



NOAA
FISHERIES

Northwest
Fisheries
Science Center

Groundfish Science Report

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November 4, 2012

Overview

- **Data-Moderate Assessments – Overview**
- **Process Straw Dog Using Data-Moderate Assessments**
- **Groundfish Total Mortality Report**

Data-Moderate Assessments

What is a data-moderate assessment?

Council Assess. Tier	Assessment type	Data types; Model attributes	Catch Buffer (OFL-ABC)
3	Data Poor (DCAC; DB-SRA; SSS)	Catch, basic life history	Highest
2	Data Moderate (XDB-SRA; exSSS)	Catch, basic life history, abundance indices; No recruitment/selectivity estimation	Medium
1	Full Stock Synthesis (SS)	Catch, detailed life history, indices, length/age comps, environmental indices; Complex structure poss.	Lowest

Why Use a Data-Moderate Assessment

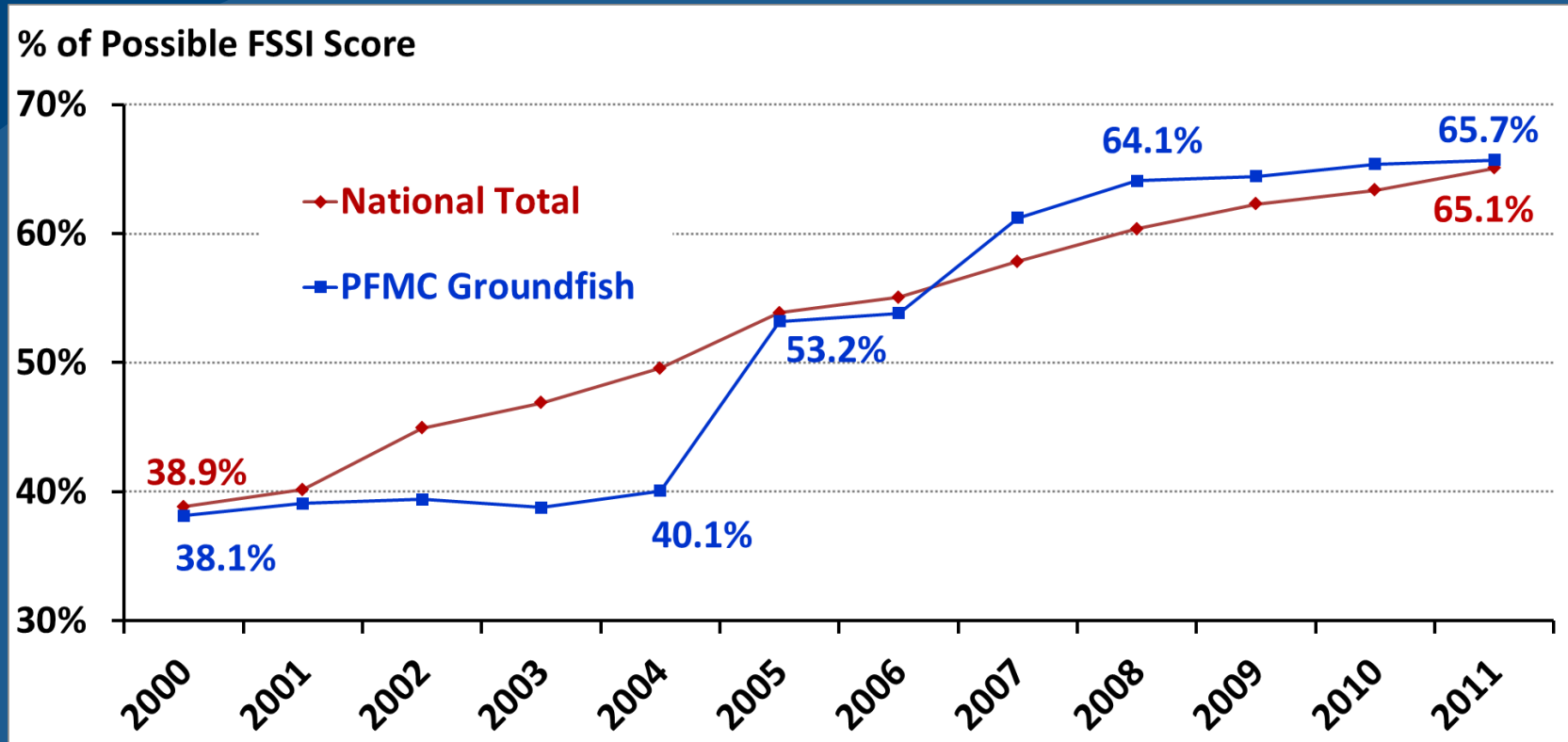
- Data Availability -- often not there
- Meet National requirements
 - More adequate assessments

