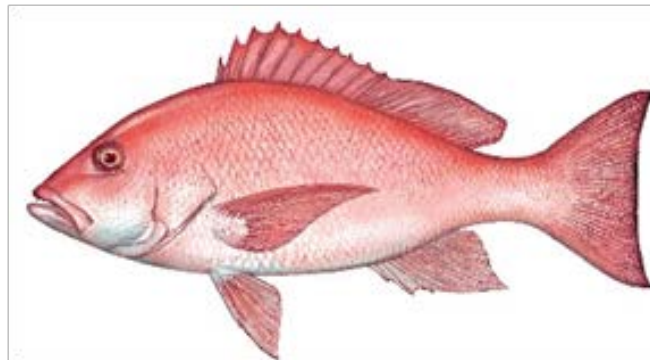# SEDAR 41 – Red Snapper

Summary of Key Uncertainties Identified

In the Review Workshop Report
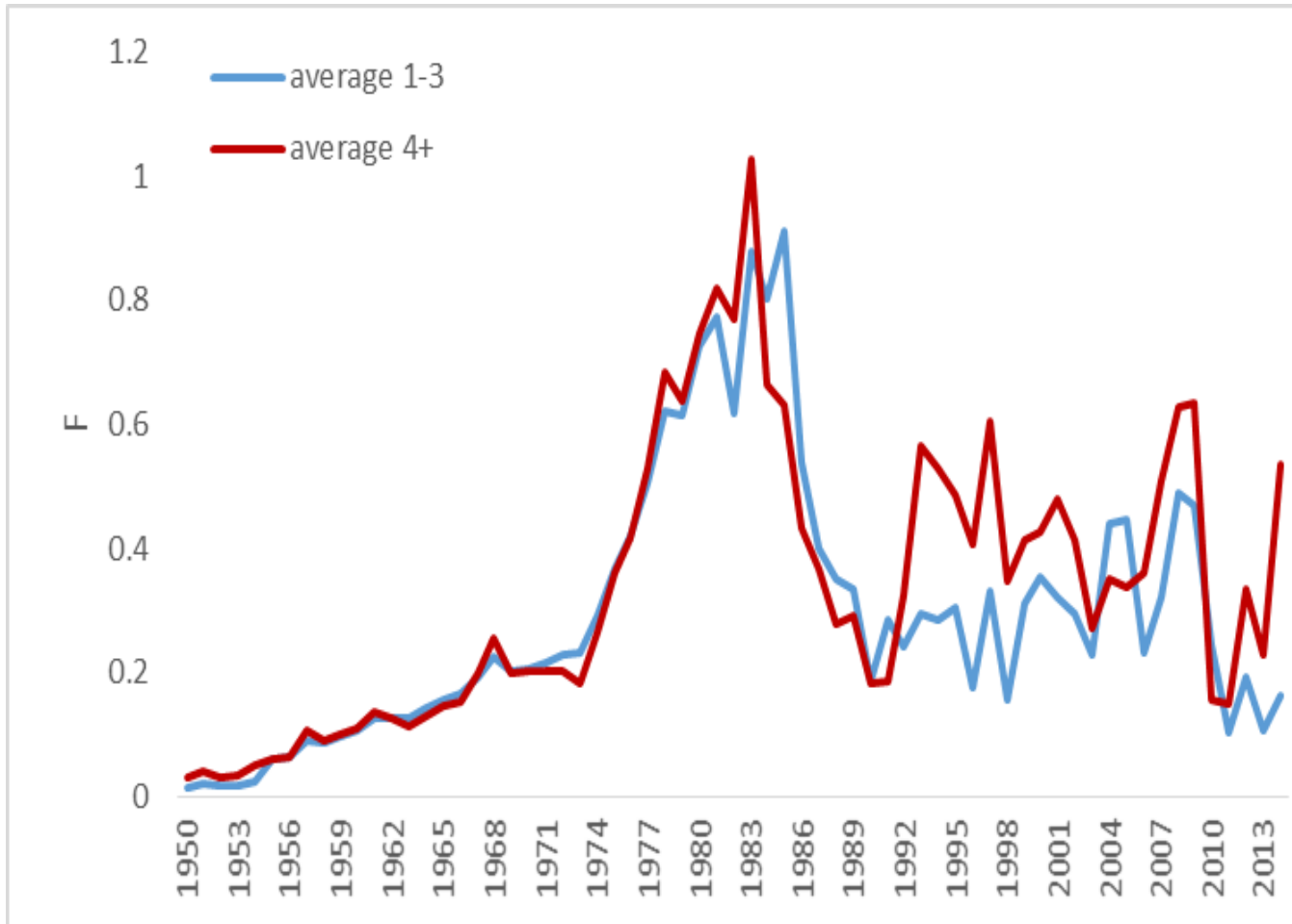
Main Uncertainties:

- Number of parameters being fitted vs. data quality

- Stock-recruitment relationship

- Selectivities for the different fishery fleets

- Composition and magnitude of recreational discards

- Strong retrospective pattern

S-R Relationship:

- S-R relationship couldn't be estimated. Used proxy reference points

- Poor/equivocal information on stock productivity:
  - SEDAR 15: MSY = 2,319,000 lbs
  - SEDAR 24: MSY = 1,842,000 lbs
  - SEDAR 41: MSY proxy = 763,000 lbs

Selectivities:

- Poorly-informed assumptions regarding recent fishing behavior

- Shift from sharp dome to flat top in 2010 in rec fleet

- <u>Outcome</u>: older and larger fish sampled in the recent period couldn't be explained by domed selectivity (and greater reductions in F). The increase in catch of older ages could only be explained with a shift in selectivity

For most of the time series F decreases with age, but since 2010, F at ages 5+ is similar, increasing from ~0.2 in 2010 to ~0.5 in 2014

Recreational Discards:

- During the most recent years of the stock assessment series (i.e., the 2010-2014 moratorium), recreational discards are one of the most important and most uncertain sources of information

- MRIP PSE's of rec discards: 35%-90% (mean ~65%)

- SEDAR 41 assessment model had CV = 5%

Retrospective Pattern:

- Retrospective analysis indicates a substantial upward adjustment of recent Fs with addition of 2014 data. Remove 2014 and the recent Fs are down to around the $F_{30\%}$ ref point (apical values)