

Status of forage species in the Gulf of Alaska region



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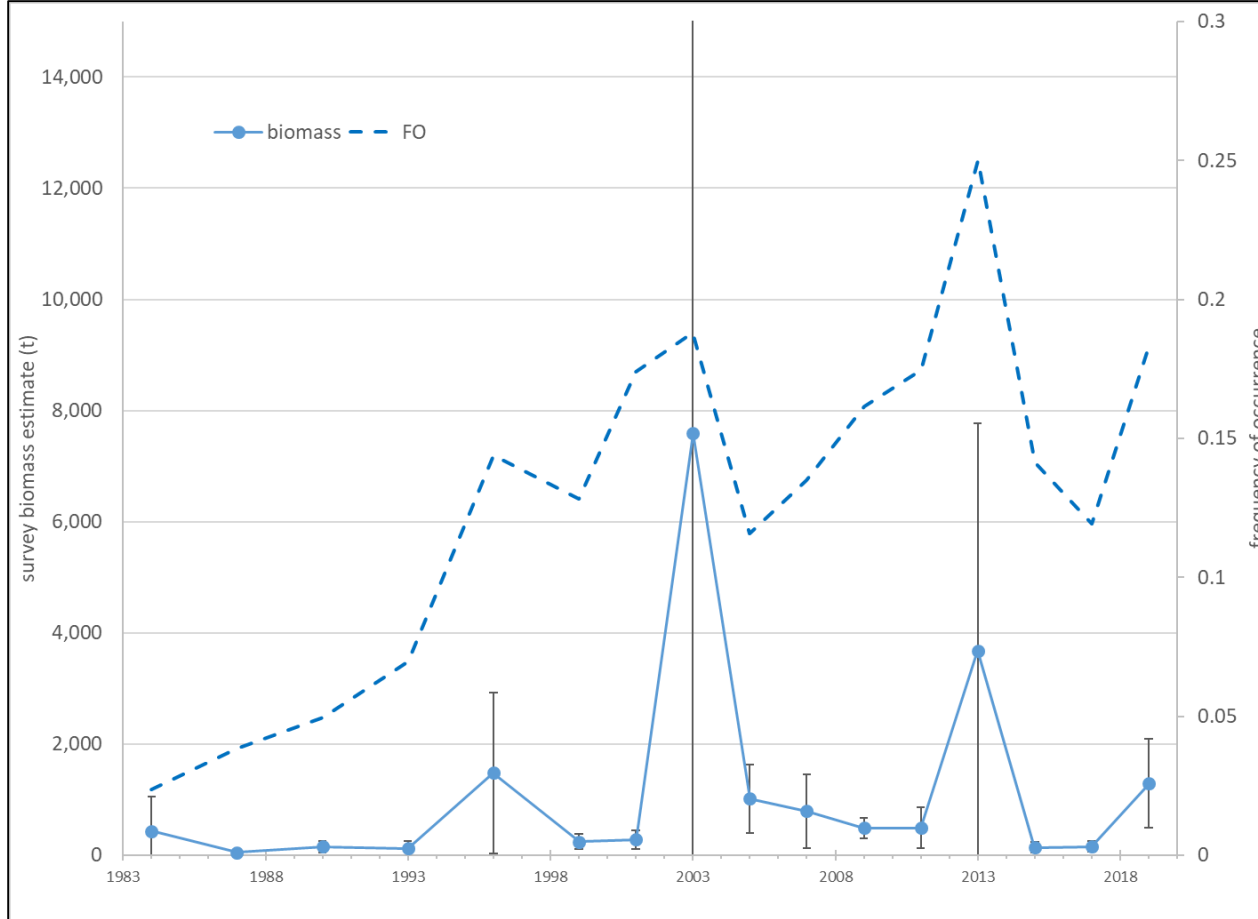
overview