FSSI – Fishery Stock Sustainability Index

- Tracks a fixed list of species over time
 - Includes 39 stocks from PFMC Groundfish FMP
- Points are awarded based on knowledge of stock and fishing status, and the level of status, based on adequate assessments less than 6 years old:

<p>SCORING</p> <p>Points are cumulative</p> <p>A total of 4 points are possible for each stock</p>	Stock Condition	Pts	Fishery Condition	Pts
	“Overfished” status is known	0.5	“Overfishing” status is known	0.5
	Stock biomass is above the defined “overfished” level	1.0	“Overfishing” is not occurring	1.0
	Stock biomass \geq 80% of B_{MSY} target	1.0		

FSSI in Annual Report to Congress: A scorecard for measuring performance



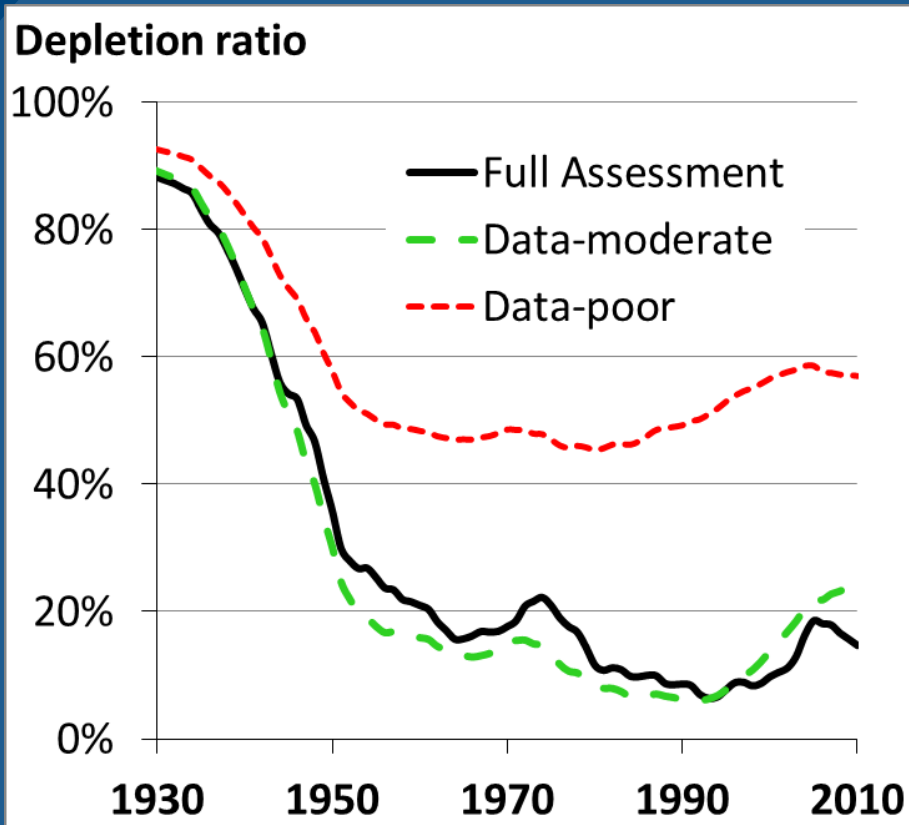
"The value of the FSSI has been calculated since 2000. Out of a possible 920 points, the index has increased from 357.5 in 2000 to 598.5 in 2011. This 67 percent increase represents significant progress in managing our fisheries sustainably."

