## Pollock assessment update and plans

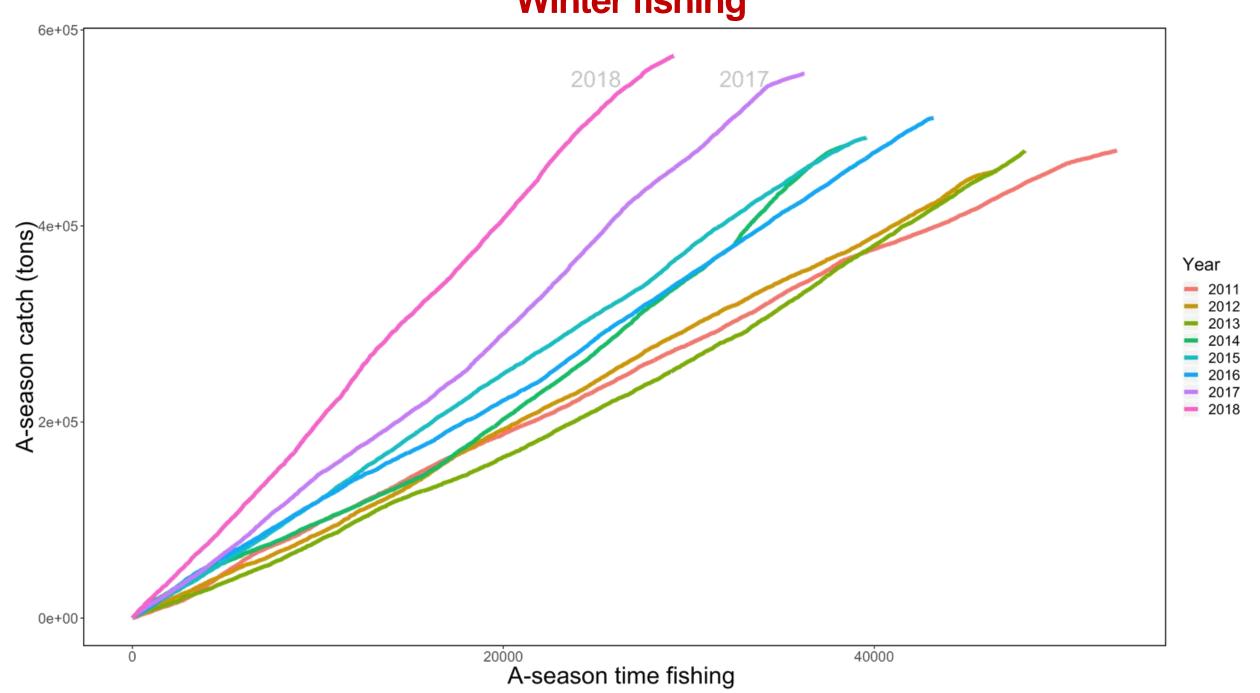
James Ianelli

Conributions from Cole Monnahan, Cecilia O'leary, Ellen Yasumiishi, and James T. Thorson