- 1) overview of forage group
- 2) population trends
- 3) catch monitoring

forage species in the report

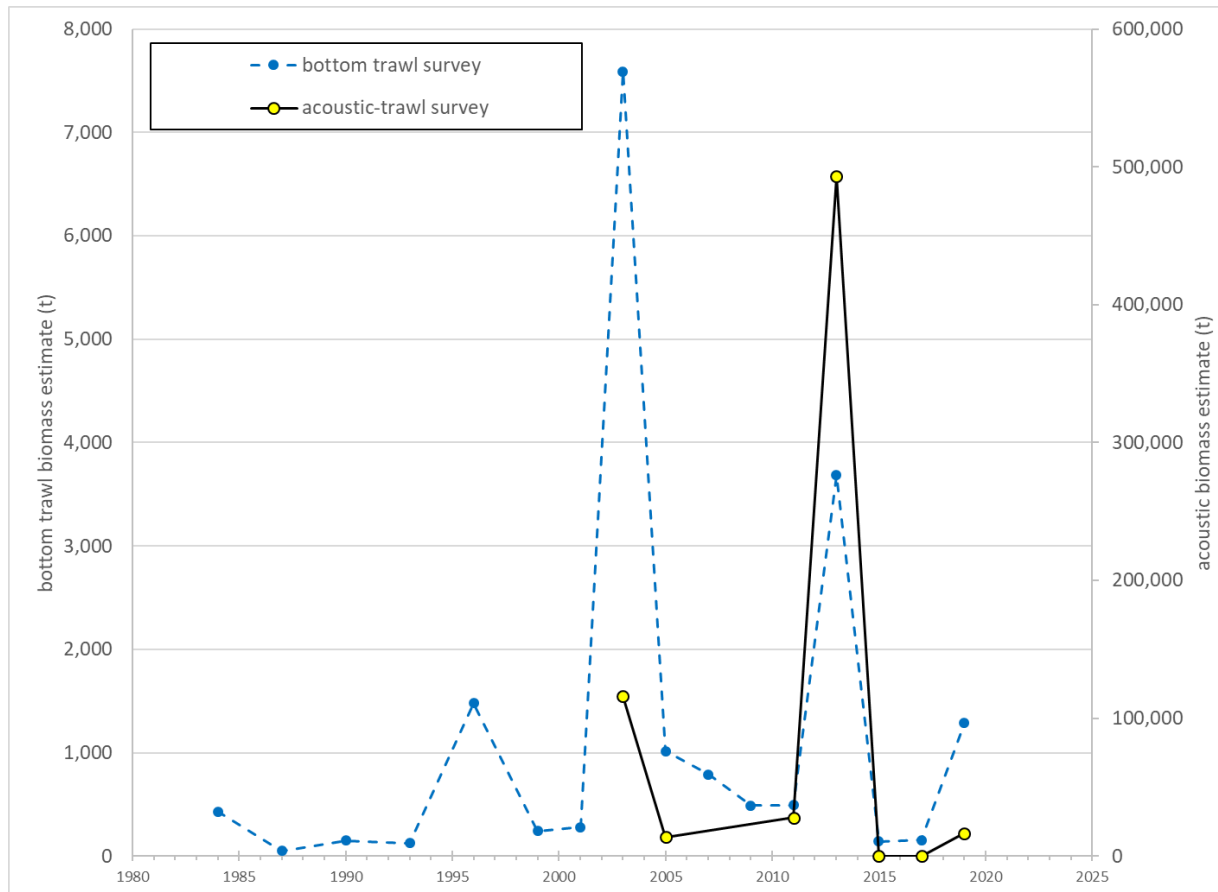
- 1) “FMP” forage group
- 2) Squids
- 3) Pacific herring
- 4) Pandalid shrimp