– 2011 Report to Congress

Examples of good Data-Moderate Performance

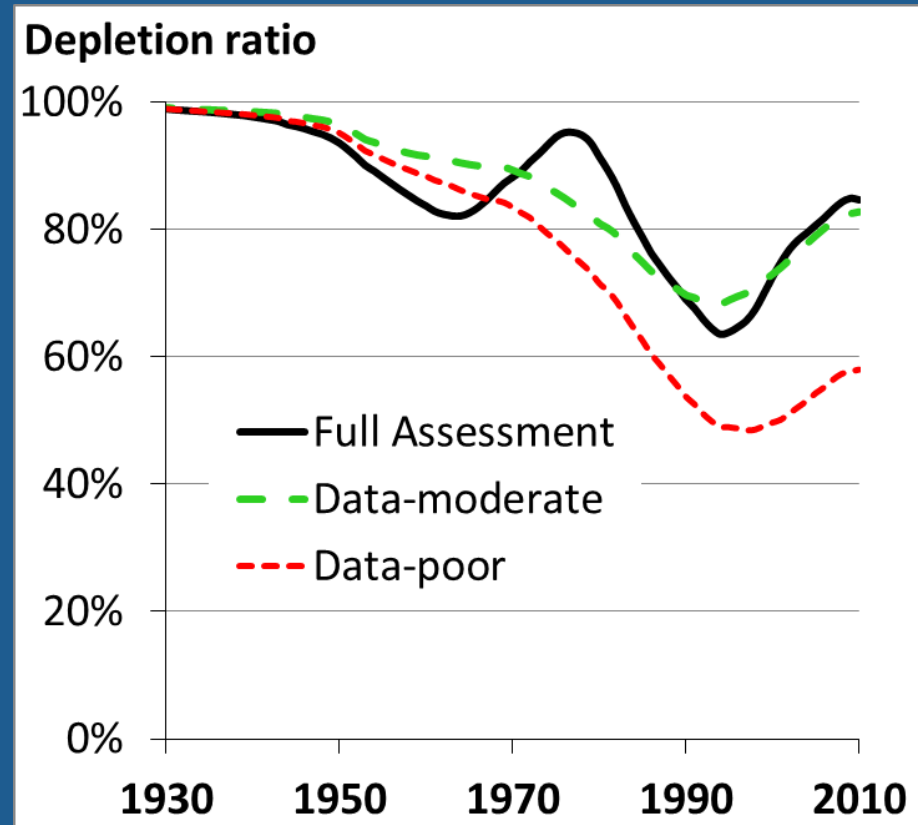
Petrale sole

Data-poor overestimates status.



Dover sole

Data-poor underestimates status.



