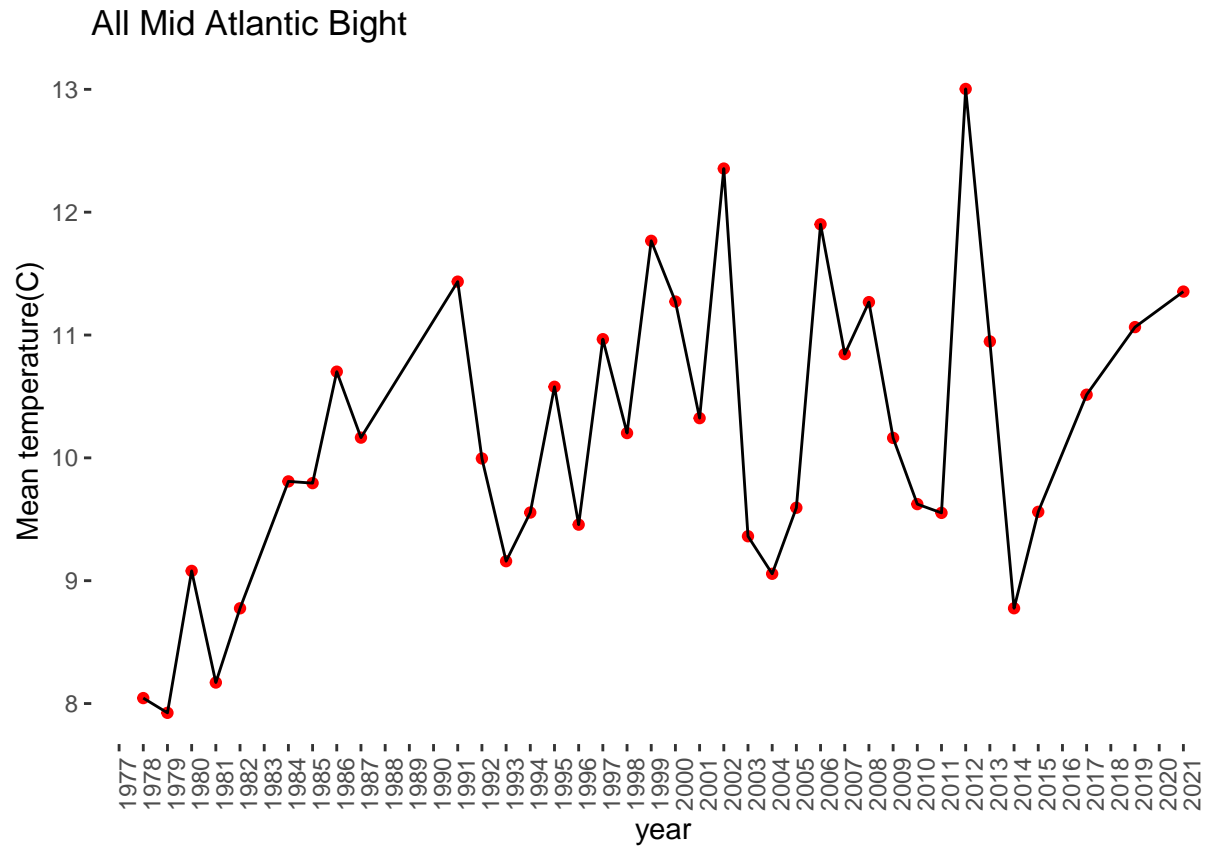


## Southern Mid Atlantic Bight



## Northern Mid Atlantic Bight





### Gulf Stream Index

The GSI is calculated based on the method presented by Pérez-Hernández and Joyce (2014). This gulf stream index is a position anomaly meaning the larger the value of the index the further north the northern wall of the Gulf Stream is for that year.