capelin – bottom trawl survey



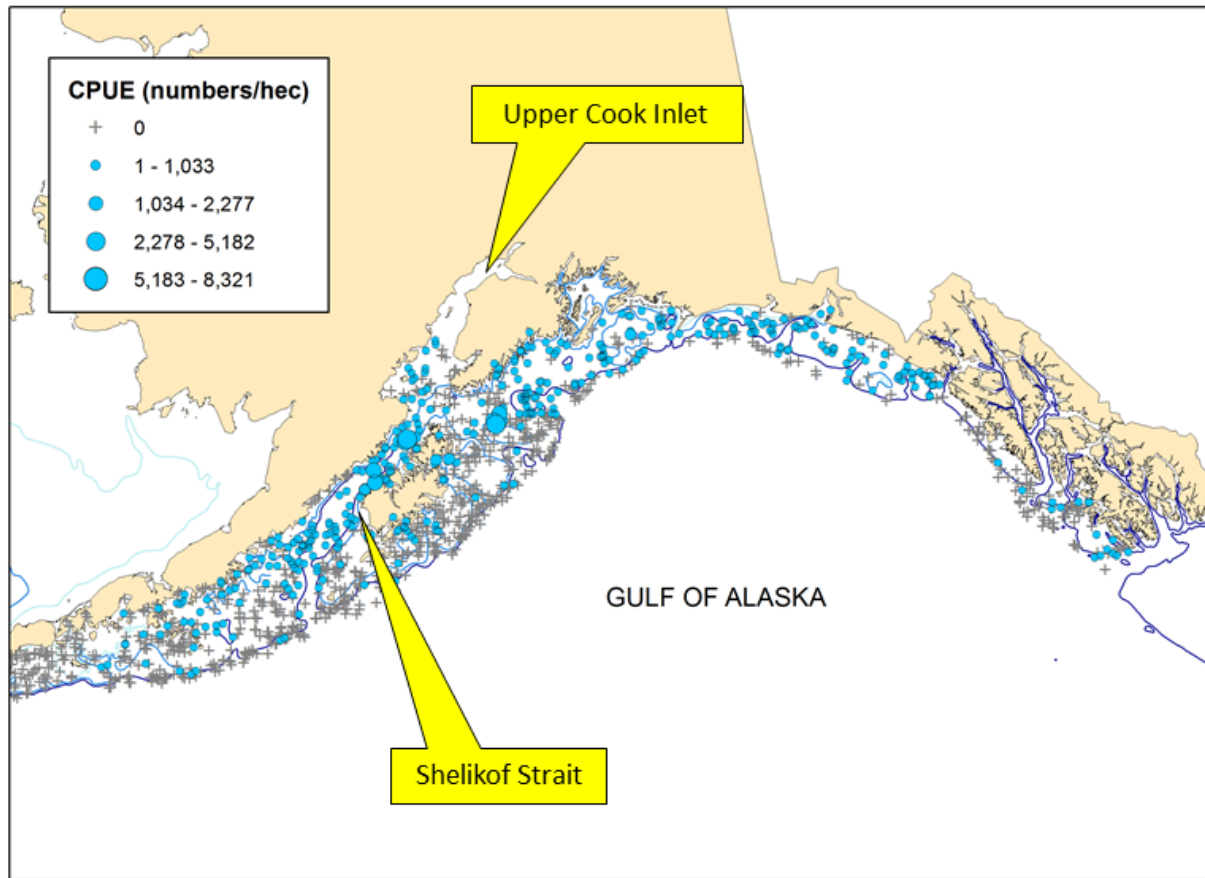
- bottom trawl survey poor sampler of capelin
- population seems to be increasing after negative MHW impacts

capelin biomass – BTS vs AT



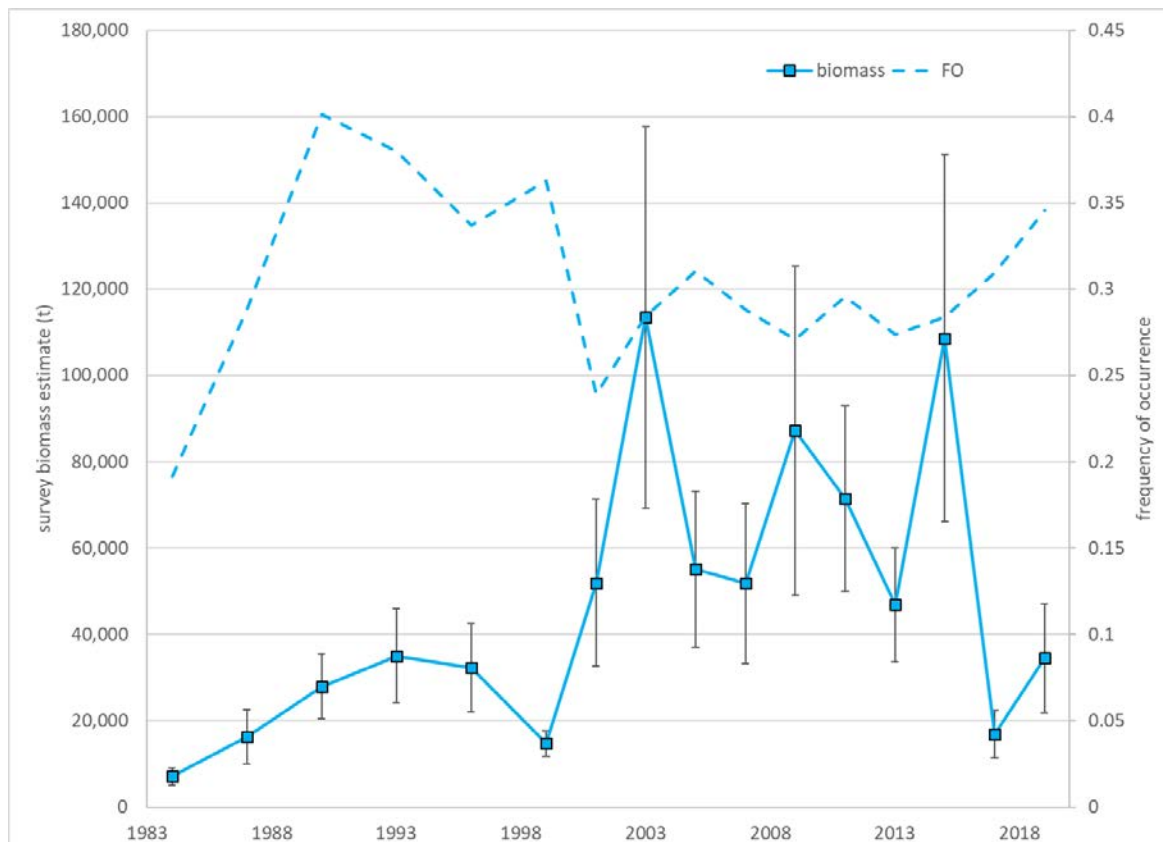
- starting to have a real time series from AT survey (changes to estimation)
- suggests coherence between BTS and AT surveys
- AT survey suggests post-blob recovery (consistent with diet data)

