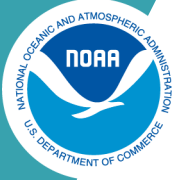




Join by computer at: <https://noaanmfs-meets.webex.com/noaanmfs-meets/j.php?MTID=m161d8630abba4e363a98635052f62a1f>

Webex meeting #: 2762 418 8254 Meeting Password: groundfish

Or by phone: 1 (415) 527-5035 Access code: 2762 418 8254



**NOAA  
FISHERIES**

National Marine Fisheries Service  
Alaska Fisheries Science Center

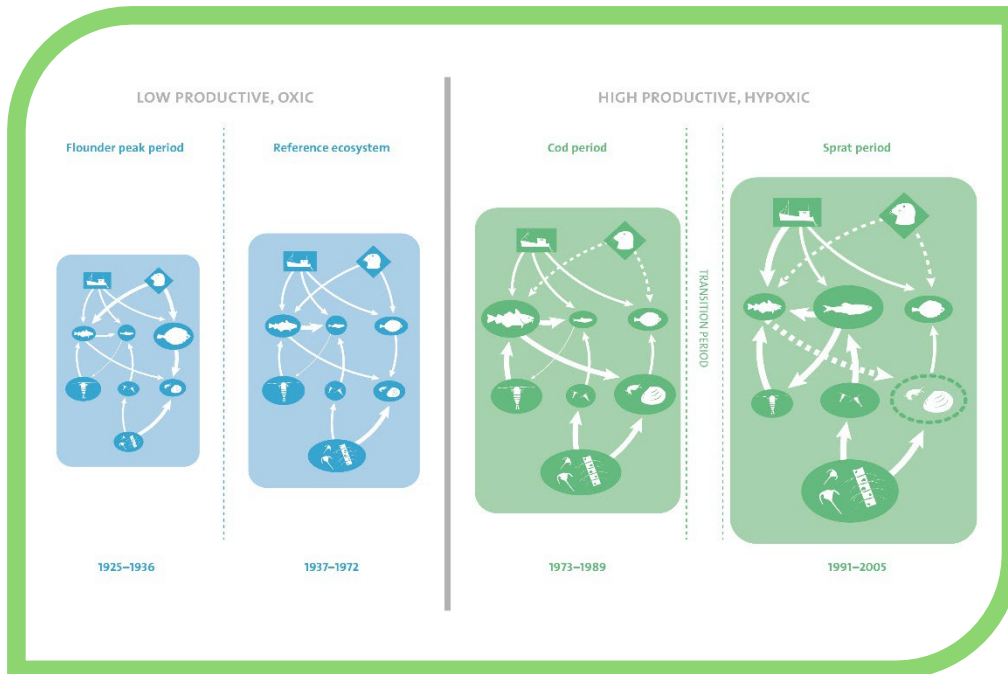
2022 Groundfish  
Seminar Series

**Maciej T. Tomczak,**

**SLU Aqua, Swedish Univ. of Agricultural Sciences**

Tuesday, December 13th @ 10 am Pacific

**Baltic sea ecosystem changes over the last 100 years**



The occurrence of regime shifts in marine ecosystems has important implications for environmental legislation that requires setting reference levels and targets of quantitative restoration outcomes. The Baltic Sea ecosystem has undergone large changes in the 20th century related to anthropogenic pressures and climate variability, which have caused ecosystem reorganisation. Here, we compiled and analysed historical information across biotic and abiotic variables from 1925 to 2005 in the Central Baltic Sea. Our analysis shows that for the entire time period, productivity, climate, and hydrography mainly affected the functioning of the food web, whereas fishing became important more recently.

*For more  
information contact*

Liz.Dawson@noaa.gov

Mark.Zimmermann@noaa.gov

Bianca.Prohaska@noaa.gov or

Sarah.Friedman@noaa.gov