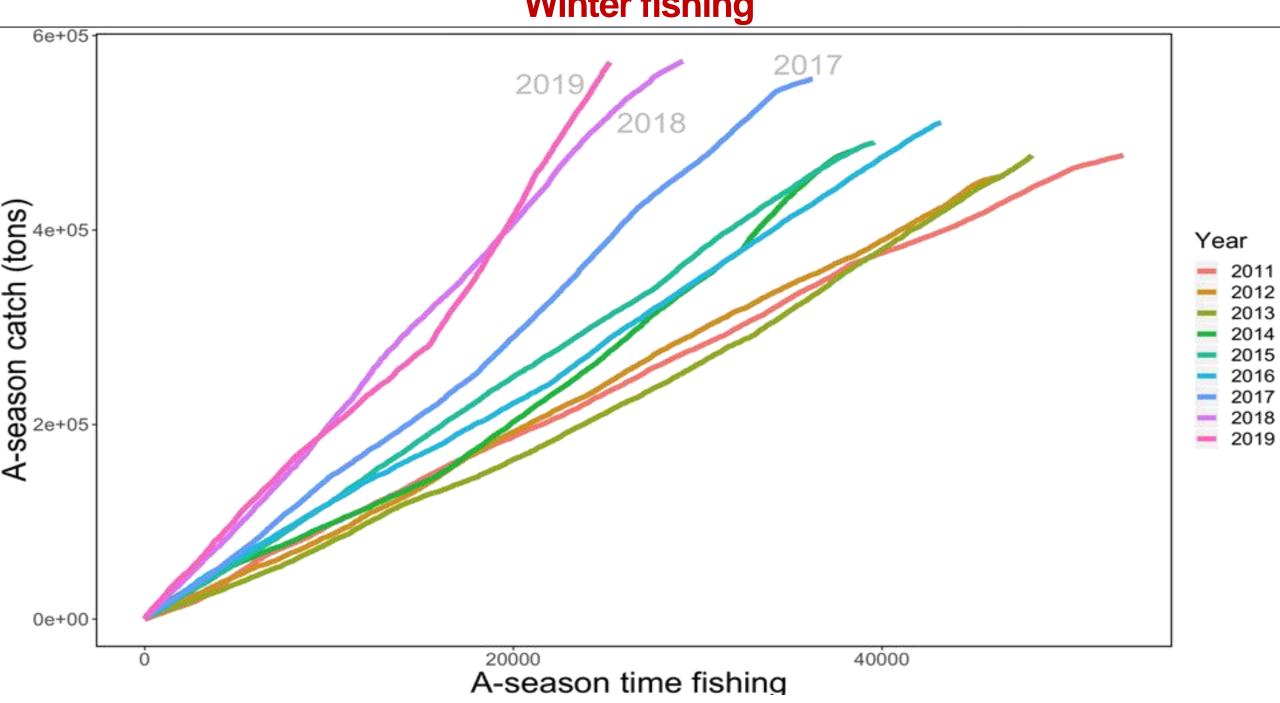
Alaska Fisheries Science Center NMFS/NOAA

