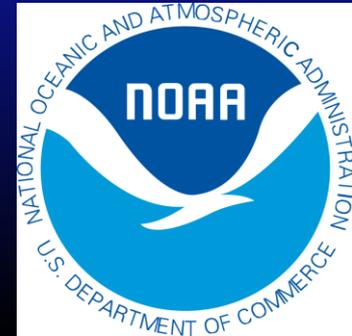


The Pacific Fishery Management Council's Groundfish Stock Assessment and Management Process

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Pacific Fishery Management Council



Overview

- Evolution of the assessment process
- Management changes since 2000
- New harvest management framework
- Description of the biennial assessment and management process
- Public involvement in the assessment process

Evolution of the Assessment Process

A Sea Change in the late 1990s-early 2000s

- Sustainable Fisheries Act of 1996 created a more stringent conservation mandate
- West coast groundfish fishery declared a disaster in 2000
 - Science judged to be inadequate
 - Stock biomasses and productivities largely overestimated
- Overfished declarations for bocaccio, lingcod, POP in 1999; cowcod, canary, and darkblotched rockfish in 2000; widow rockfish in 2001; yelloweye rockfish and Pacific whiting in 2002

Evolution of the Assessment Process

Science Improvements

- **Annual (vs. triennial) trawl surveys implemented in 2002**
 - Survey design improved
 - Survey area expanded
- **Improved assessment models**
- **More rigorous and independent peer review of assessments**
 - Transition from GMT review to STAR panel review with CIE involvement
- **Formal Terms of Reference defining roles and responsibilities**

Management Changes Since 2000

- **Rockfish Conservation Areas (2002)**
- **VMS for all Commercial Vessels Landing Groundfish**
- **Gear Restrictions**
 - **Development of more selective gears (e.g., selective flatfish trawls with cut-back headropes and small diameter footropes)**
- **Intensive Inseason Management to Shift Effort Away from High Bycatch Areas**
- **Trawl Permit/Vessel Buyback (2004)**
- **Trawl Catch Share Program (2011)**

Fishery CPUE is commonly used as an indicator of population abundance elsewhere; however, the cumulative stream of changes in management restrictions and the fishery makes their use very challenging here

New Harvest Management Framework

OFL = Overfishing Level

ABC = Allowable Biological Catch

ACL = Annual catch limit

ACT = Annual catch target

Scientific
uncertainty

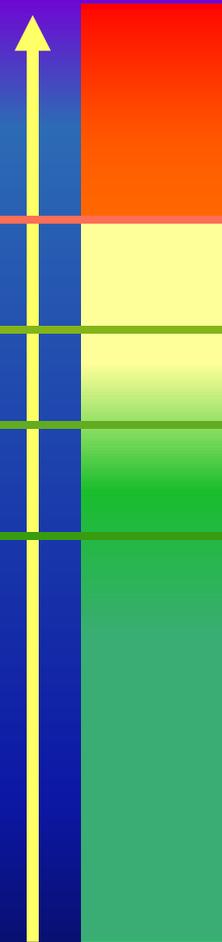
Mgmt.
uncertainty

$$OFL > ABC \geq ACL > ACT$$

$$OFL = F_{MSY} * B_{Exploitable}$$

$$ABC = OFL * Buffer$$

(size of buffer is based on
assessment category (σ) and
risk tolerance (P^*))



Biennial PFMC

Assessment and Management Process

- Biennial process implemented in 2005
- Annual process dedicated staff resources to do assessments and to decide and implement new specifications and management measures
- Biennial process allowed Council and NMFS staff resources to be devoted to other Council priorities
- Biennial process allowed Council and NMFS staff to pursue other “off year” science activities than assessments (e.g., methodology workshops)

The Biennial Stock Assessment and Management Process

Year 1 of Biennial Cycle

2014	March	April	June	July-Aug	Sept	Oct-Dec
Assessment	Initiate 2015 assessment planning with PFMC		Continue research and preparation for 2015, including: solidifying ageing priorities; workshops; begin assessments			
Management	Continue 2015-16 spex decision-making process		Final 2015-16 Spex	Notice and comment on 2015-16 spex	Finalize 2015 assessment list, STAR schedule, and ToRs (to inform management in 2017 and beyond); Notice and comment on 2015-16 spex	Notice and comment on 2015-16 spex
	Consider 2015 assessment options		Determine near final 2015 assessment list and changes to ToRs			

