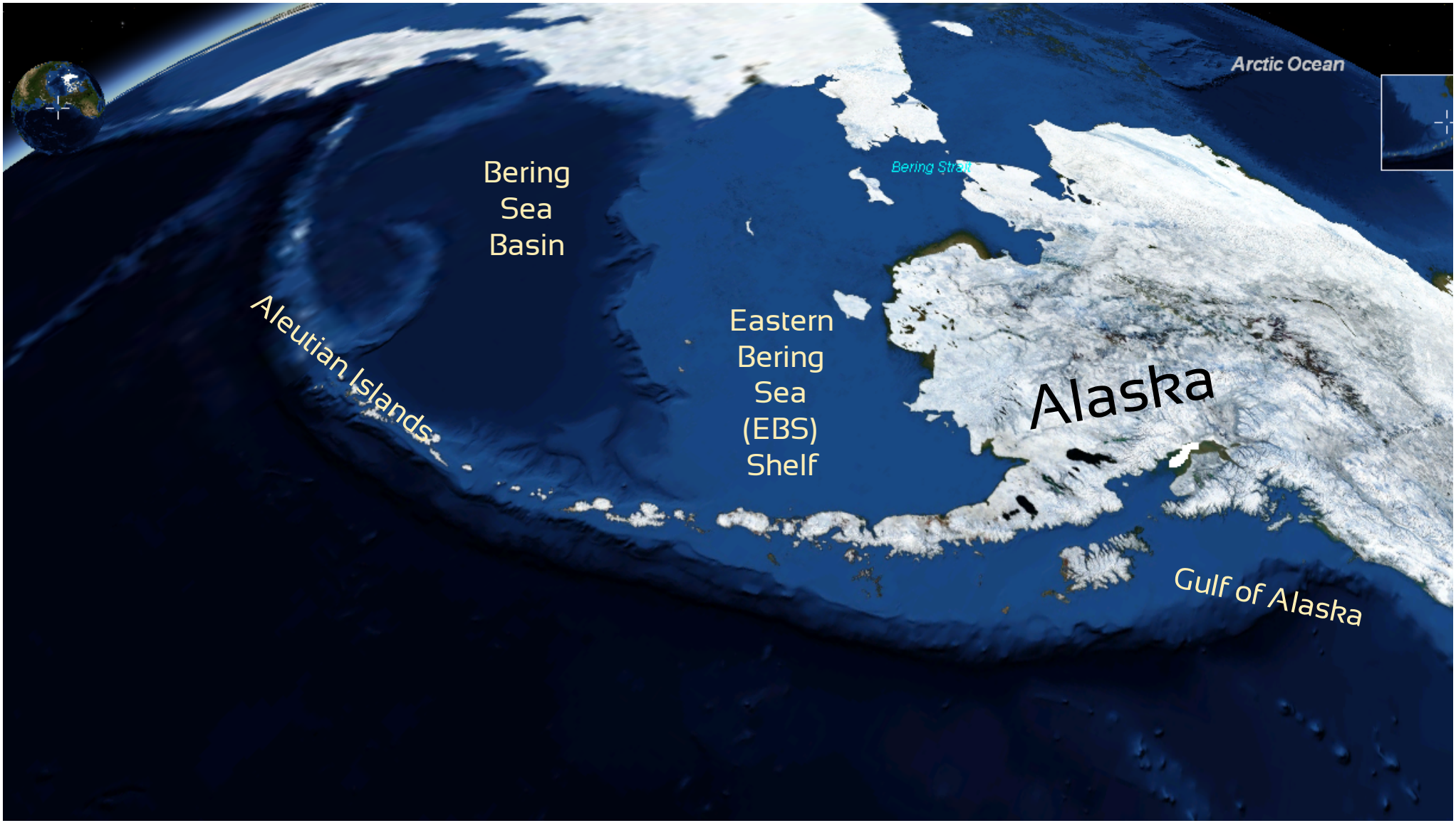
NOAA FISHERIES

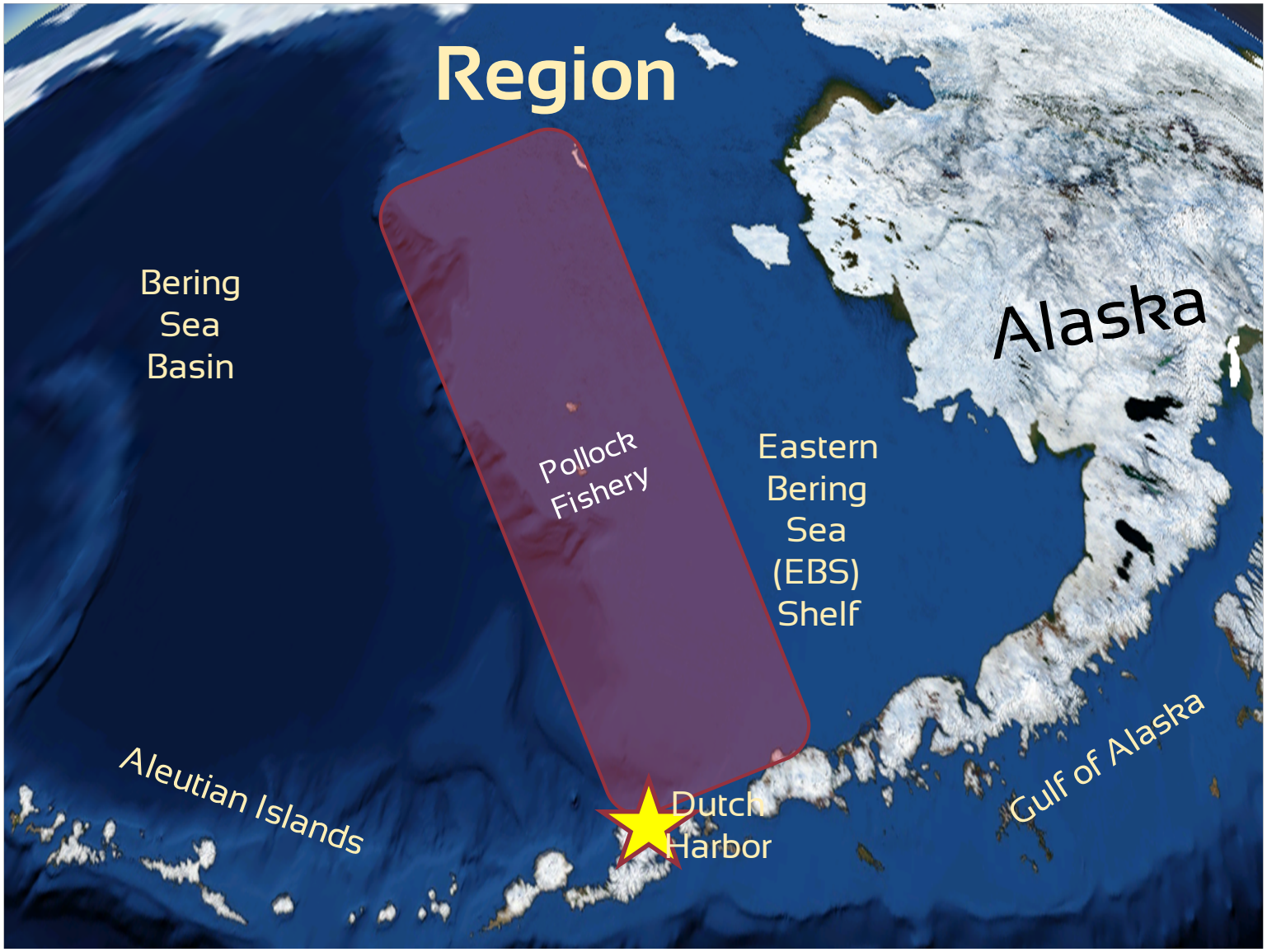
- Alaska Fisheries
- Science Center

Eastern Bering Sea pollock CIE review, May 2016

Background

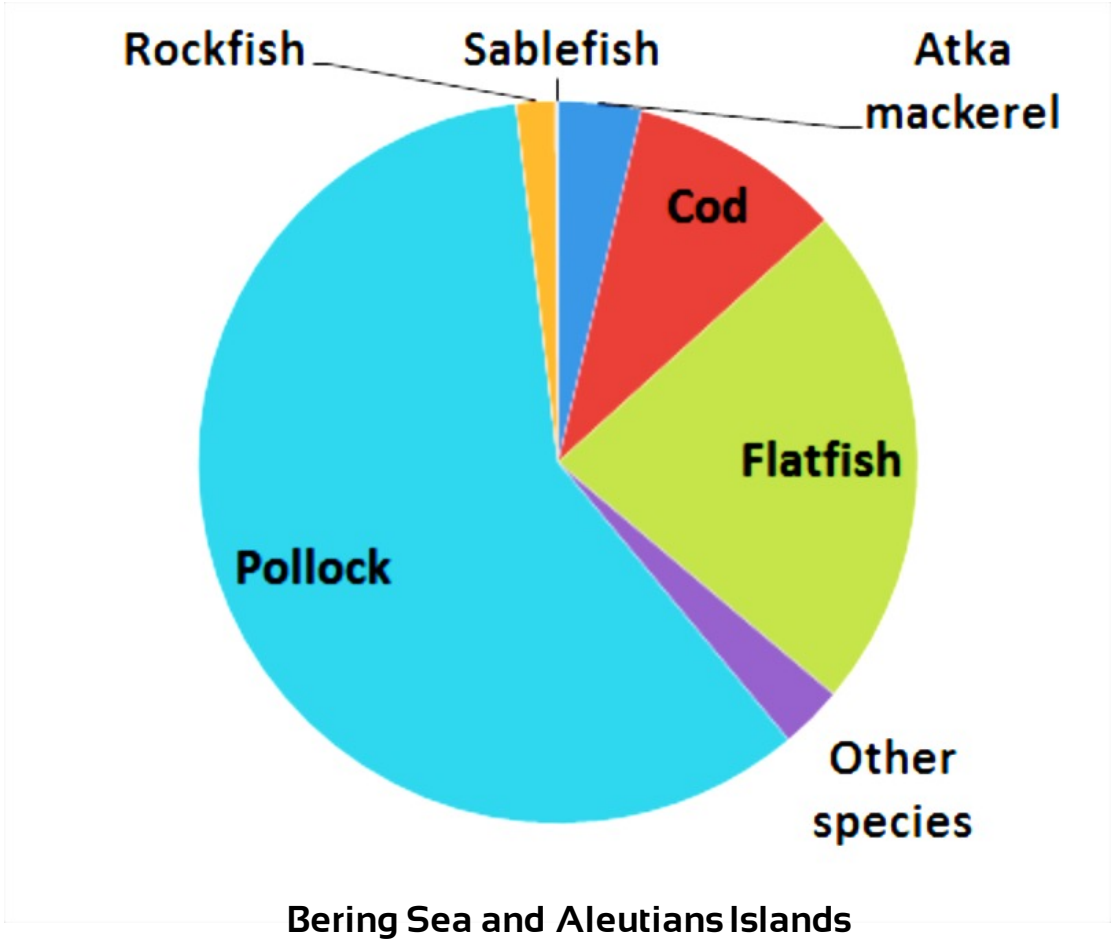
Alaska Fisheries Science Center


Arctic Ocean
Bering Strait
Bering Sea Basin
Aleutian Islands
Eastern Bering Sea (EBS) Shelf
Alaska
Gulf of Alaska