eulachon distribution



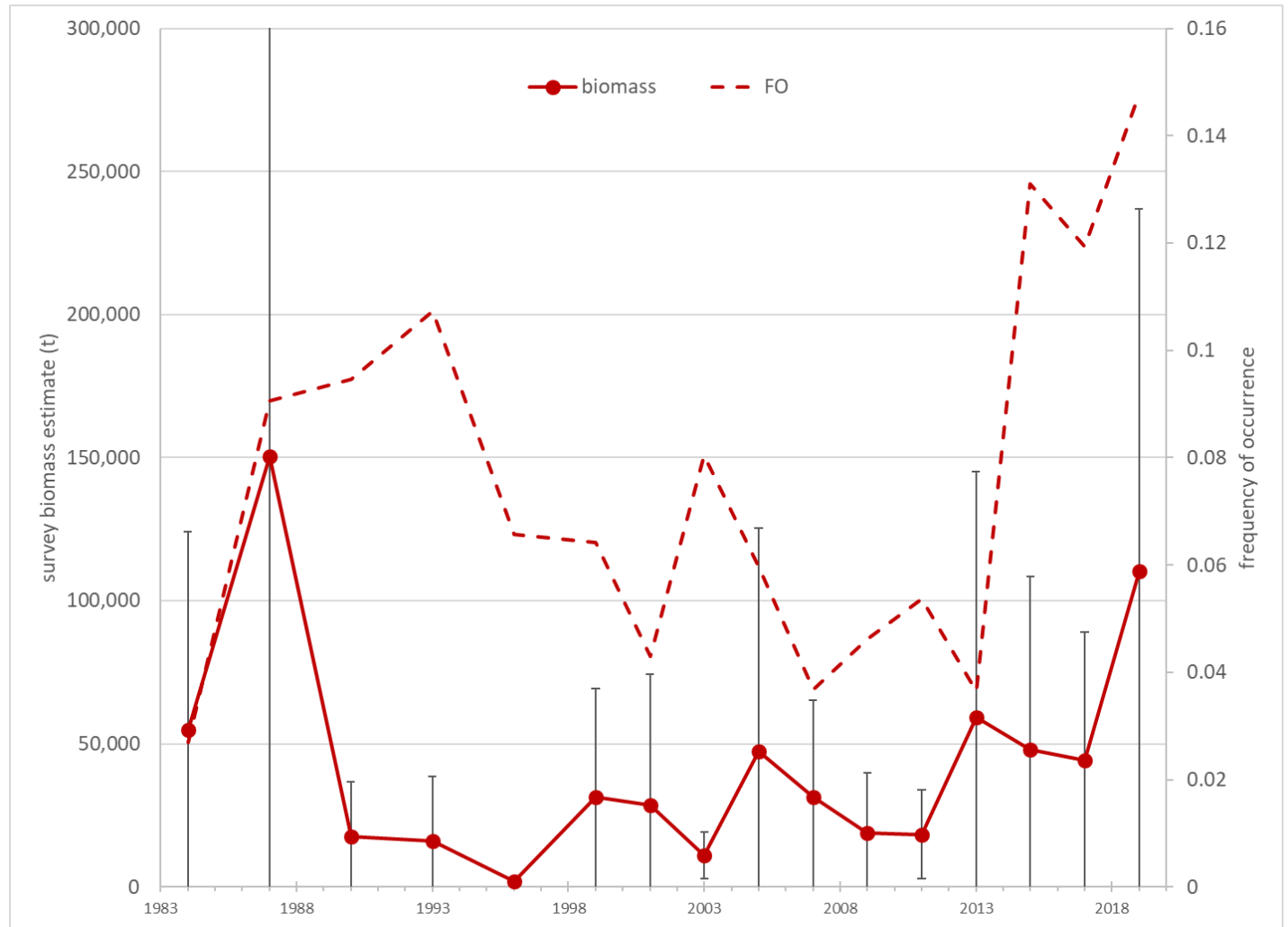
- summer: eulachon ubiquitous on shelf, concentrations in Shelikof and NE of Kodiak
 - winter catches mainly in Shelikof Strait
 - spawning runs & state commercial fishery in Upper Cook Inlet
- relationship between shelf populations and spawning runs unknown