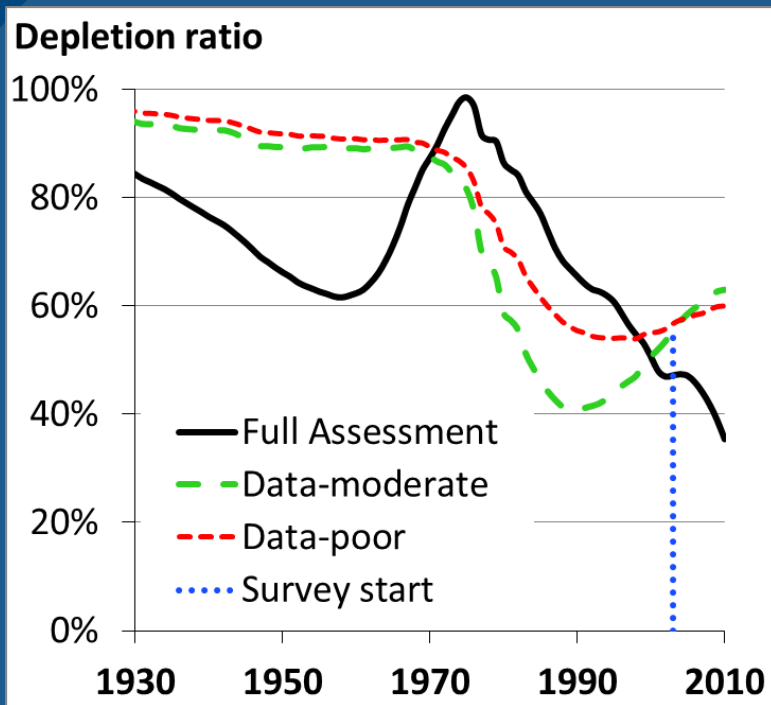
Data-Moderate Assessments

Data-moderate assessments are easier to conduct and review than full assessments, because the required assumptions and restrictions on data types:

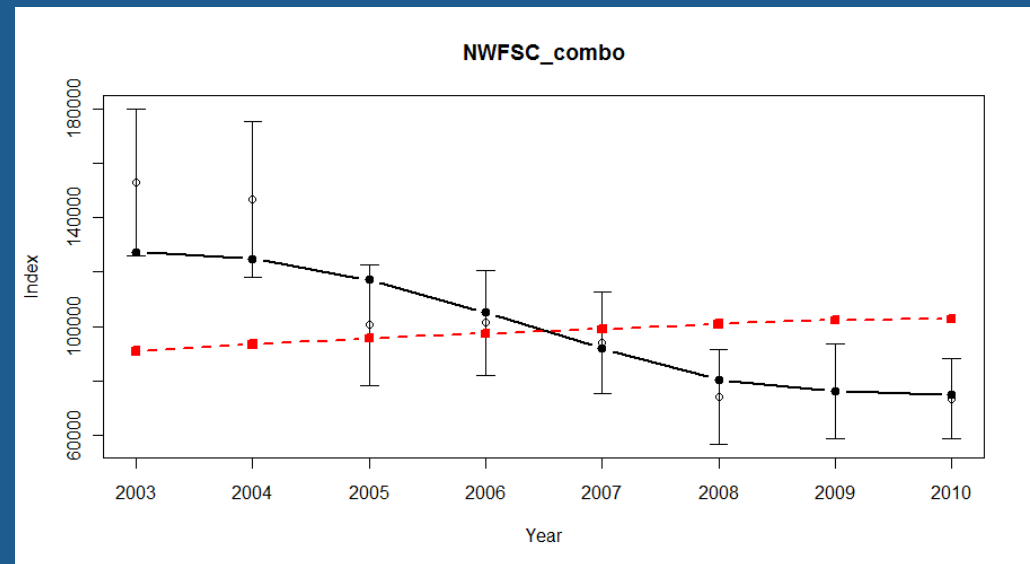
- Limit the number of alternative model structures and sensitivities that can be explored.
- Reduce the time needed to review the model and its performance diagnostics
- Provide fewer review-panel options for model exploration between acceptance and rejection, expediting the review process

Determining whether a data-moderate assessment "fits"