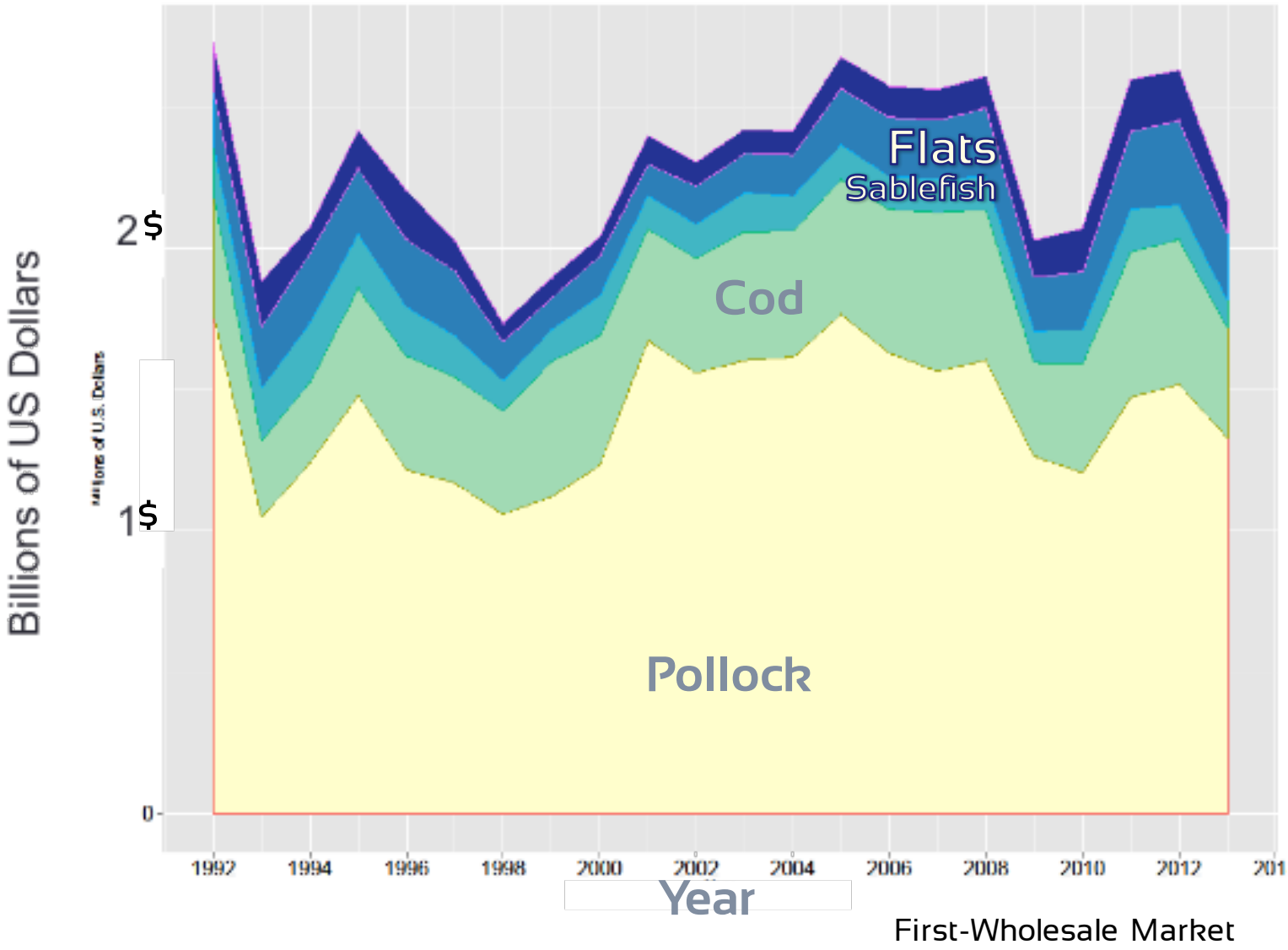

Region
Bering
Sea
Basin
Pollock
Fishery
Eastern
Bering
Sea
(EBS)
Shelf
Alaska
Aleutian Islands
Dutch
Harbor
Gulf of Alaska

Groundfish Management

2015 Catch limits (TAC)

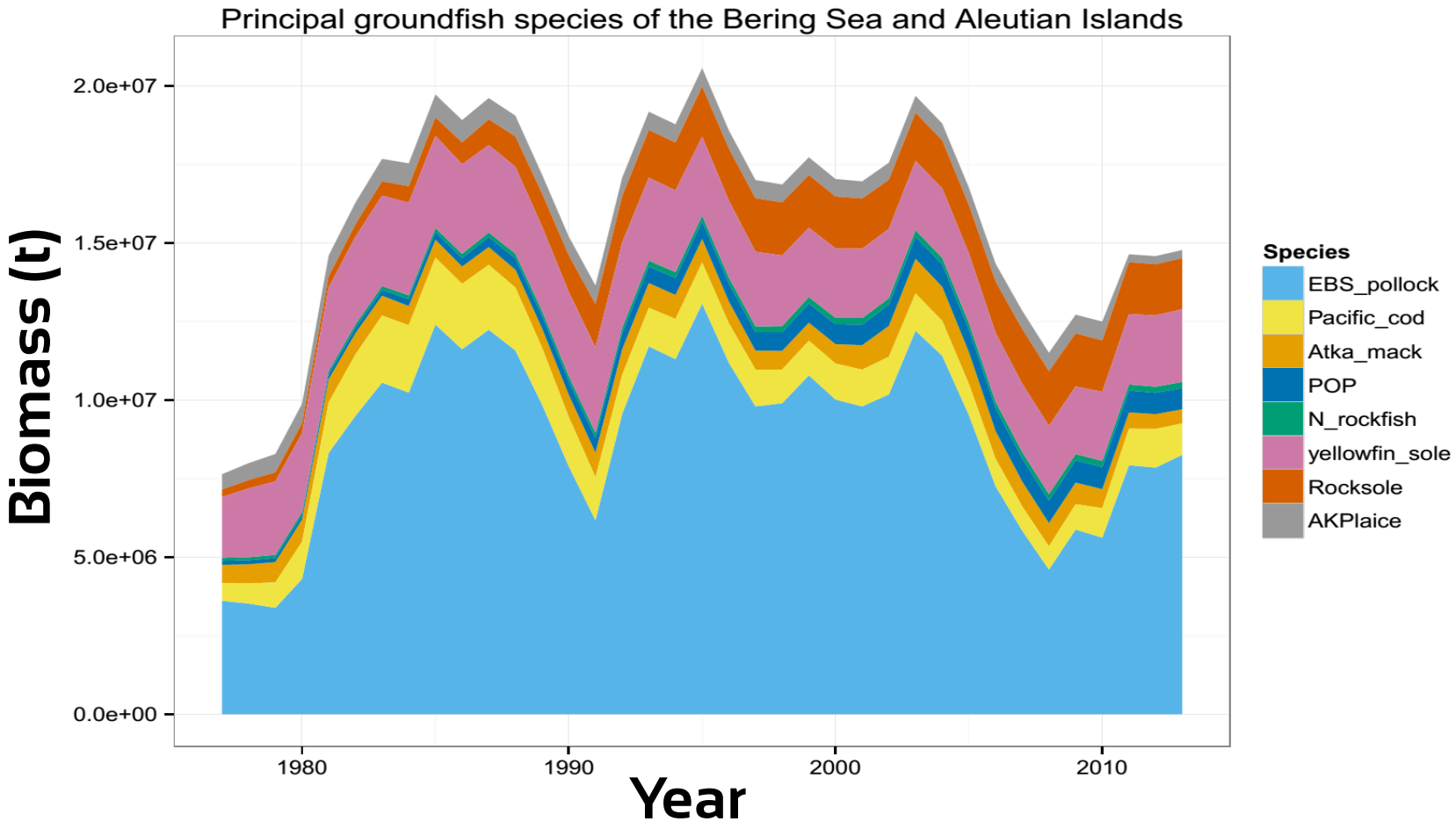


Bering Sea and Aleutians Islands



First-Wholesale Market

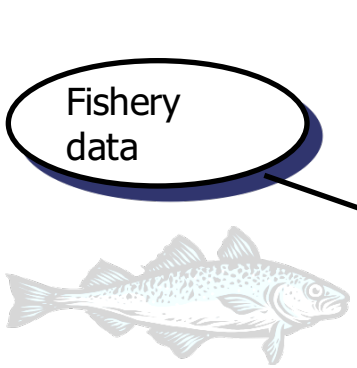
Pollock biomass is also an important component of the Bering Sea Ecosystem



National Standard (NS) 1

- "Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry."
  - Magnuson Stevens Act Section 301(a)(1)

The North Pacific Groundfish management system establishes catch limits (TAC)



Survey data

Fishery data

Life history data

Assessment

Plan Team review

Advisory Panel (stakeholders)

