

The Northeast Shelf Under Investigation

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The Northeast US Shelf (NES), surrounding Narragansett Bay, is one of the most productive ocean regions on the planet, a hotspot for marine life. The NES sustains intense fisheries with huge economic importance and is particularly vulnerable to climate change, with some of the fastest changes observed in climate indicators, including temperature increases. However, the links between environmental changes, the planktonic food web and the fish stocks are poorly constrained. The NES Long Term Ecological Research (NES-LTER) site, located on the shelf from Narragansett Bay to the shelf break, supports research on the physics, chemistry and ecology of the NES ecosystem to anticipate and manage climate impacts on ocean ecosystems. This poster aims at providing a general overview of the NES-LTER project and the work performed by the Menden-Deuer lab, in collaboration with the other investigators from Woods Hole Oceanographic Institution, University of Massachusetts Dartmouth, University of Rhode Island, Wellesley College and NOAA's Northeast Fisheries Science Center. A better understanding of the key mechanisms linking changes in the physical environment, planktonic food webs and higher trophic levels on the NES is essential to predict how organisms living in the NES, from plankton to fish, are changing in response to changes in their environment. The dynamics of the Narragansett Bay is strongly related to the processes occurring in the NES. The RI C-AIM and the NES-LTER overarching goals are then complementary and present promising synergy.