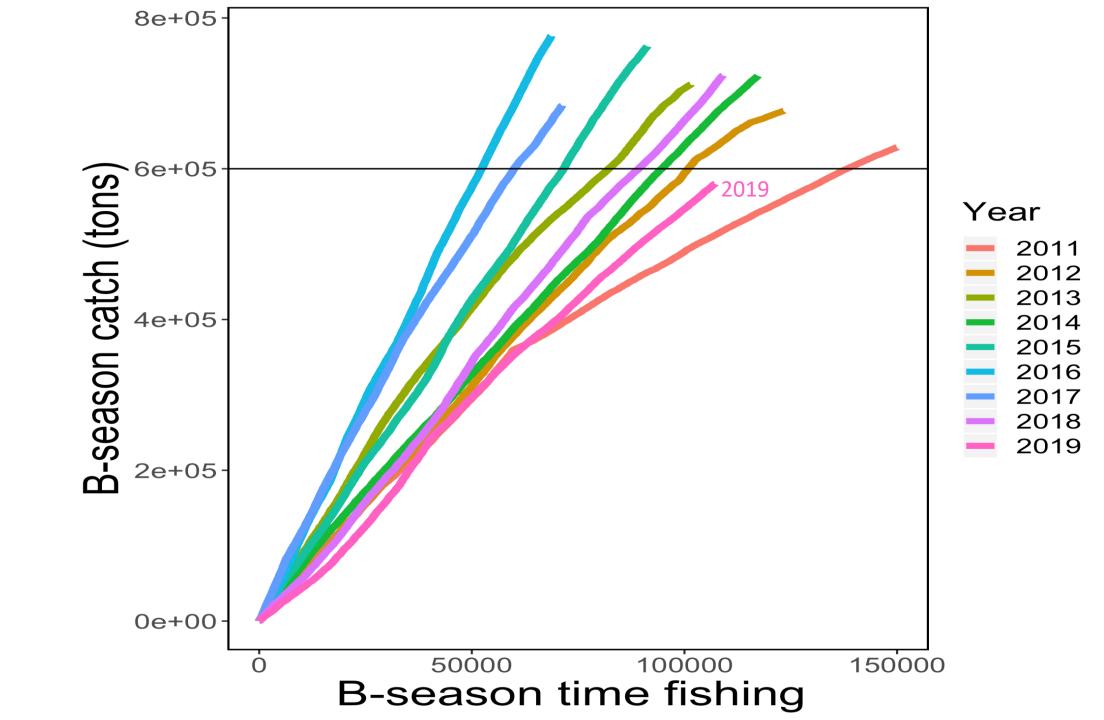
Sept 2019
Plan Team

#### Winter fishing

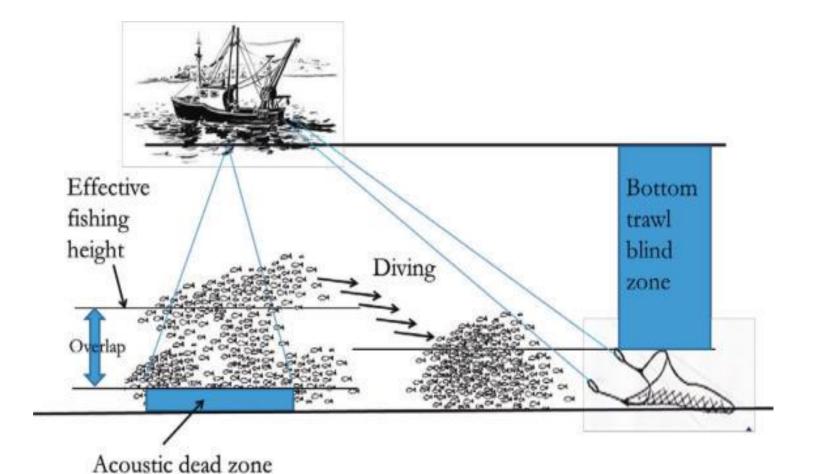


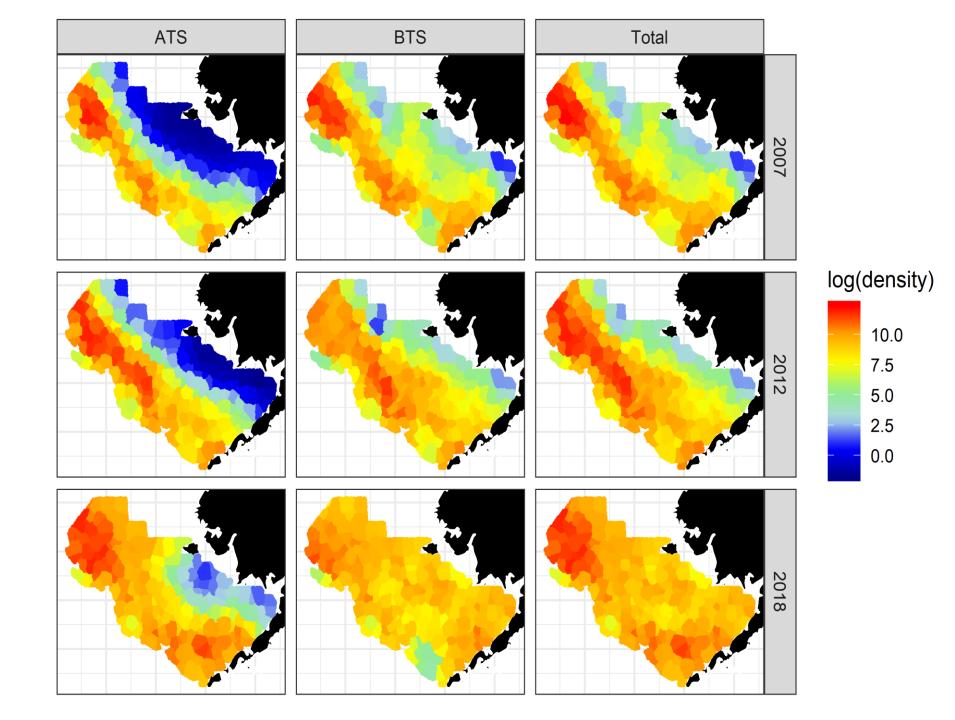
Winter fishing

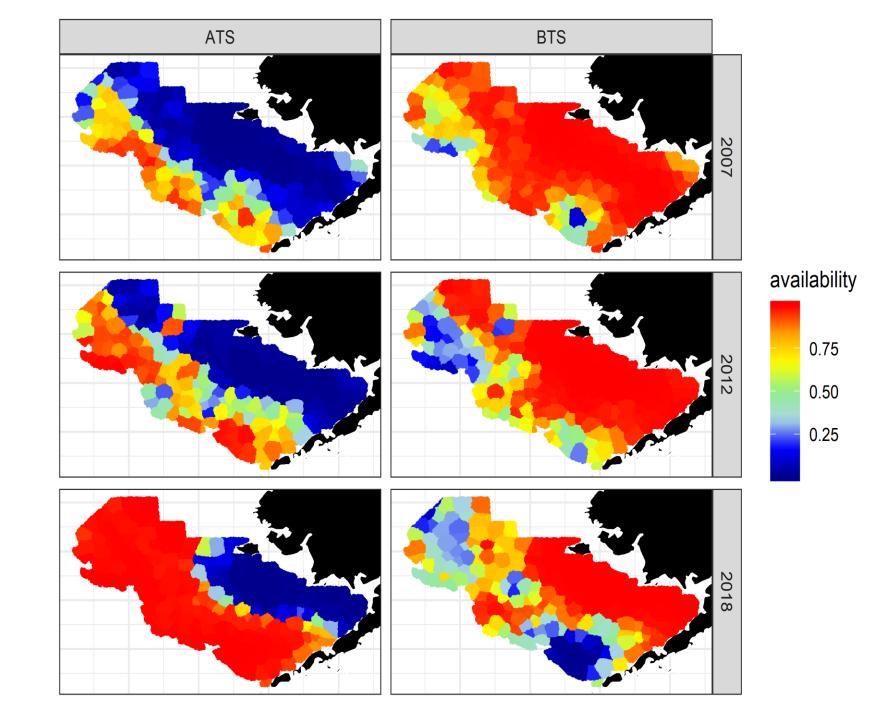




# Acoustic and bottom trawl survey spatio-temporal modeling—Incorporating vertical distribution in index standardization Cole Monnahan

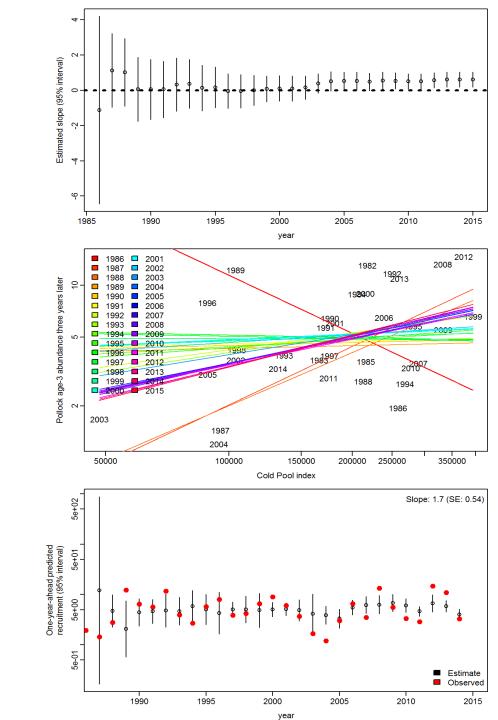