Scientific & Stat. Committee

Public input

Council

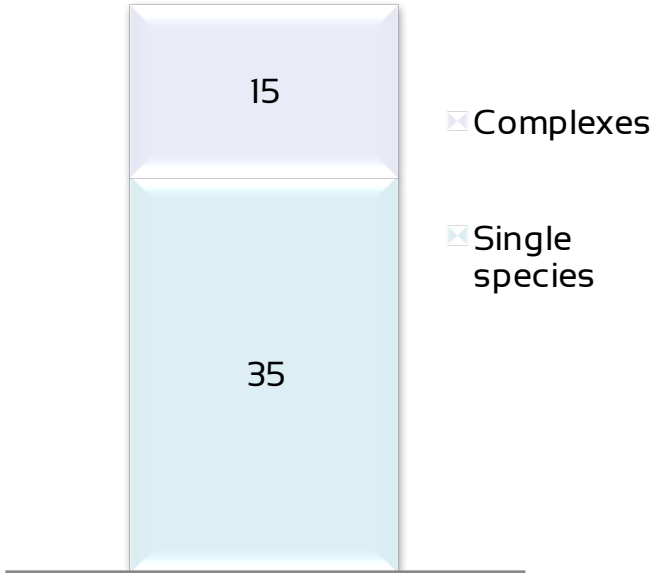
Public input

Final TAC specifications

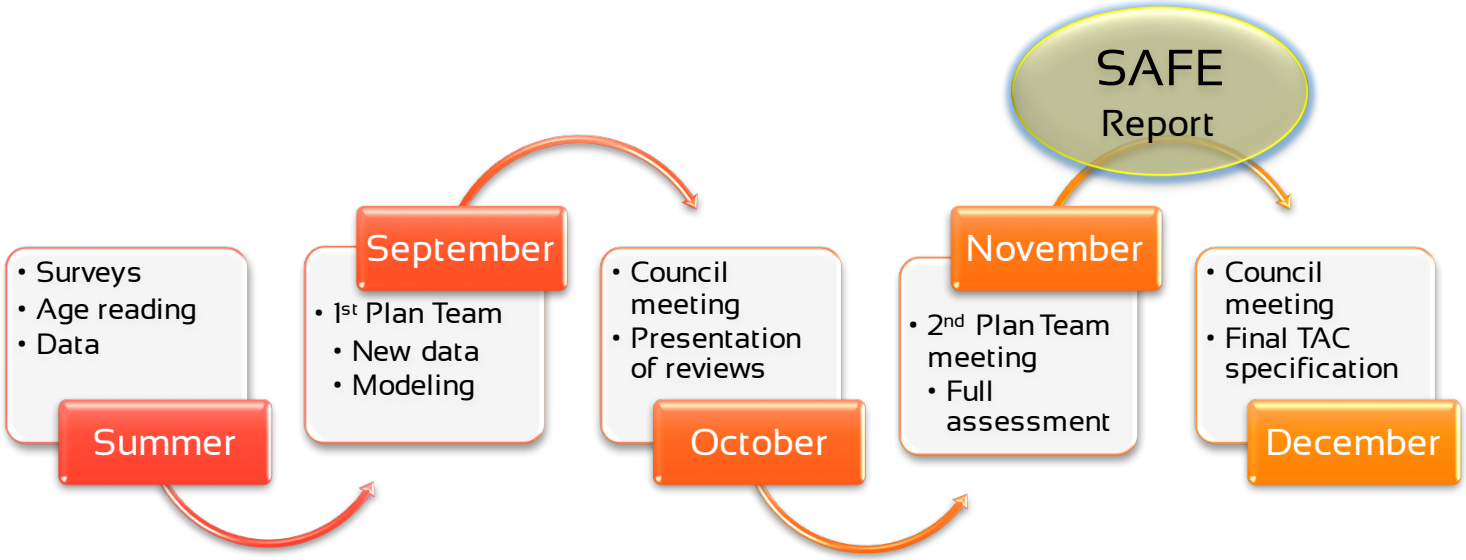
Includes sets of external constraints

+ C

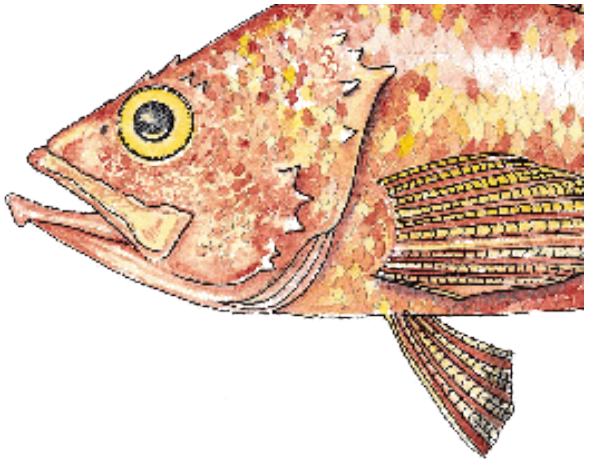
50 Assessments per year

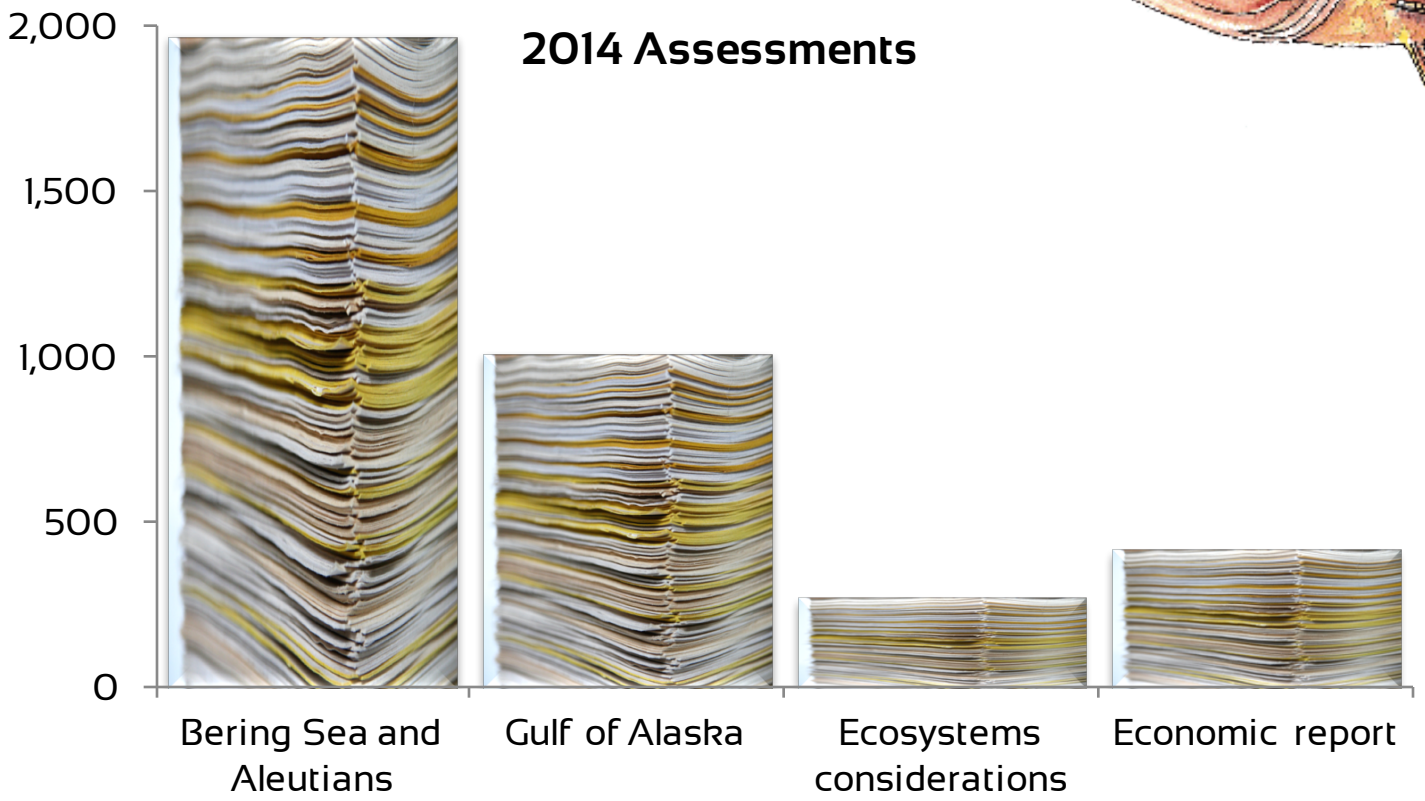


Assessment review leading to quota recommendations



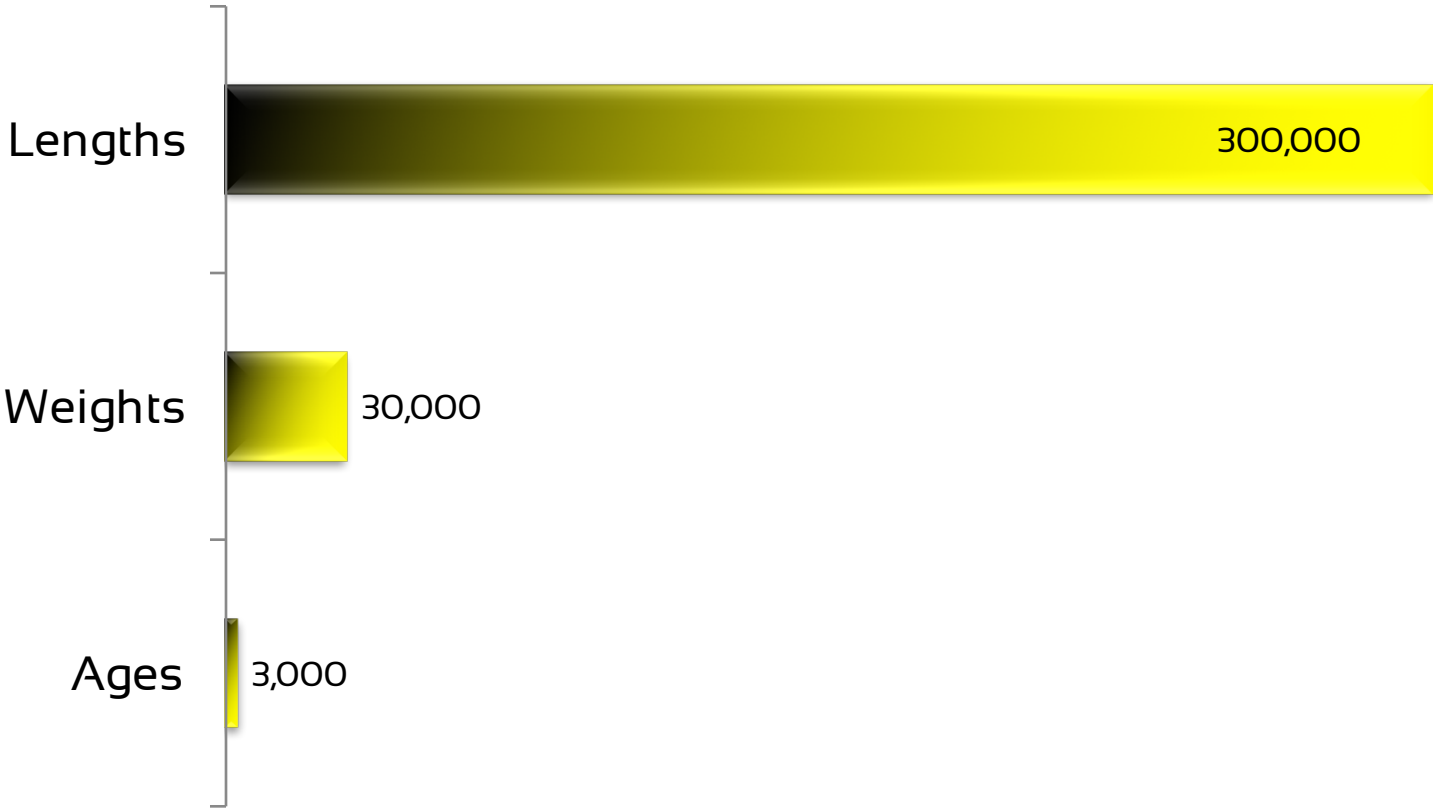
Pages reviewed annually…



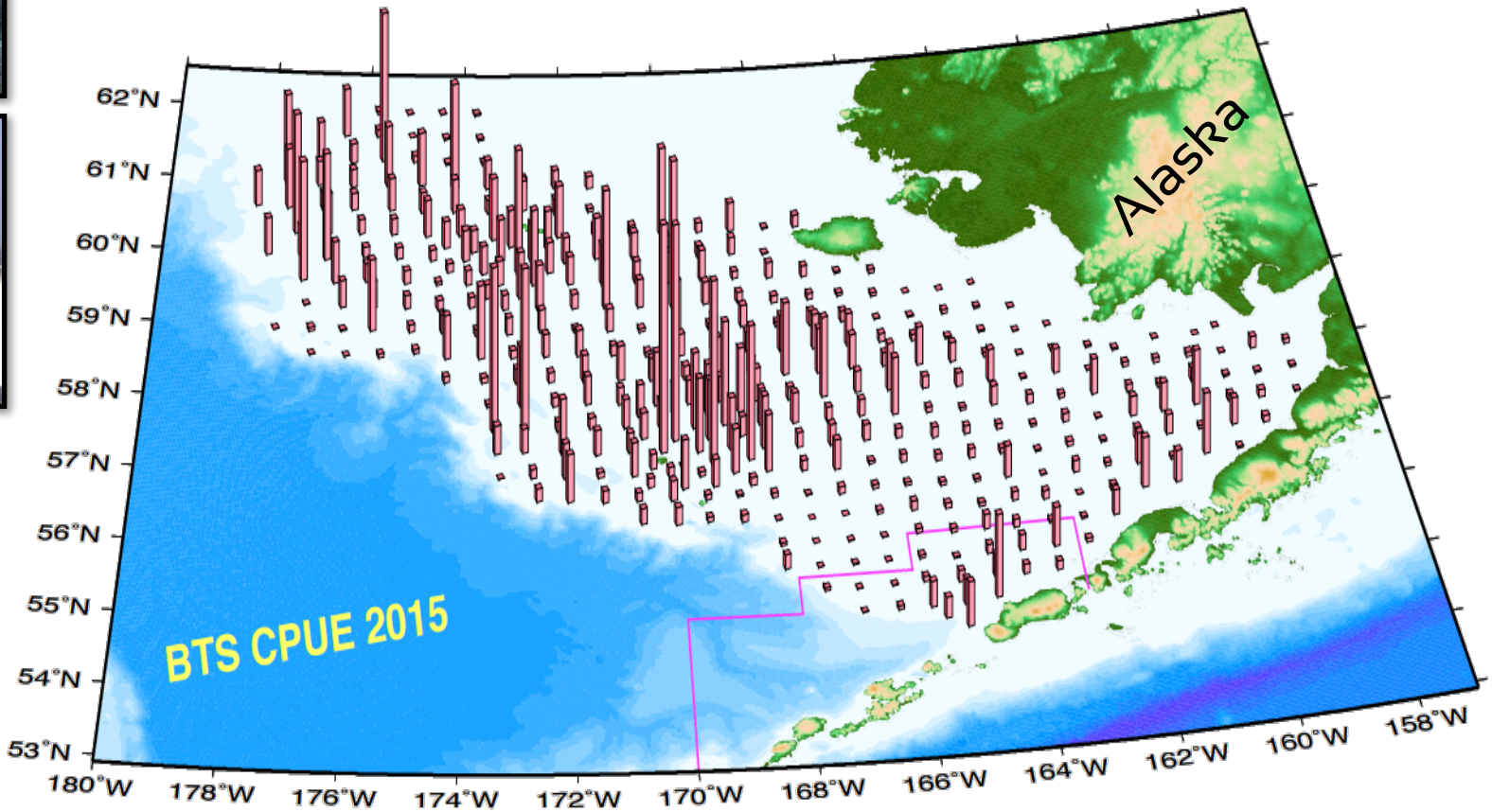


- Stock assessment components

Scientific Observer sampling

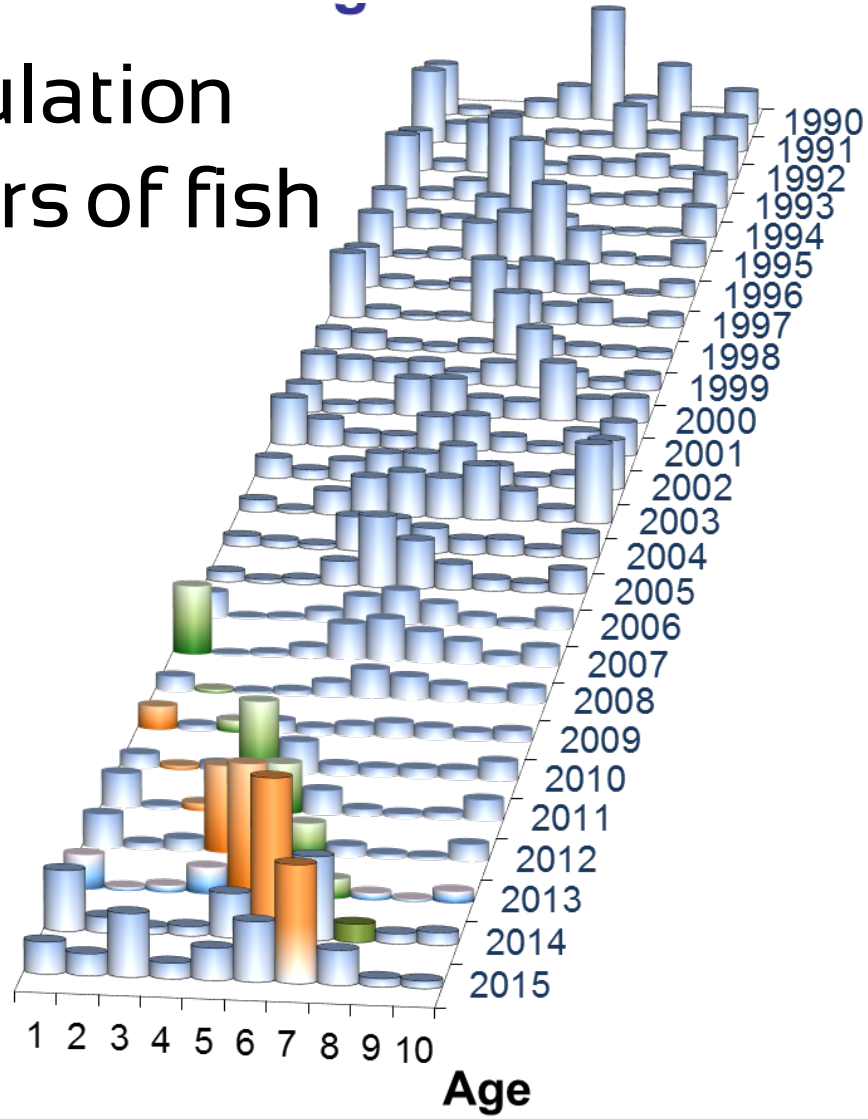


Scientific research survey



Scientific Research Survey Results

Population numbers of fish



Model application for estimation

- Stock status
- Projections for harvest control rules

SSC requirements

"Each scientific and statistical committee shall provide its Council ongoing scientific advice for fishery management decisions, including recommendations for:

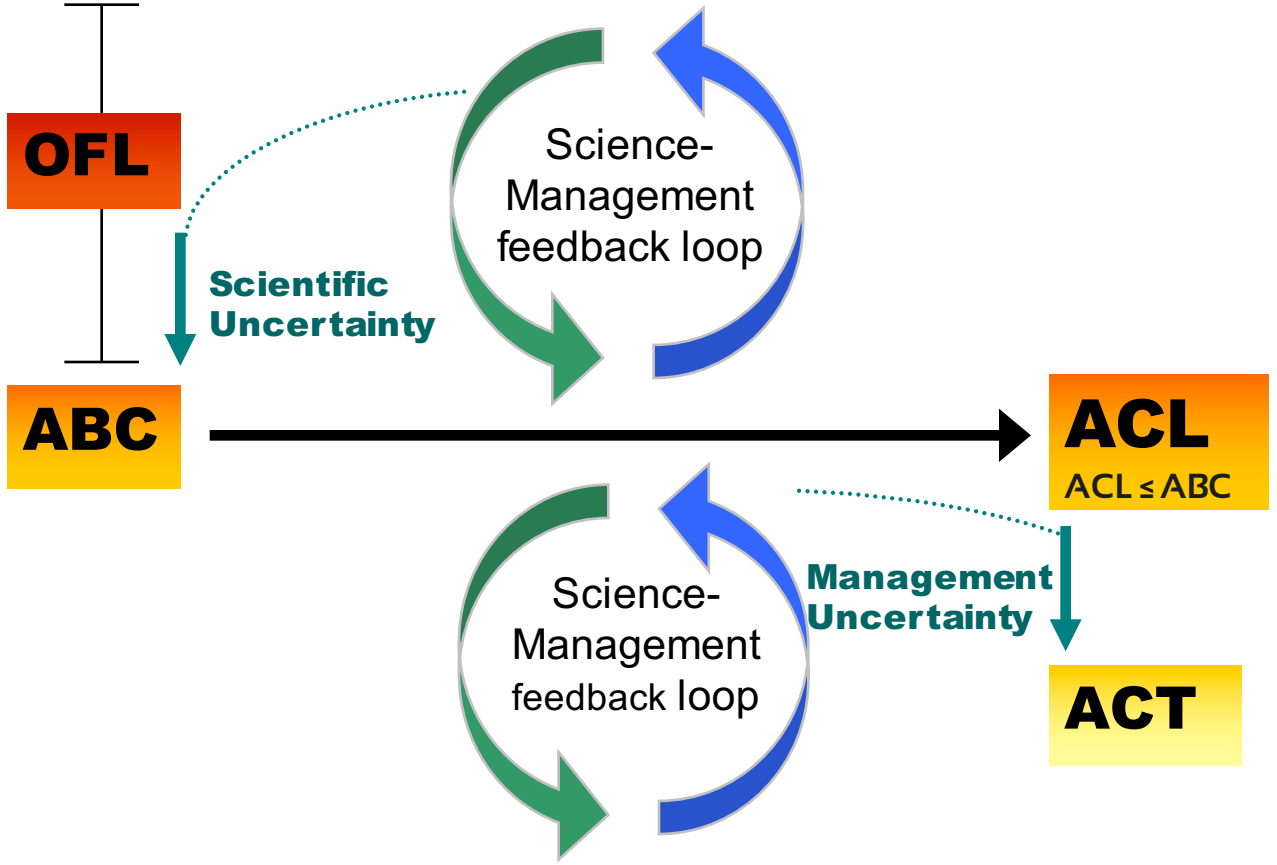
- acceptable biological catch
- preventing overfishing
- maximum sustainable yield, and
- achieving rebuilding targets, and
- reports on stock status and health
- bycatch
- habitat status
- social and economic impacts of management measures, and
- sustainability of fishing practices."

- This information comes from our assessments…

MSA Section 302(g)(1)(B)

Roles in Setting ACLs

SSC Role **Council Role**



Tier system

Amendment 56 of BSAI FMP

For ABC & OFL only

1) Information available: *Reliable point estimates of B and B_{MSY} and reliable pdf of F_{MSY}.*

1a) Stock status: $B/B_{MSY} > 1$

$F_{OFL} = \mu_A$, *the arithmetic mean of the pdf*

$F_{ABC} \le \mu_H$, *the harmonic mean of the pdf*

1b) Stock status: $\alpha < B/B_{MSY} \le 1$

$F_{OFL} = \mu_A \times (B/B_{MSY} - \alpha)/(1 - \alpha)$

$F_{ABC} \le \mu_H \times (B/B_{MSY} - \alpha)/(1 - \alpha)$

1c) Stock status: $B/B_{MSY} \le \alpha$

$F_{OFL} = 0$

$F_{ABC} = 0$

2) Information available: *Reliable point estimates of B, B_{MSY}, F_{MSY}, $F_{35\%}$, and $F_{40\%}$.*

2a) Stock status: $B/B_{MSY} > 1$

$F_{OFL} = F_{MSY}$

$F_{ABC} \le F_{MSY} \times (F_{40\%}/F_{35\%})$

2b) Stock status: $\alpha < B/B_{MSY} \le 1$

$F_{OFL} = F_{MSY} \times (B/B_{MSY} - \alpha)/(1 - \alpha)$

$F_{ABC} \le F_{MSY} \times (F_{40\%}/F_{35\%}) \times (B/B_{MSY} - \alpha)/(1 - \alpha)$

2c) Stock status: $B/B_{MSY} \le \alpha$

$F_{OFL} = 0$

$F_{ABC} = 0$

3) Information available: *Reliable point estimates of B, $B_{40\%}$, $F_{35\%}$, and $F_{40\%}$.*

3a) Stock status: $B/B_{40\%} > 1$

$F_{OFL} = F_{35\%}$

$F_{ABC} \le F_{40\%}$

3b) Stock status: $\alpha < B/B_{40\%} \le 1$

$F_{OFL} = F_{35\%} \times (B/B_{40\%} - \alpha)/(1 - \alpha)$

$F_{ABC} \le F_{40\%} \times (B/B_{40\%} - \alpha)/(1 - \alpha)$

3c) Stock status: $B/B_{40\%} \le \alpha$

$F_{OFL} = 0$

$F_{ABC} = 0$

4) Information available: *Reliable point estimates of B, $F_{35\%}$, and $F_{40\%}$.*

$F_{OFL} = F_{35\%}$

$F_{ABC} \le F_{40\%}$

5) Information available: *Reliable point estimates of B and natural mortality rate M.*

$F_{OFL} = M$

$F_{ABC} \le 0.75 \times M$

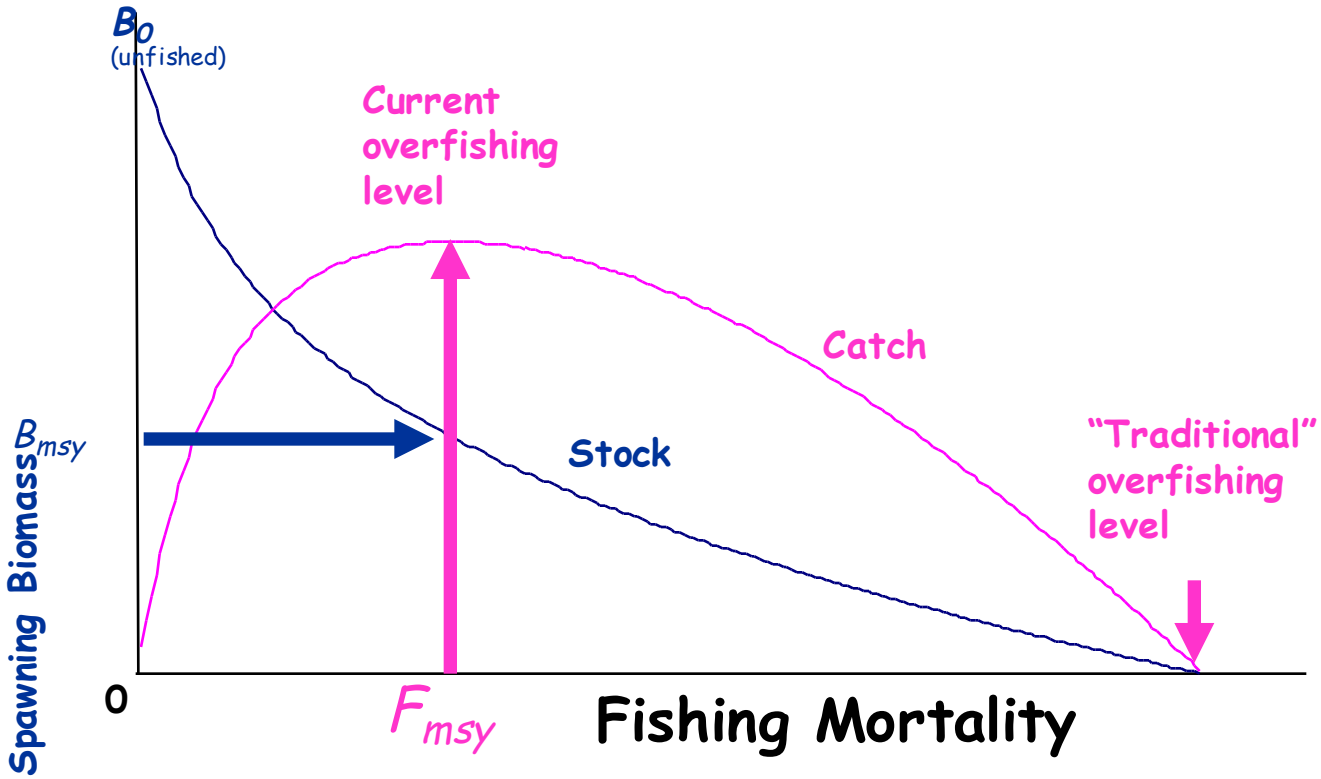
6) Information available: *Reliable catch history from 1978 through 1995.*

OFL = the average catch from 1978 through 1995, unless an alternative value is established by the SSC on the basis of the best available scientific information

