

LFA 34 Advisory Maritimes Region 2021

Adam Cook & Cheryl Denton

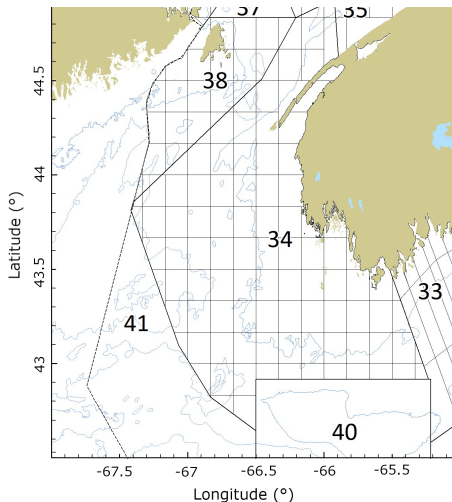
Department of Fisheries and Oceans
Science Branch
Population Ecology Division

October 28, 2021

Overview

- 1 Introduction
- 2 Precautionary Approach
 - Precautionary Approach - LFA34
- 3 Assessment
 - Primary Indicators
 - Secondary Indicators
- 4 Summary

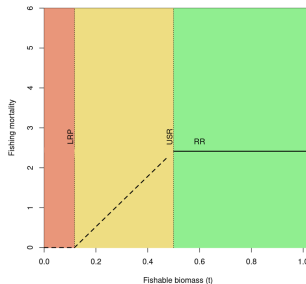
Overview



- LFA 34 lobster fishery active for over 150 years
- Covers more than 20,000 km² from SW Nova Scotia to Bay of Fundy
- Fishing effort extends from inshore to the 50nm offshore line
- LFA 34 landings typically represent 40% of Canadian and 20% of North American Landings

Precautionary Approach

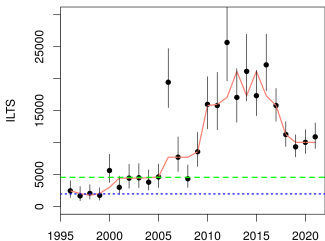
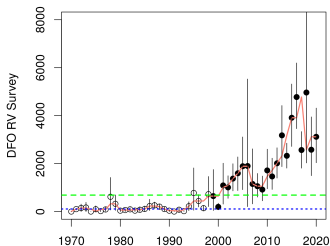
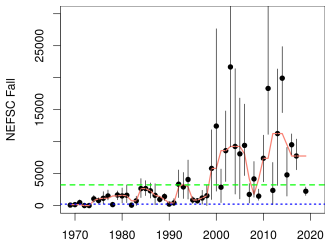
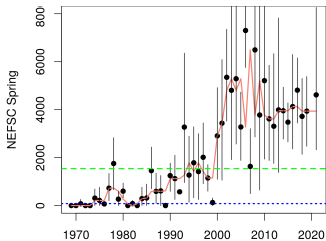
- Precautionary Approach (PA) is a guiding principle for Fisheries Management
- Frames how Science provides stock assessment advice
- Establishes reference points to define stock status
 - ▶ Above the Upper Stock Reference (USR), stock is in healthy zone
 - ▶ Below the Limit Reference Point (LRP), stock is in critical zone
 - ▶ Between the LRP & USR, stock is in cautious zone
 - ▶ Removal Reference identifies threshold between over-fishing and not over-fishing



LFA 34 Framework and Assessment

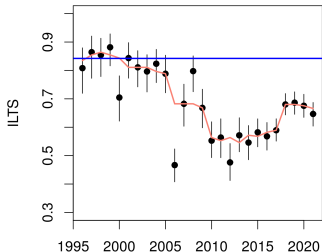
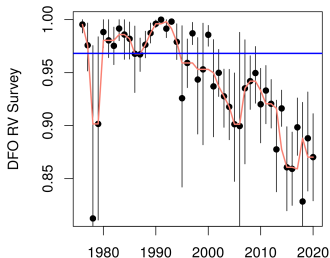
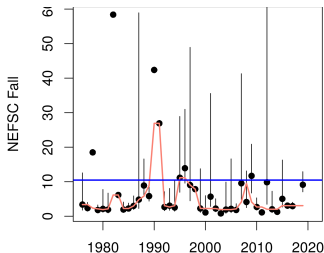
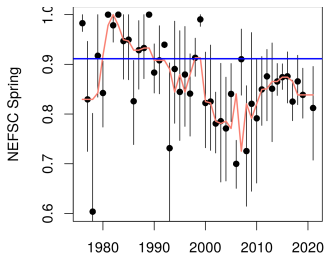
- Framework meeting January 2019
 - ▶ Unpack all the data
 - ▶ Explore methods
 - ▶ Develop approach for providing advice
 - ▶ Expert Reviewers (zonal and international)
- Primary and Secondary Indicators
 - ▶ Primary (with reference points)
 - ★ Trawl Survey Commercial Biomass trends (4 surveys)
 - ★ Relative fishing mortality (Landings / Commercial Biomass; [4 surveys])
 - ▶ Secondary (no reference points)
 - ★ Landings
 - ★ Effort
 - ★ Commercial Catch Rate