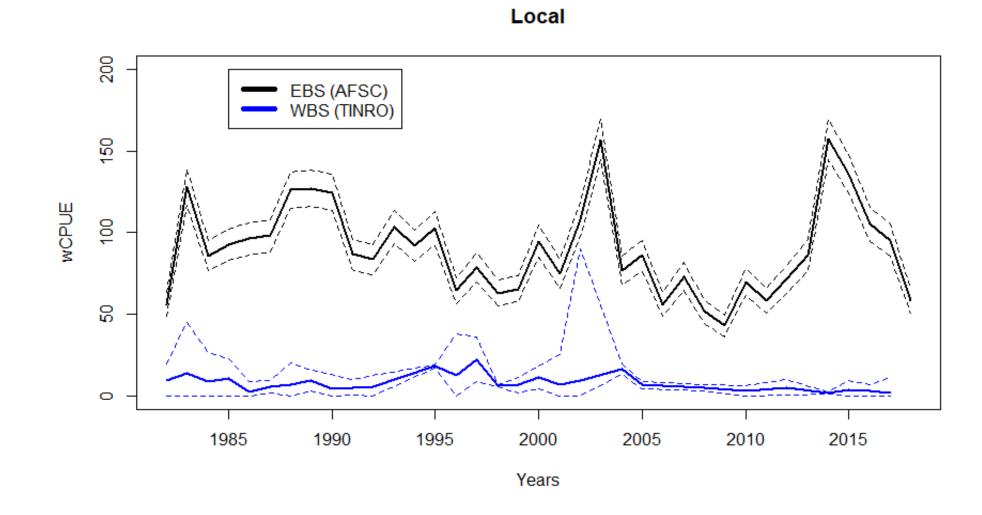


Developing environmental indices—retrospective analysis of zooplankton abundance in Bering Sea pollock stock recruitment models

E. Yasumiishi and others



### Estimating groundfish spatiotemporal patterns Cecilia O'leary, AFSC



Survey age-composition estimation consistent with spatiotemporal indices of abundance for use in stock assessment Cecilia O'leary, AFSC