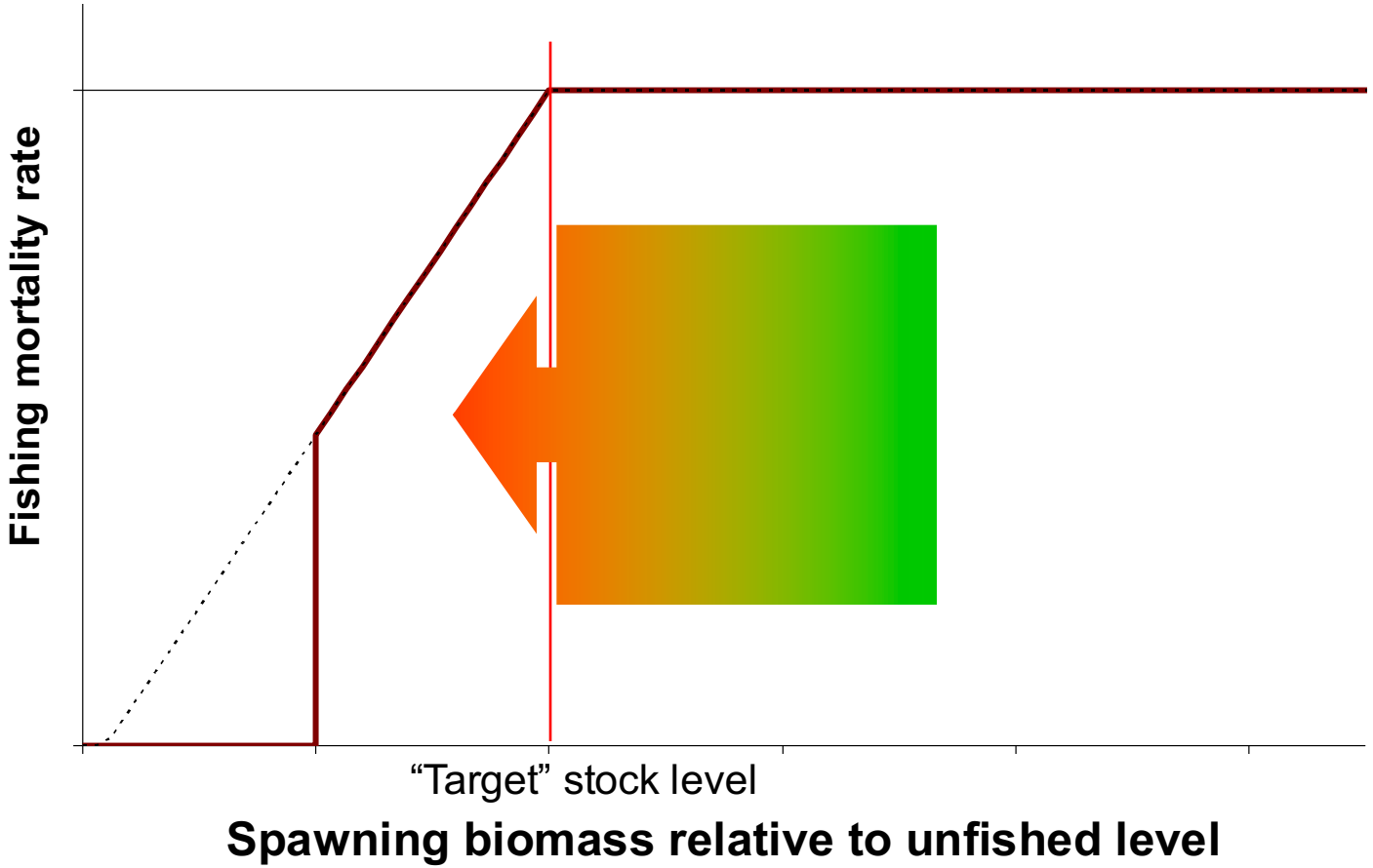
$ABC \le 0.75 \times OFL$

Catch ≤ TAC ≤ ABC < OFL

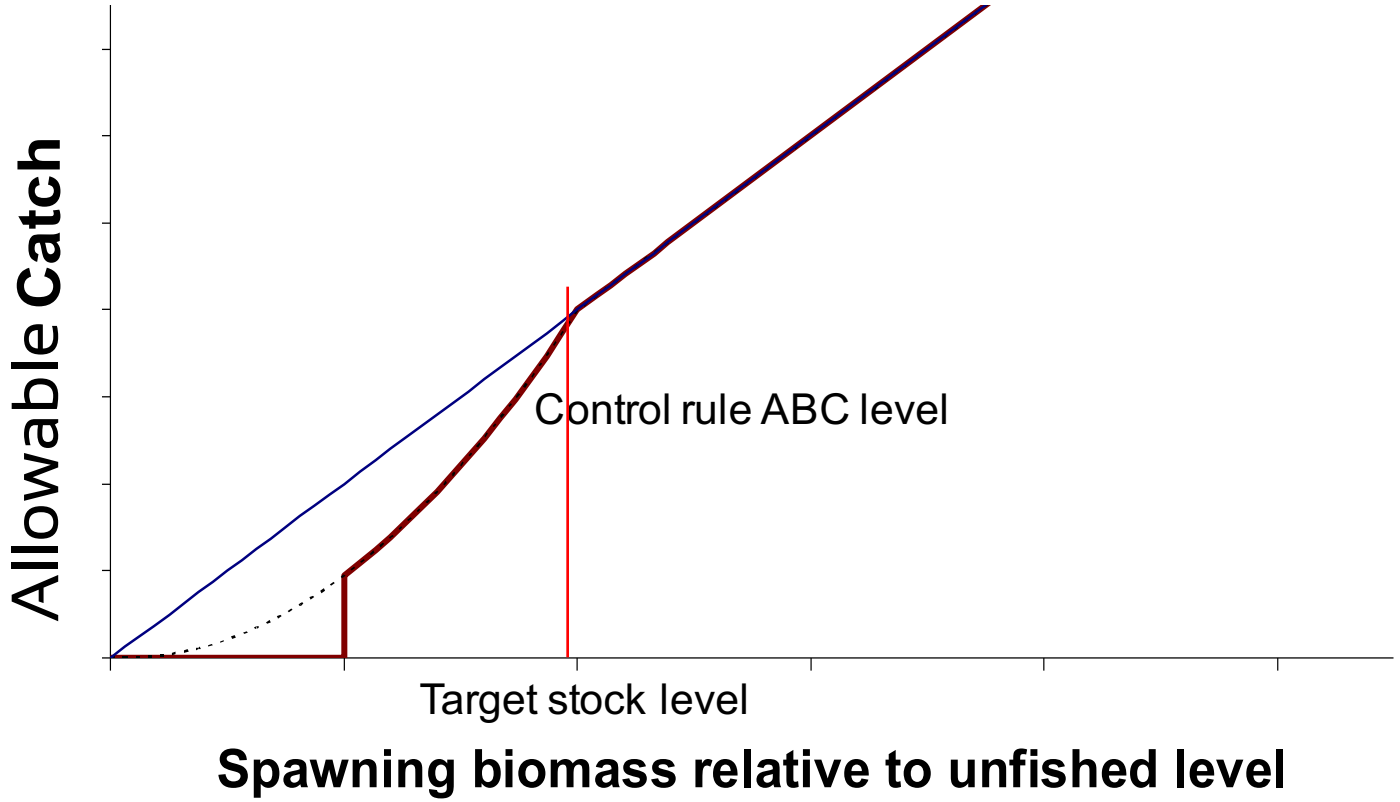
Risk averse guidelines

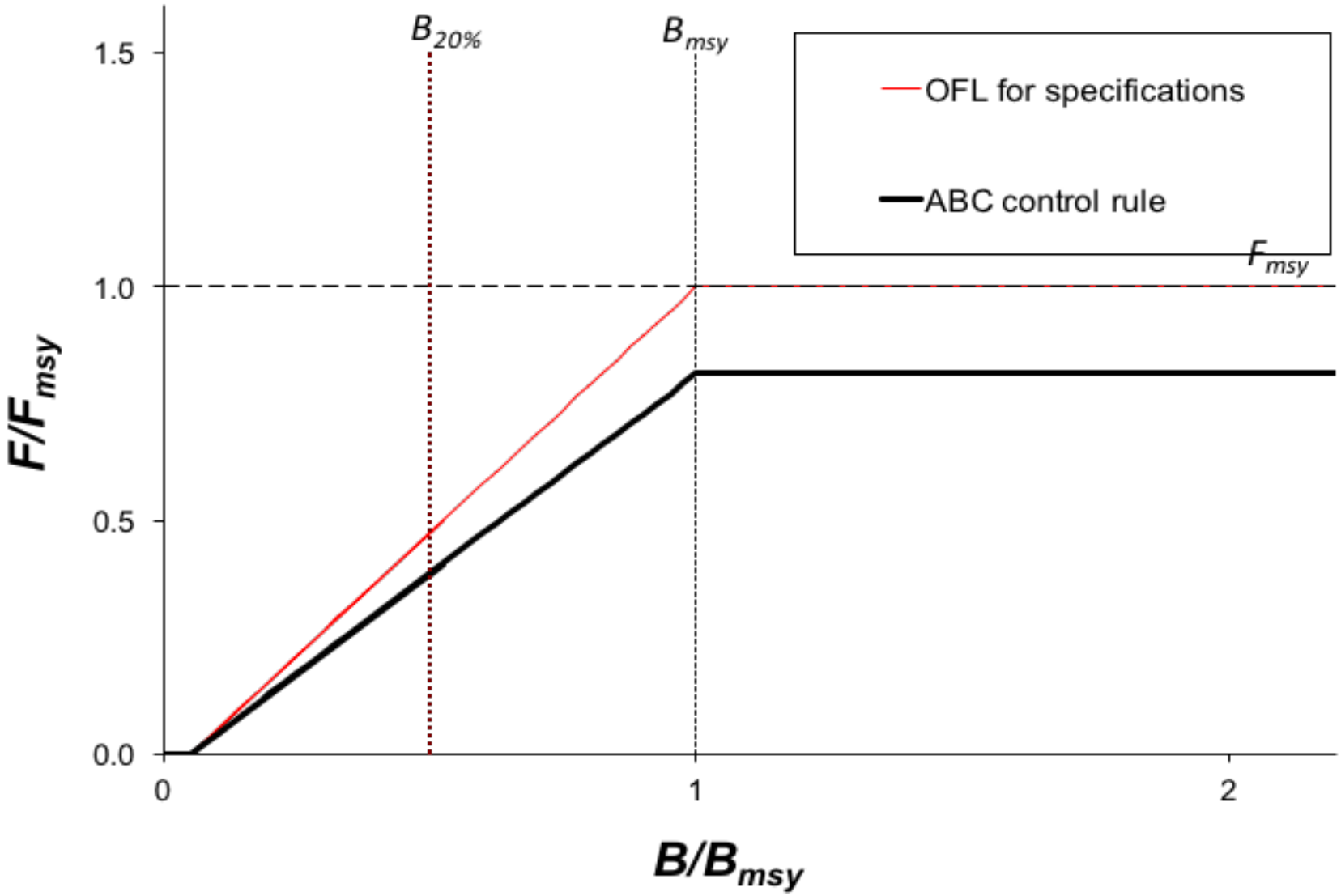


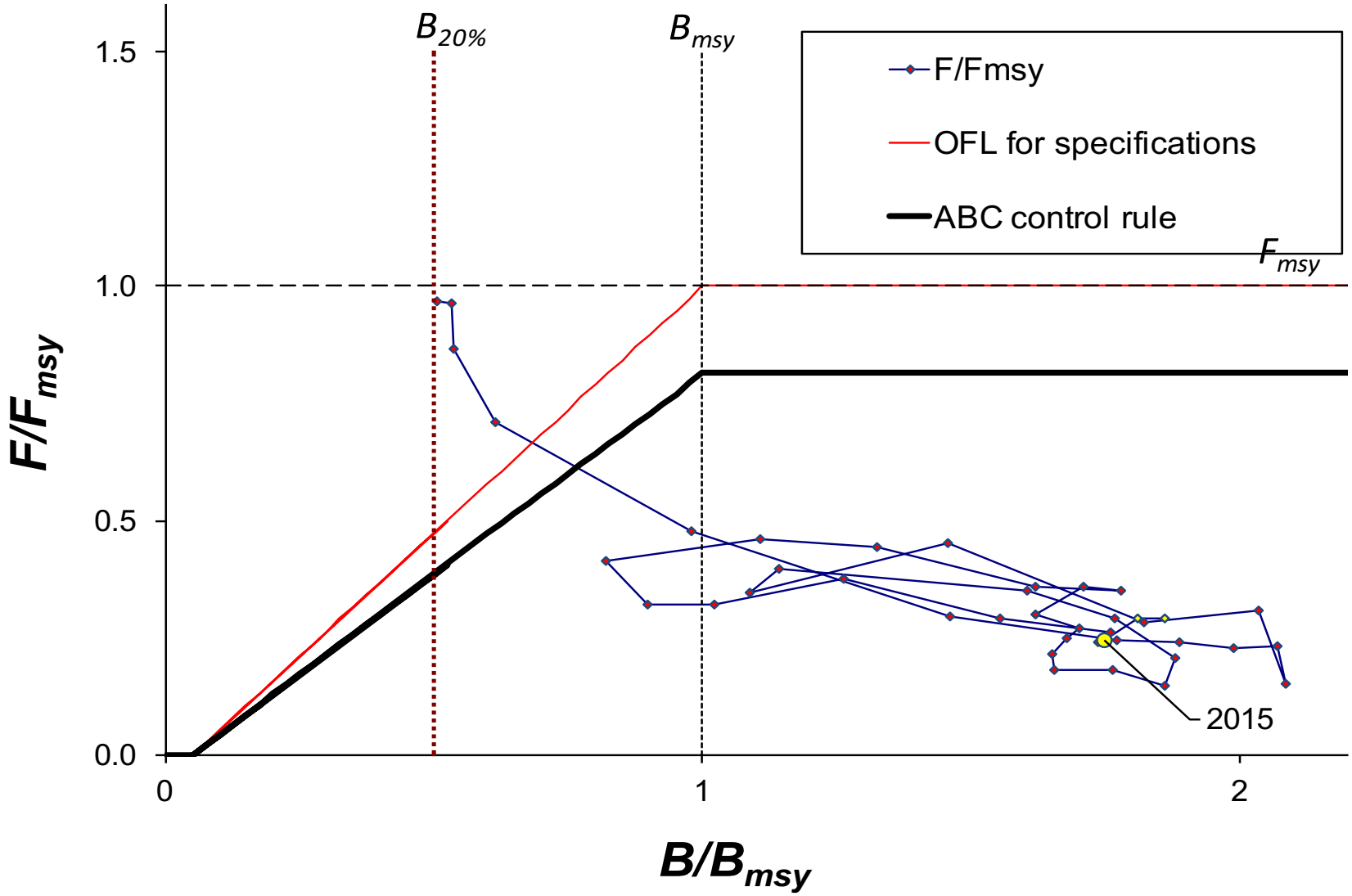
Control rule affects rates...