eulachon – bottom trawl survey

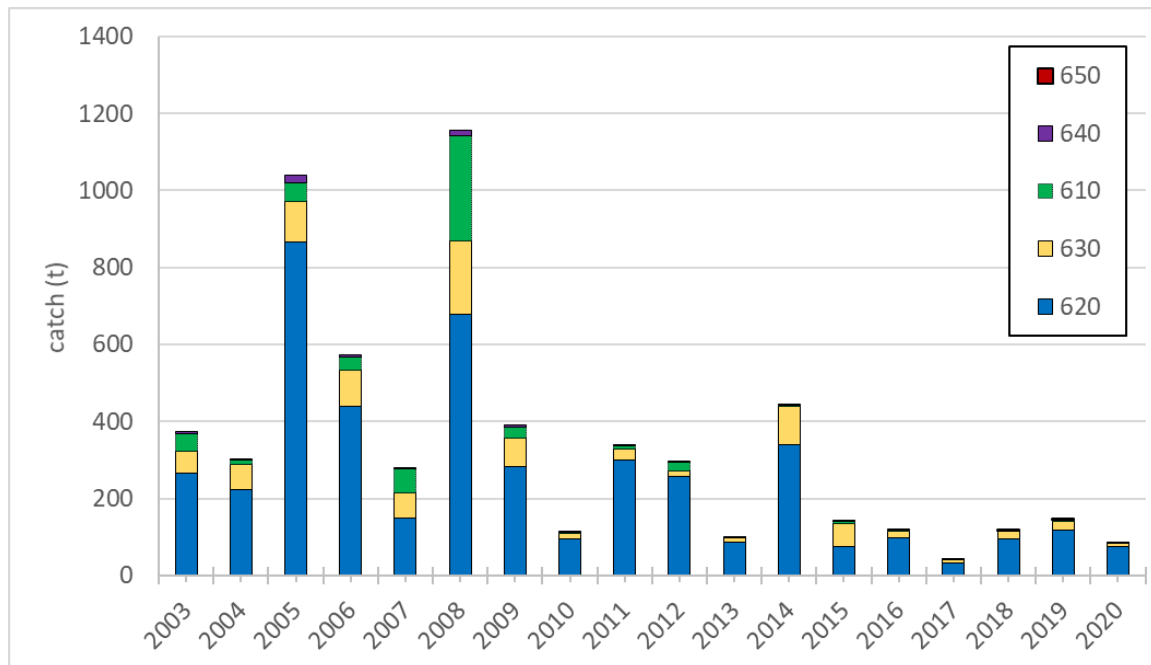
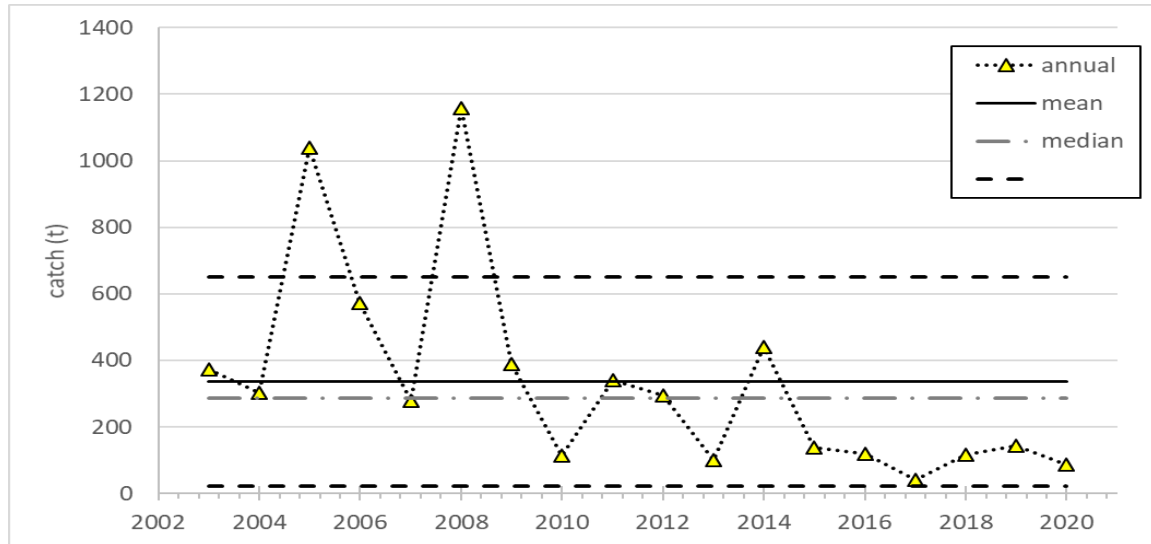