Survey Commercial Biomass



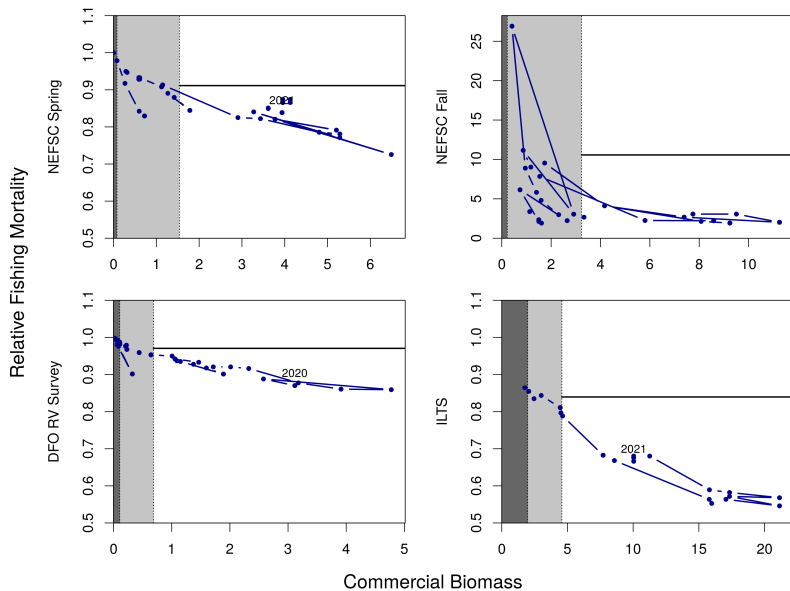
- NEFSC Surveys not conducted in 2020
- Running medians (red lines) are all above the USI in each survey
- Last several years, declining biomass, but appears to have stabilized in 2020 or marginally increased.

Relative Fishing Mortality

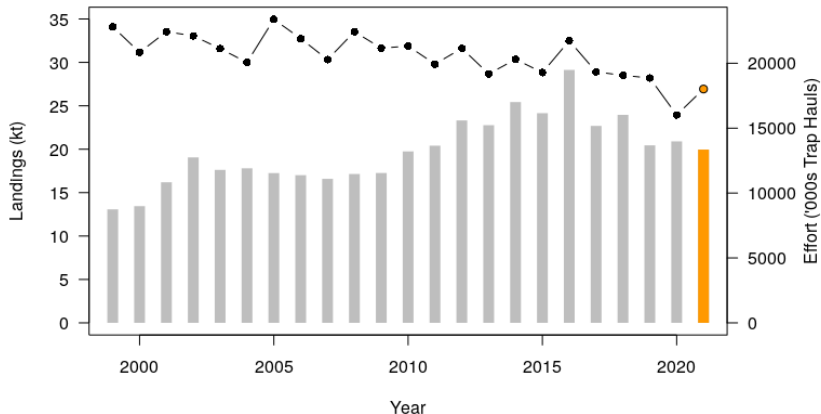


- Running medians (red lines) are all below the RI in each survey
- Last several years, increasing Relative F, but appears to have stabilized or decreased in 2021.

Phase Plots

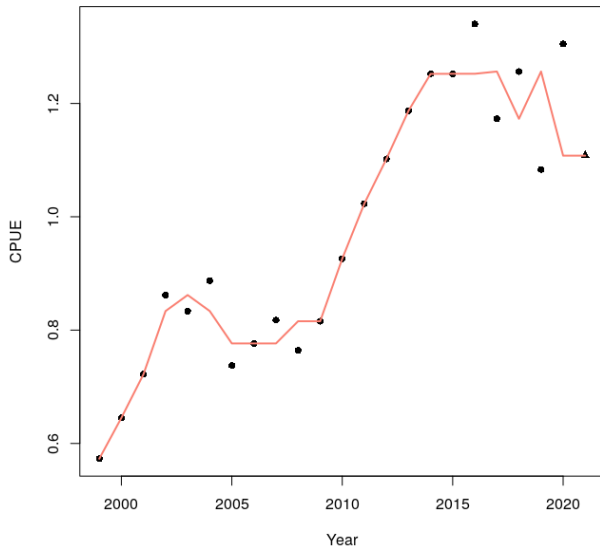


Landings and Effort



- 2020/21 landings 19,959 mt (85% of logs received)
- 2019/20 landings 20,906 mt

Catch Rates



Summary

- Survey Indices of Commercial Biomass Above USIs
 - ▶ Trending downward over last couple of years, stabilized in 2020
- Estimates of Relative Fishing Mortality below RI
- Landings on par with last year (outstanding logs)
- Effort up from last year, still trending down since 2016
- Overall, stock considered in the 'healthy' zone