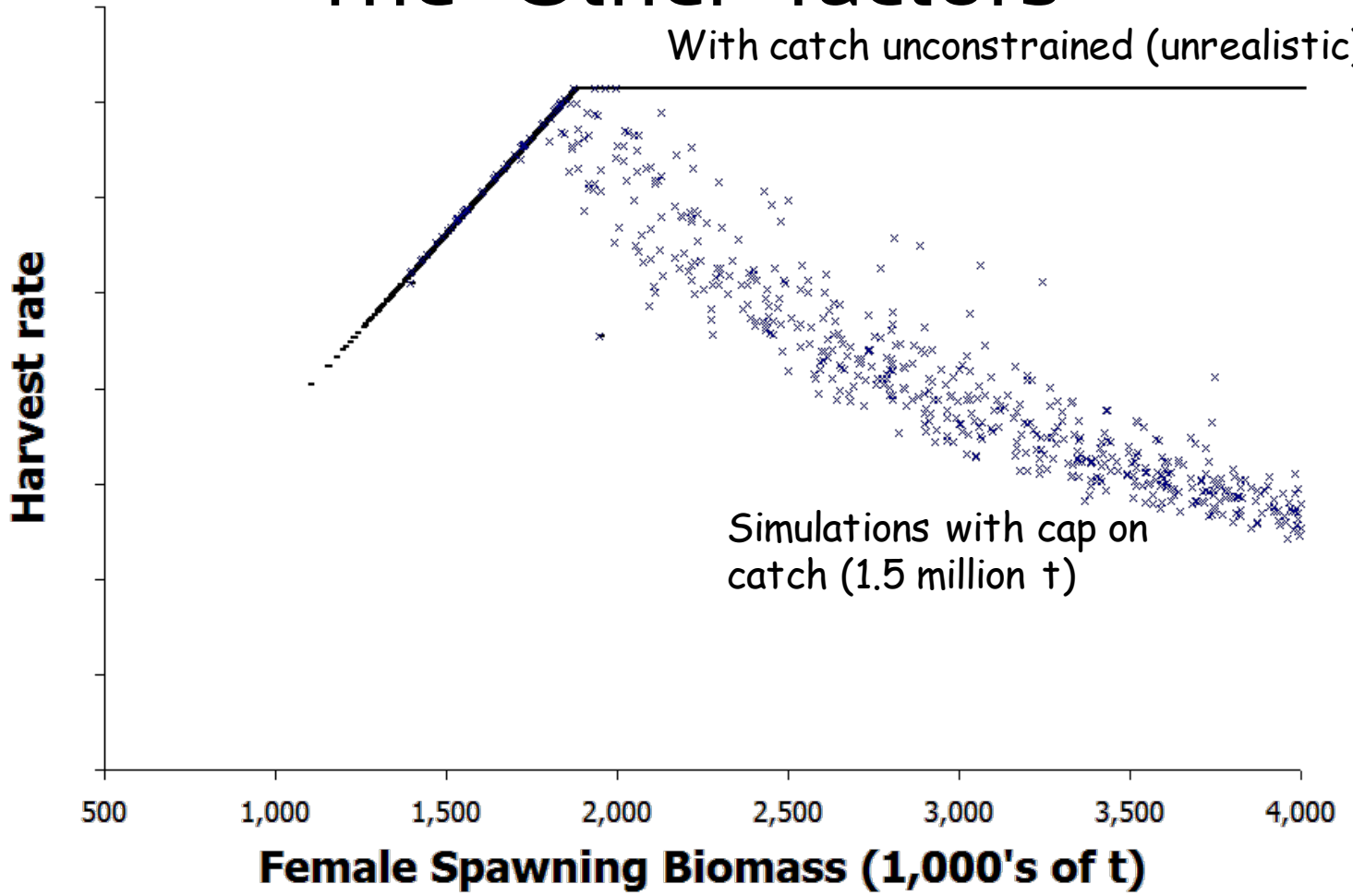
Rate declines, catch declines faster…



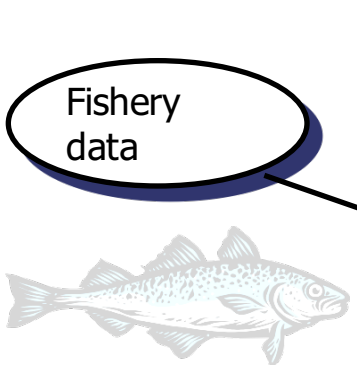

$B_{20\%}$
B_{msy}
OFL for specifications
ABC control rule
F_{msy}
1.5
1.0
0.5
0.0
0
1
2
F/F_{msy}
B/B_{msy}


$B_{20\%}$
B_{msy}
F/Fmsy
OFL for specifications
ABC control rule
F_{msy}
1.5
1.0
0.5
0.0
0
1
2
2015
F/F_{msy}
B/B_{msy}

The "Other" factors



The North Pacific Groundfish management system establishes catch limits (TAC)



Survey data

Fishery data

Life history data

Assessment

Plan Team review

Advisory Panel (stakeholders)