- BIS not great for eulachon, but better than for capelin
- biomass decline in 2017, consistent with low state catch
- frequency of occurrence pretty stable
- Upper Cook Inlet biomass estimate of 48,000 t (larvae-based)

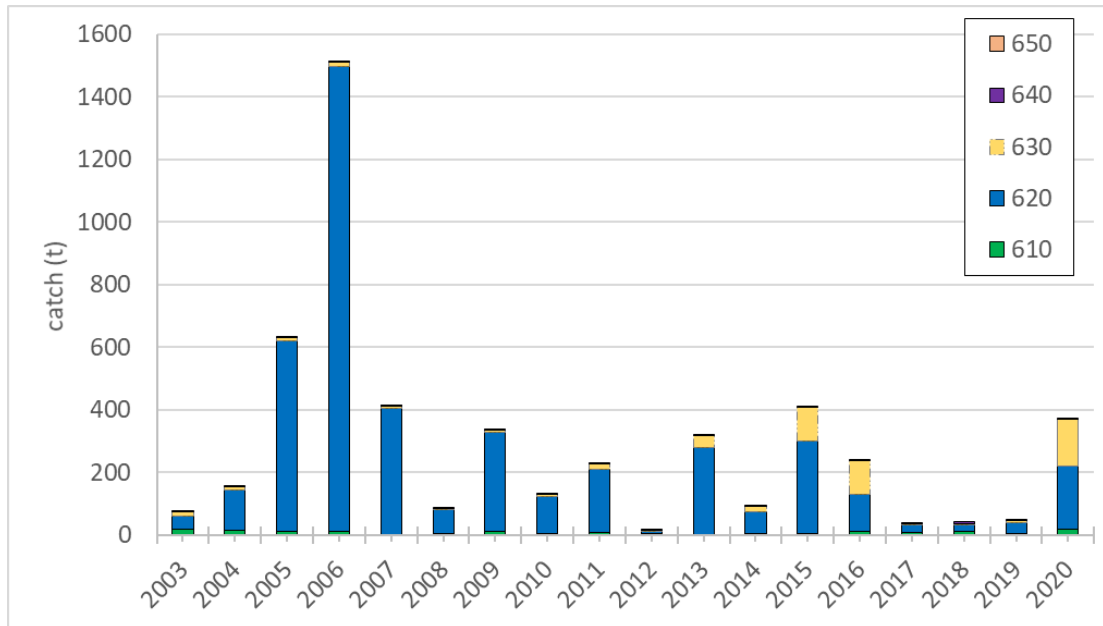
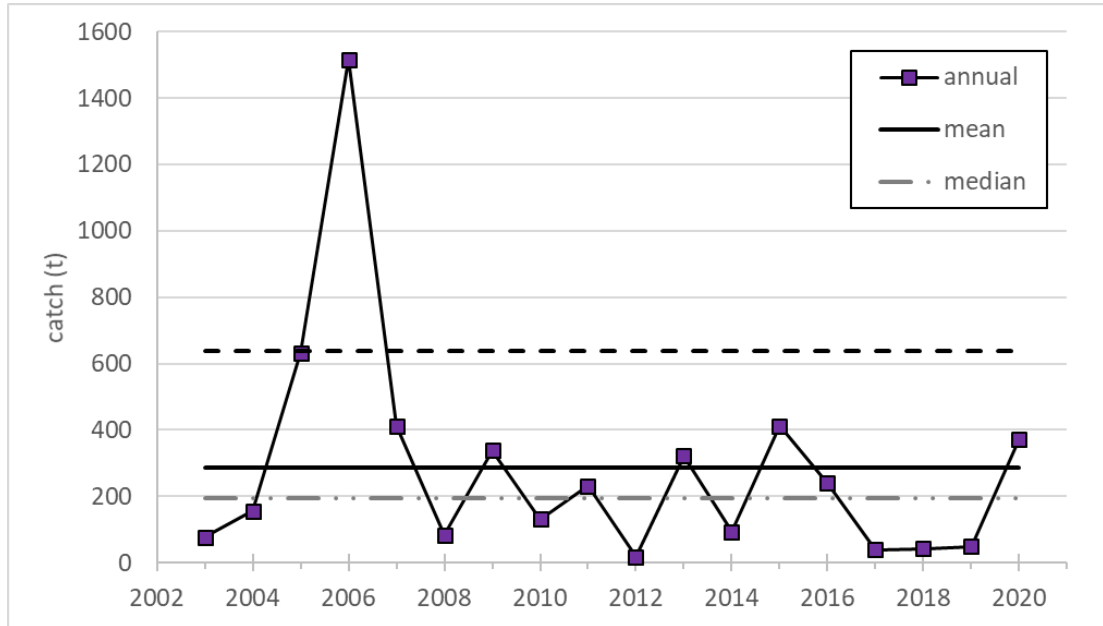
Pacific herring – bottom trawl survey