The Biennial Stock Assessment and Management Process

Year 2 of Biennial Cycle

2015	March	April-May	June	July-Aug	Sept	Oct-Dec
Assessment	Finalize draft assessments for April/May STAR panels; Work on assessments for later STAR panels	"Early" assessments reviewed at STAR panels; Finalize draft update assessments	SSC reviews early assessments, and update assessments; Later assessments reviewed at STAR panels (if scheduled)	Later assessments reviewed at STAR panels	SSC reviews later assessments; SSC GF Subcm reviews any problematic assessments at the "mop-up" STAR panel	SSC reviews "mop-up" assessments and rebuilding analyses
Management		Council staff, GAP, and GMT advisors attend STAR panels	Council staff, GAP, and GMT advisors attend STAR panels (if scheduled); Council adopts SSC-recommended assessments	Council staff, GAP, and GMT advisors attend STAR panels	Council staff, GAP, and GMT advisors attend "mop-up" STAR panel; Council adopts SSC-recommended assessments; Council begins deciding 2017-18 spex	Council adopts SSC-recommended assessments and rebuilding analyses; Council continues deciding 2017-18 spex

Further Details Regarding The Biennial Process

- **NMFS and Council staff coordinate with the SSC on scheduling STAR panels and deciding on STAR panel chairs**
- **Council staff selects 4th STAR panel reviewers**
 - **Limited list of qualified reviewers with west coast groundfish assessment expertise**
 - **Candidates cannot have a conflict of interest**
- **Assessments due 3 weeks prior to STAR panels**
 - **1st week dedicated to reviewing draft assessments to assure ToR compliance (Council staff, SAC, and STAT responsibility)**
 - **Draft assessments distributed to STAR reviewers 2 weeks in advance of the STAR panel**

Public Involvement in the Assessment Prioritization Process

- Two meeting process
- All meetings noticed in the Federal Register, on Council web site, and in an email listserve
- Fully transparent process - all meetings are open to the public and public comment is solicited
- Recommendations solicited from science advisors (NMFS science centers and SSC), industry (GAP), management entities (Feds, Tribes, states, GMT), and public
- All meeting materials including advisory body reports and meeting minutes available online at pcouncil.org

Public Involvement in the Assessment Review Process

- STAR panels are noticed in the Federal Register and through an email listserve and public participation is encouraged
- Formal advisors to STAR panels include a GAP representative, a GMT representative, and a Council staffer
- STAR panel reports are publicly available and archived at <http://www.pcouncil.org/groundfish/stock-assessments/>

Availability of Assessments

- **All Assessments, STAR Panel reports, and advisory reports available online at pcouncil.org**
 - **Organized by year or by species**

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By Species

By Year

Terms of Reference

1984

1985

1986

1987

1988

1989

1990

1991

1992

1993

1994

1995

1996

1997

1998

1999

2000

By Year: 2013

- [Stock Assessment of Aurora Rockfish](#) in 2013 (Published December 27, 2013)
- [STAR Panel Report for Aurora Rockfish](#) (July 2013)
- [The Status of Rougheye Rockfish \(*Sebastes aleutianus*\) and Blackspotted Rockfish \(*S. melanostictus*\) as a Complex Along the U.S. West Coast in 2013](#) (Published January 6, 2014)
- [STAR Panel Report for Rougheye \(and Blackspotted\) Rockfish](#) (July 2013)
- [Status of Bocaccio, *Sebastes paucispinis*](#), in the Conception, Monterey and Eureka INPFC areas as evaluated for 2013 (Submitted January 17, 2014)
- [Status of the Darkblotched Rockfish](#) Resource off the Continental U.S. Pacific Coast in 2013 (Published March 2014)
- [Darkblotched Rockfish STAR Panel Report](#) (May 2013)
- [Stock Assessment and Status of Longspine Thornyhead \(*Sebastolobus albiguttus*\)](#) off California, Oregon and Washington in 2013 (Published January 5, 2014)
- [Longspine Thornyhead STAR Panel Report](#) (July 22-26, 2013)
- [Status of the Pacific Hake \(whiting\) Stock](#) in U.S. and Canadian Waters in 2013; Final Document (March 4, 2013)
- [Status of the U.S. Pacific Sanddab](#) Resource in 2013 (August 2013)
- [Pacific Sanddab STAR Panel Report](#) (August 2013)
- [Status of the U.S. Petrale Sole](#) Resource in 2012 (Published July 2013)
- [Petrale Sole STAR Panel Report](#) (May 2013)
- [The Status of Rougheye Rockfish \(*Sebastes aleutianus*\) and Blackspotted Rockfish \(*S. melanostictus*\) as a Complex Along the U.S. West Coast in 2013](#) (Published January 6, 2014)
- [STAR Panel Report for Rougheye \(and Blackspotted\) Rockfish](#) (July 2013)
- [Stock Assessment of Shortspine Thornyhead](#) in 2013 (Published February 12, 2014)
- [Shortspine Thornyhead STAR Panel Report](#) (July 2013)

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[Groundfish Fishery Management Plan as Amended \(May 2014\)](#)

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