Scientific & Stat. Committee

Public input

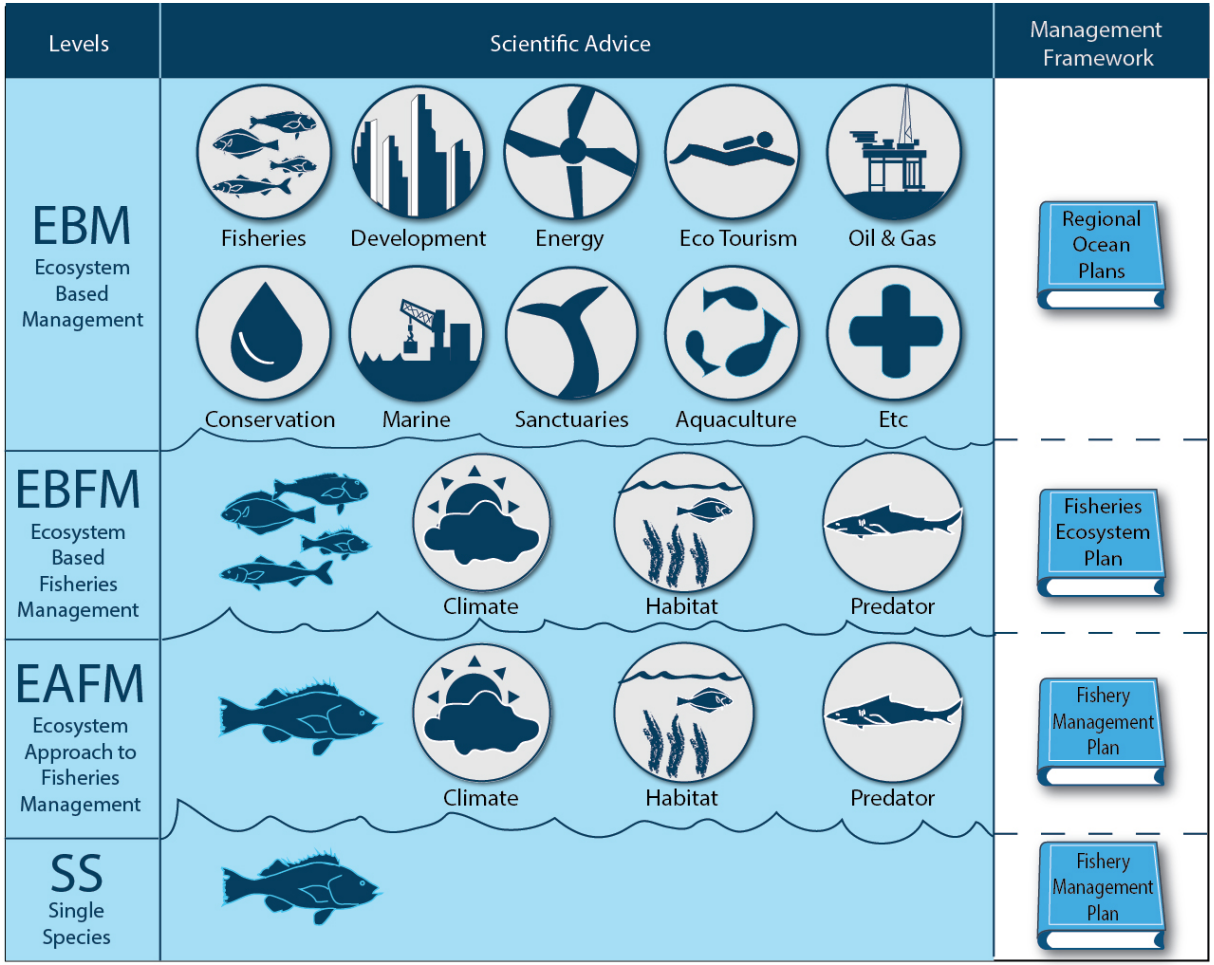
Council

Public input

Final TAC specifications

Includes sets of external constraints

+ C



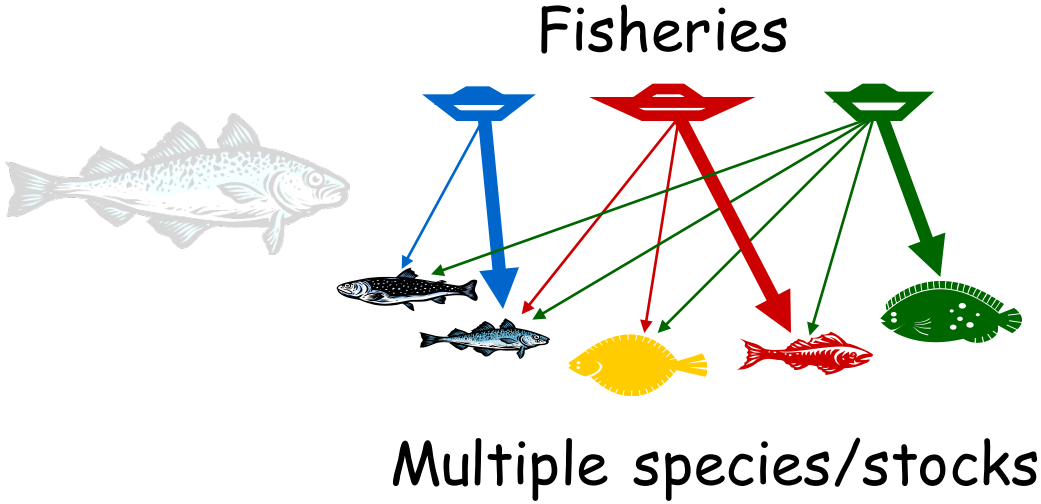
Slide courtesy of Jason Link

NOAA FISHERIES

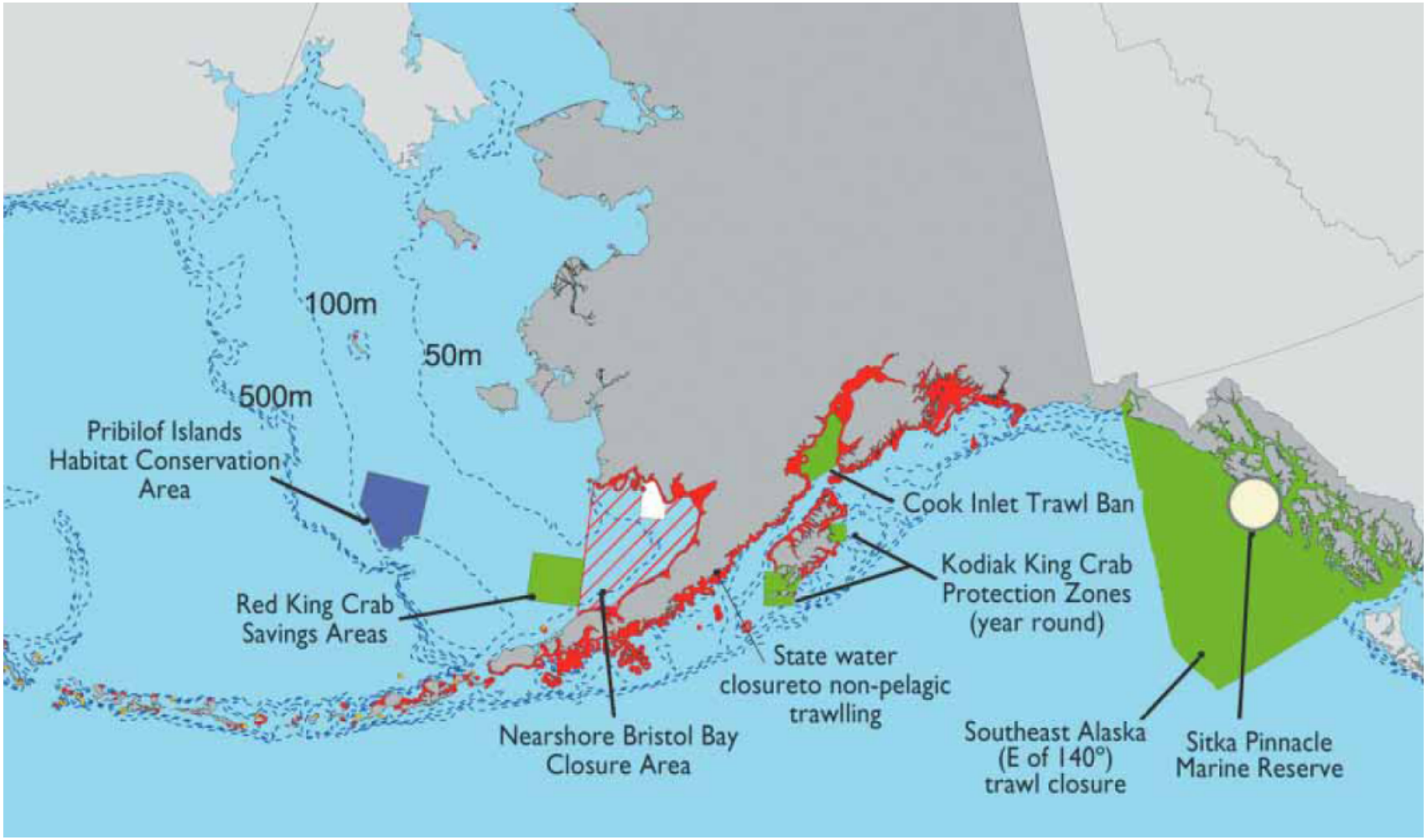
Alaska groundfish conservation strategy is fundamentally multi-species