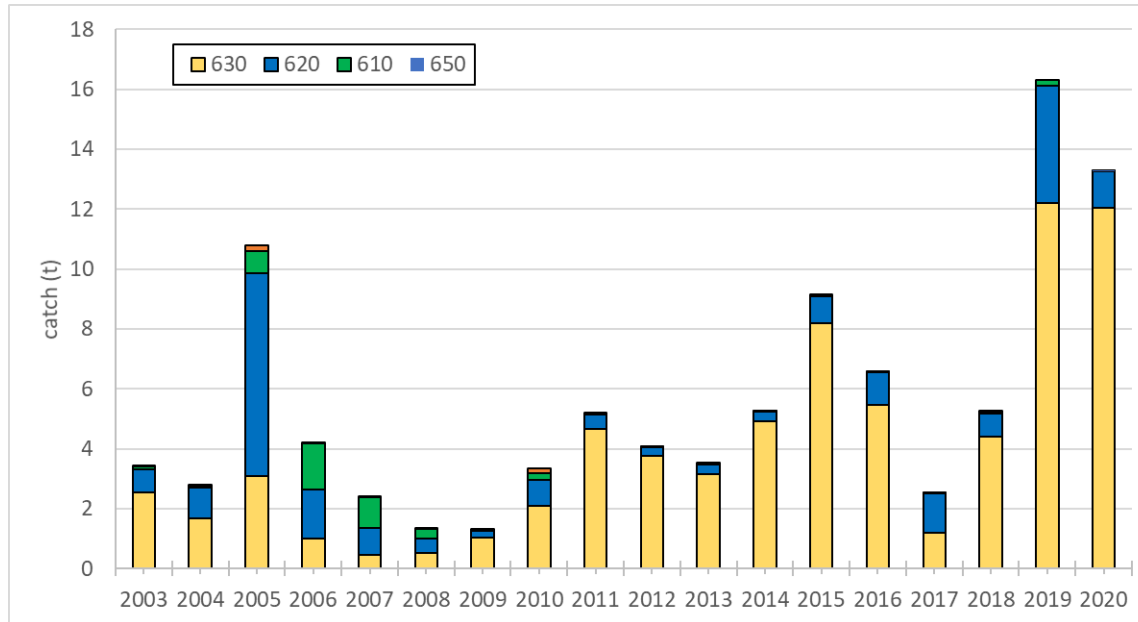
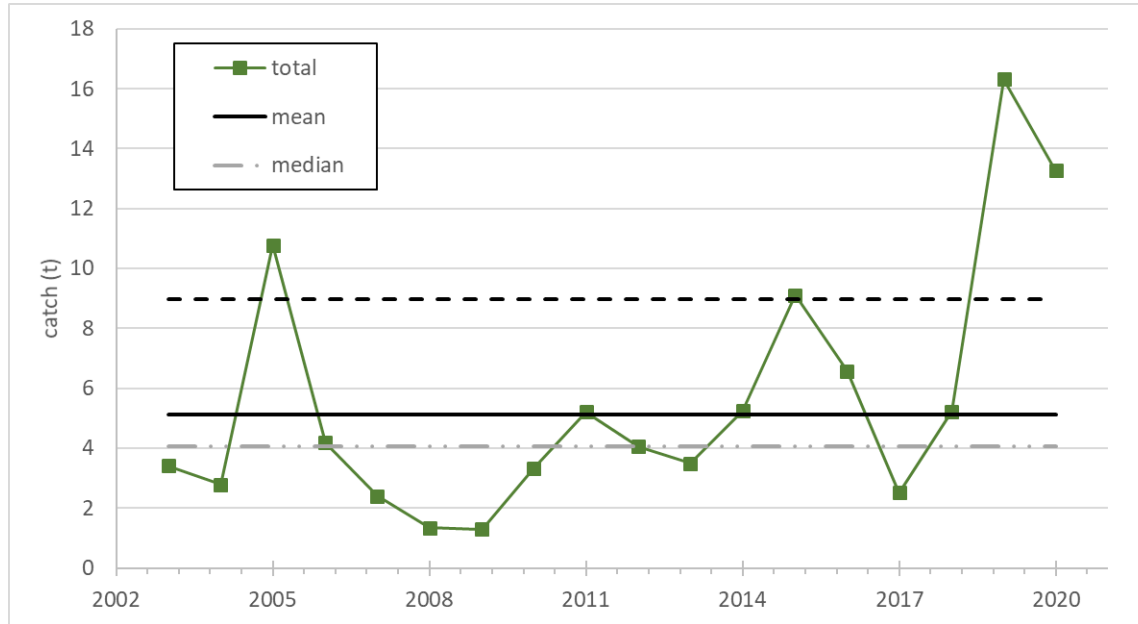
osmerids (eulachon) catch