- The "lowest common denominator" species catch limits are not exceeded

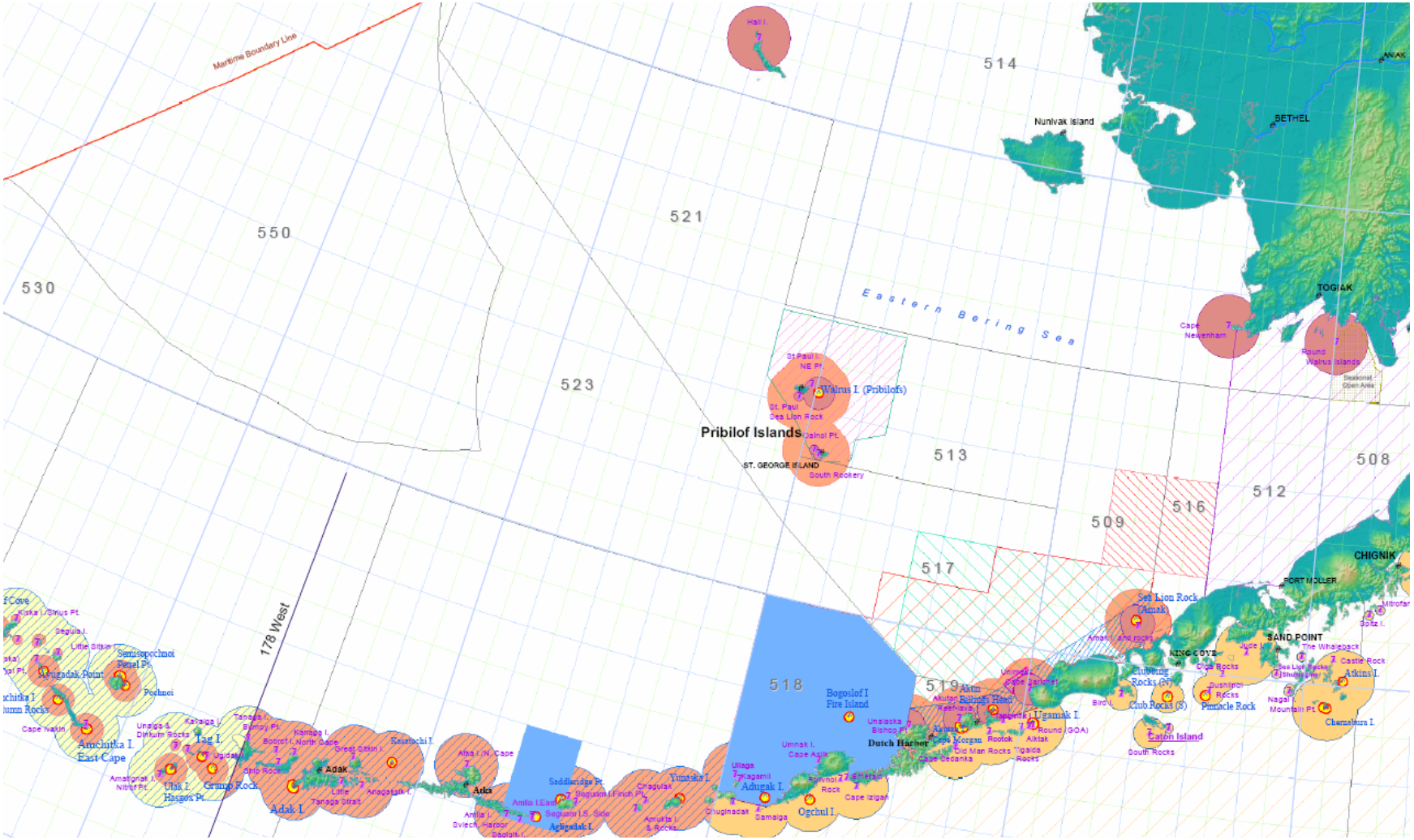
Catch ≤ TAC ≤ ABC < OFL

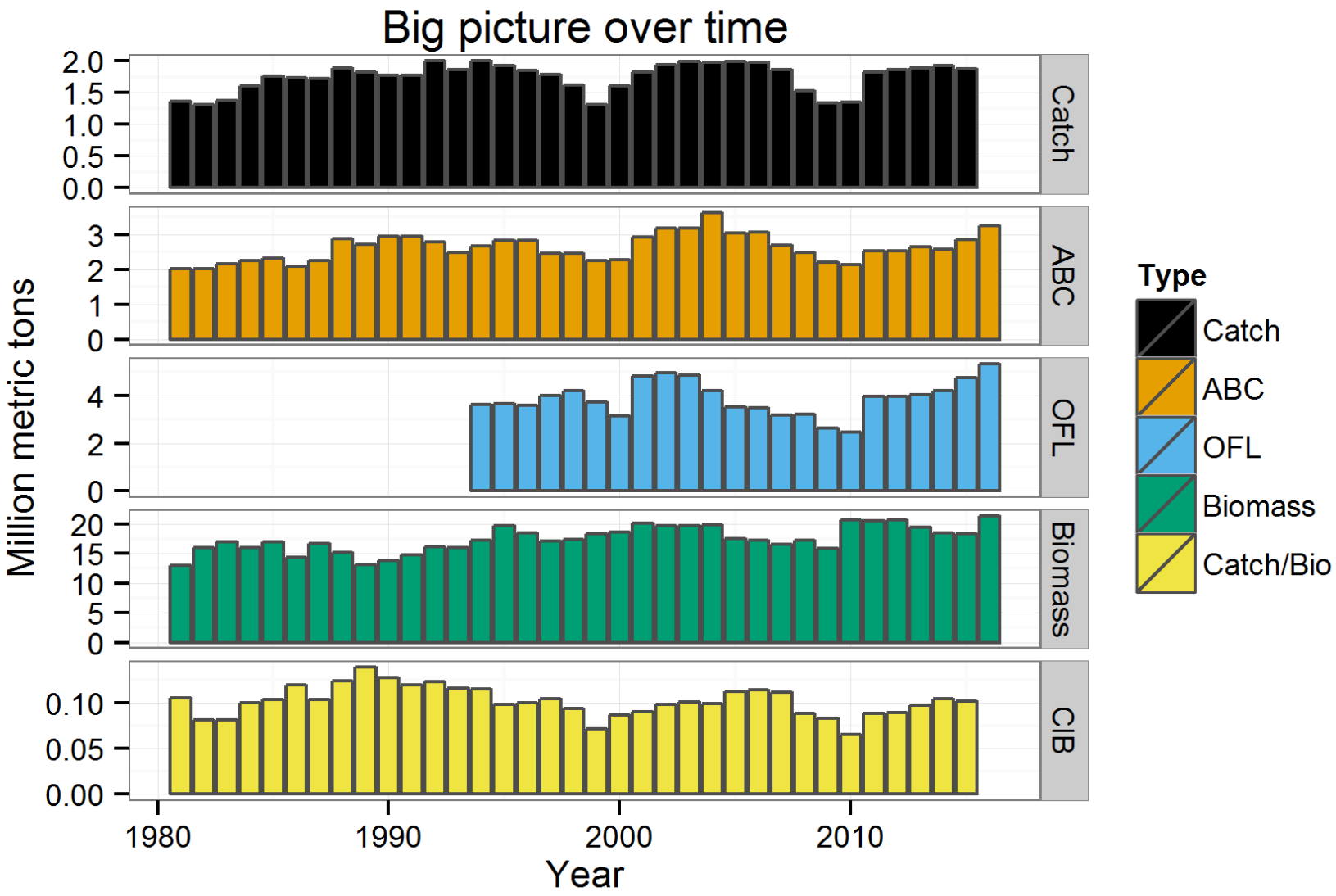


Management measures



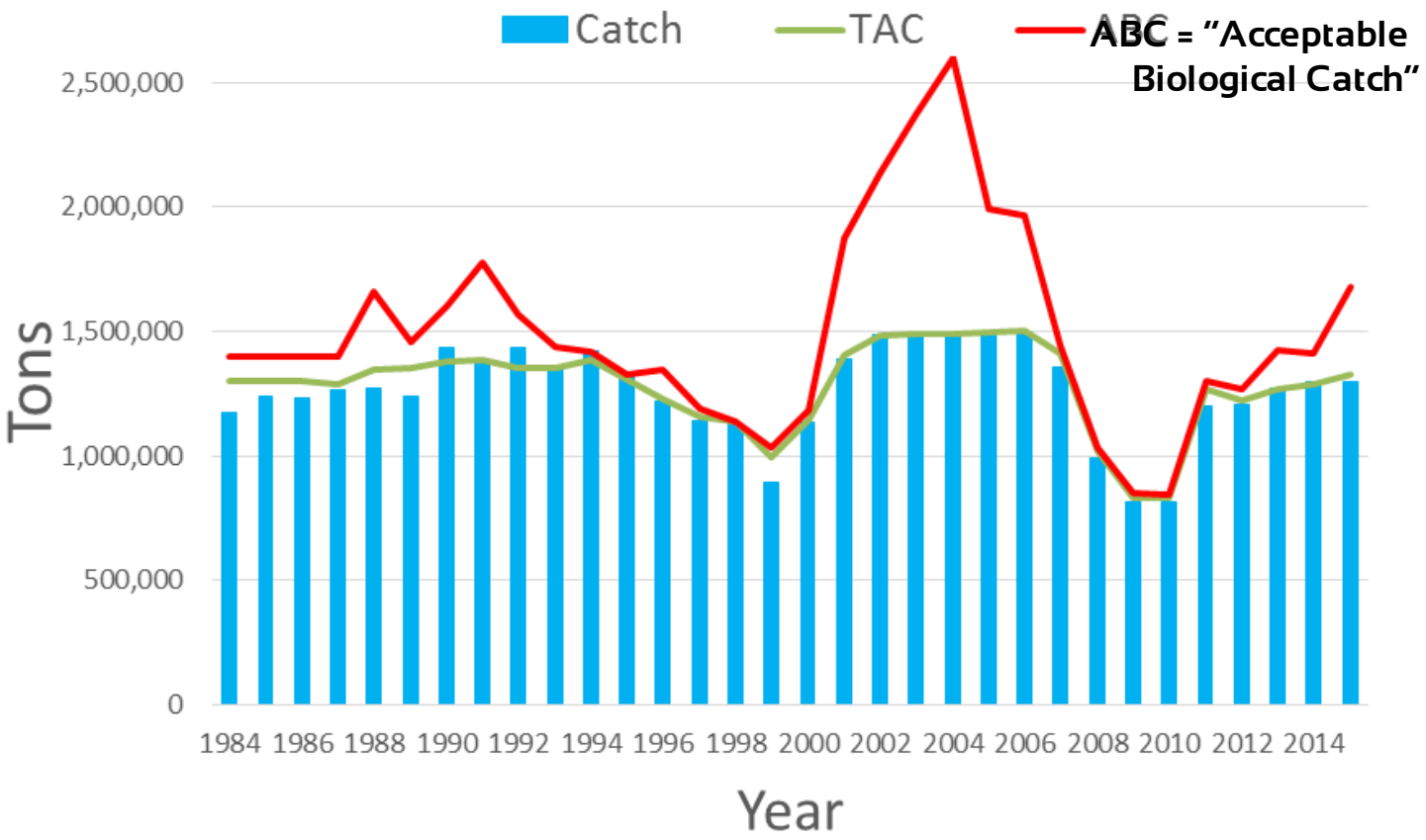
Management measures



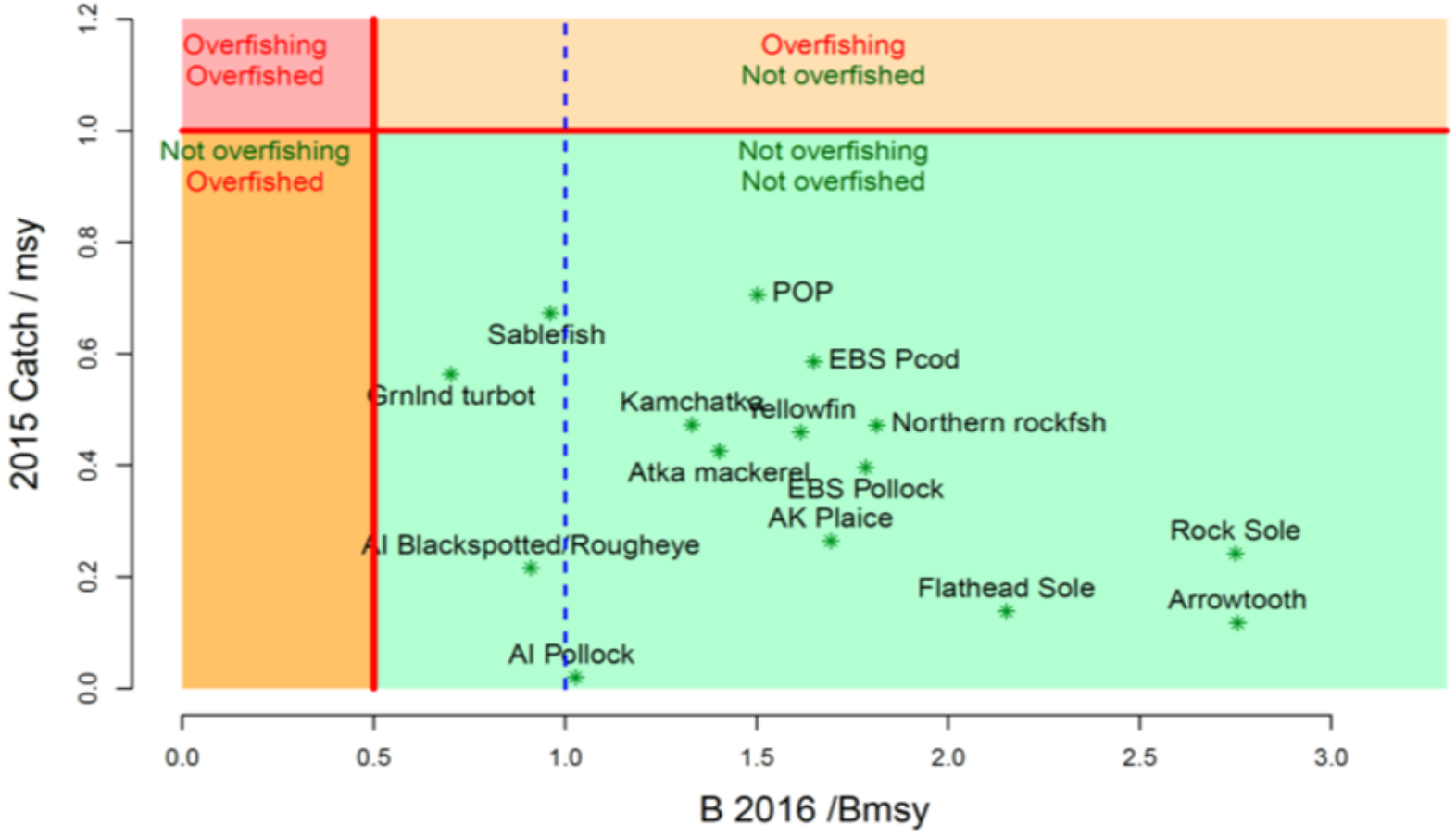

Big picture over time
Million metric tons
Catch
ABC
OFL
Biomass
CIB
2.0
1.5
1.0
0.5
0.0
3
2
1
0
4
2
0
20
15
10
5
0
0.10
0.05
0.00
1980
1990
2000
2010
Year
Type
Catch
ABC
OFL
Biomass
Catch/Bio

Catch relative to limits

EBS pollock



Bering Sea and Aleutian Islands 2015 summary for main stocks



Alaska pollock - E Bering Sea

(Country: US; Gear: TM; MSC-Client: APA; MSC-Status: MSC Recertified;)

permalink: http://www.fisherieswiki.org/site/goto_profile_by_uuid/643eda28-2687-11dd-a4e9-daf105bfb8c2

This profile is part of the Alaska pollock - E Bering Sea group

This profile last updated on 8th September 2015 (History) | Download PDF | Cite this profile

Highlight Acronyms

contribute to this profile

Do you see anything on this page with which you disagree? Want to comment on this sustainability information? Rate this profile? Have a question about something? Let us know!. And if you want to contribute by editing this profile, apply to edit this profile.

add to favourites | give us feedback | rate this profile | apply to edit this profile. Why?

Identification | Data | Improvements | Basics | Sources | Feedback

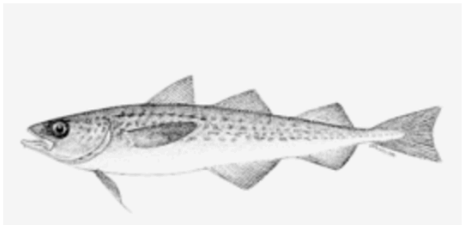
This section last updated on 22nd July 2013

A proportion of the total catch taken from this stock (midwater trawl) has been allocated to an MSC certification unit that lumps Eastern Bering Sea and Aleutian Islands stocks together. This fishery was recertified by the Marine Stewardship Council system in December 2010. Click here to link to the MSC fishery page and to learn more about the MSC fishery certification unit.

Jurisdiction
United States

Fisheries Management areas
Alaska, FAO 67 (Pacific, Northeast)

Gear types
Midwater trawls - midwater trawls (not specified)



Marine Stewardship Council

Certified sustainable seafood

Home | About us | Healthy oceans | Track a fishery | Get certified! | Global impacts | Cook, eat, enjoy | Where to buy | New

YOU ARE HERE: Home › Track a fishery › Fisheries in the MSC program › Certified fisheries › Pacific › Alaska Pollock- Bering Sea and Aleutia

- Fisheries in the MSC program
  - Certified fisheries
    - Arctic Ocean
    - Indian Ocean
    - Inland
    - North-east Atlantic
    - North-west Atlantic
    - South Atlantic / Indian Ocean
    - Pacific

Alaska Pollock - Bering Sea and Aleutian Islands

Last Updated: 14 January 2016

Certified as sustainable on 14 February 2005.
Re-certified on 14th December 2010 and 14 January 2016.

The Conformity Assess… Americas, Inc., has announced that the Alaska pollock - Be… has been re-certified for the second tim… View the MSC news release or assessm…

Largest US fishery proves it's sustainable, again

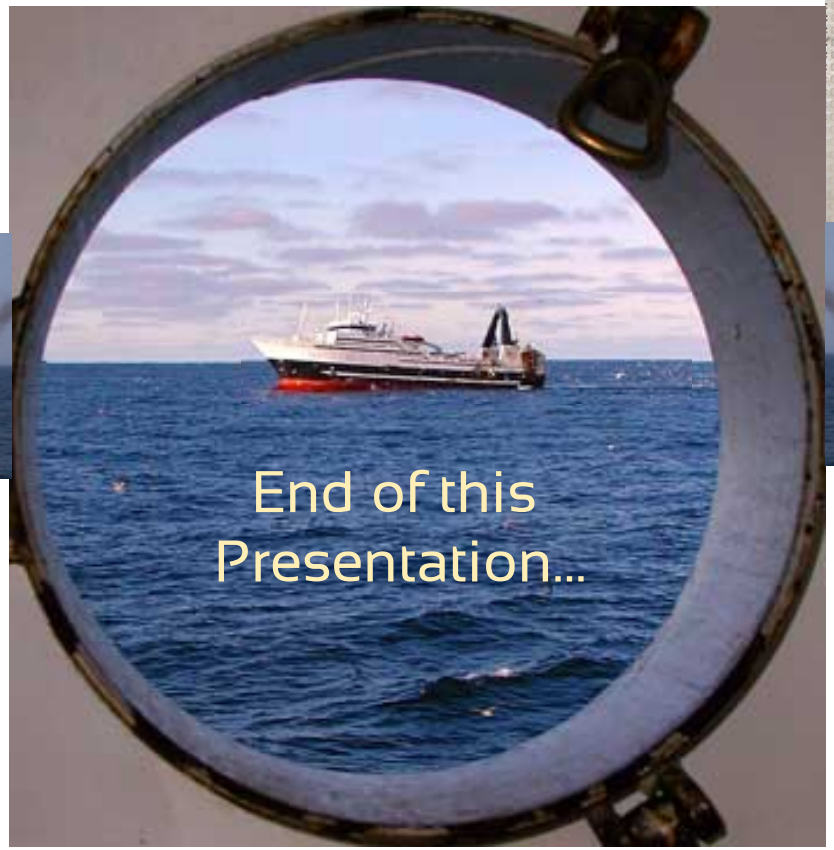
Jan 14, 2016

© Dan Lamont/ courtesy of Genuine Alaska Pollock Producers

The largest fishery in the U.S. and the largest certified sustainable fishery in the world, Alaska Pollock, has again achieved re-certification to the Marine Stewardship Council (MSC) Fisheries Standard. This science-based standard is the world's most credible and recognized standard for environmentally sustainable wild-caught seafood. The Bering Sea, Aleutian Islands and Gulf of Alaska Pollock fisheries have been certified to this standard since 2005.

...there are many facets to north Pacific fishery management besides just results from single species assessments...


mortality
trawl
indicate
increased
changes
sea
years
also
fishing
bottom
fisheries
value
region
expected
surveys
equal
assessment
rates
Tier
variability
since
compared
million
population
BTS
within
species
index
average
harvest
stock
based
fish
values
Fmsy
ABC
lower
distribution
relatively
future
area
consistent
observed
Aleutian
pollock


End of this
Presentation...