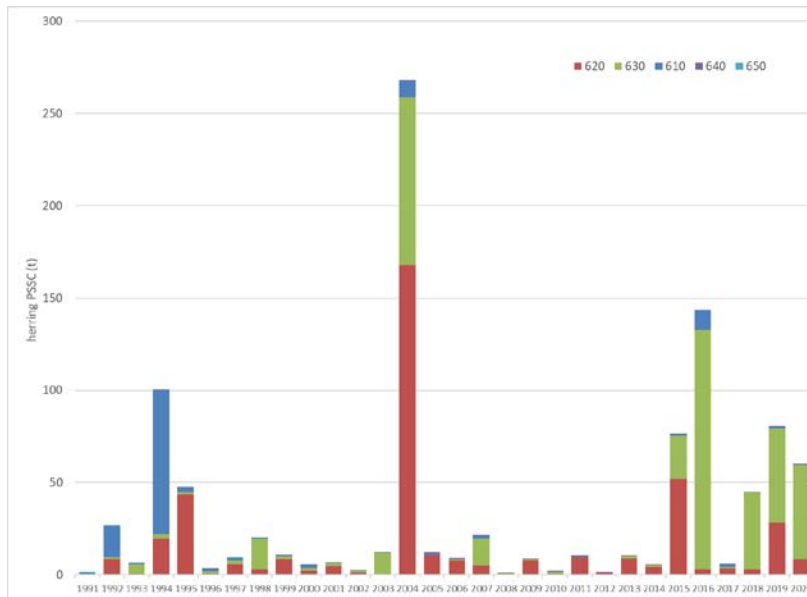
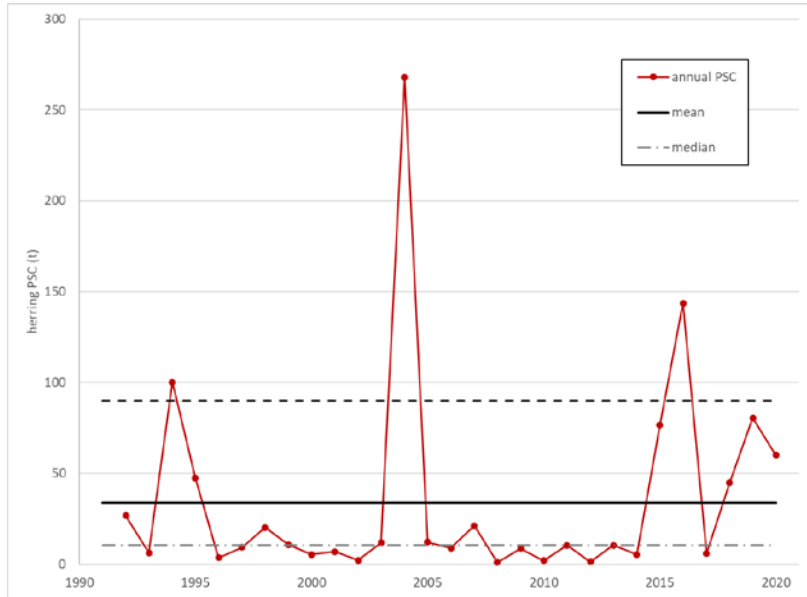
squid catch



pandalid shrimps catch



Pacific herring PSC



summary

- capelin population increasing after negative MHW impacts
- multiple data sources suggest high herring abundance in 2019
- catches of osmerids (eulachon) and squid remain low
- catches of pandalid shrimps especially high