Sablefish



Mis-match between survey index and data-moderate assessment for sablefish



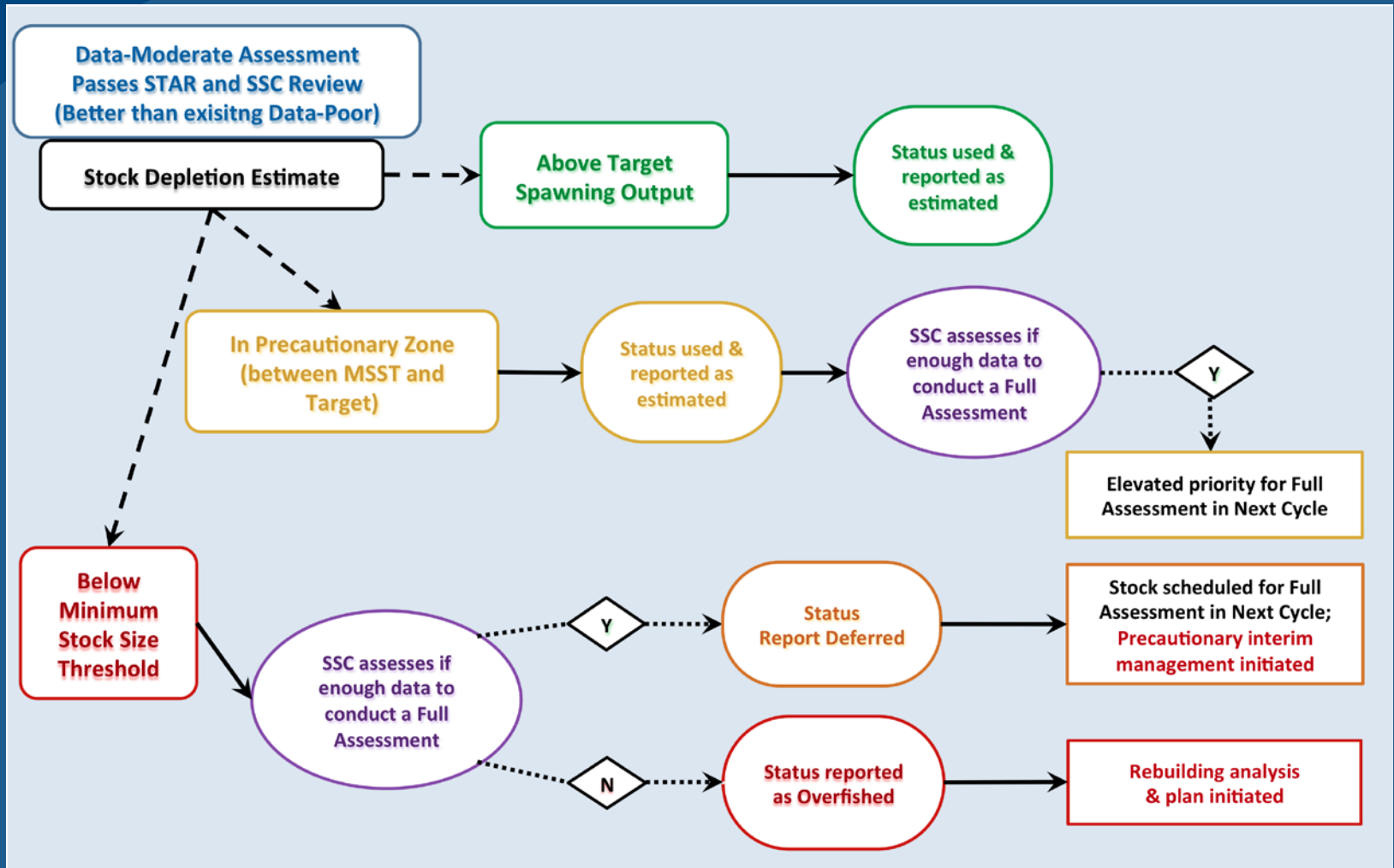
Data-Moderate Assessments

- Improve FSSI score, with limited resources
 - Indicate progress; Show return on investment for past increases in assessment funding
 - PFMC Groundfish score has stagnated, due to:
 - Limitations imposed by the STAR process
 - Focus on rebuilding species
 - Reduction in non-NMFS participation in assessments
- Provide the Council with improved information for management
 - Improved OFL estimates and smaller uncertainty reductions used in setting ABCs
 - Estimates of depletion that do not rely on *assumptions* about the current depletion level

Proposal for a Process – Using Data-Moderate Assessments in Status Determinations.

For more work by committee

Proposed Approach for Use of Stock-Status Estimates from Data-Moderate Assessments



Groundfish Total Mortality Report



Estimated Discard and Catch of Groundfish Species in the 2011 US West Coast Fisheries

- Report and Excel tables (Bellman et al. 2012)

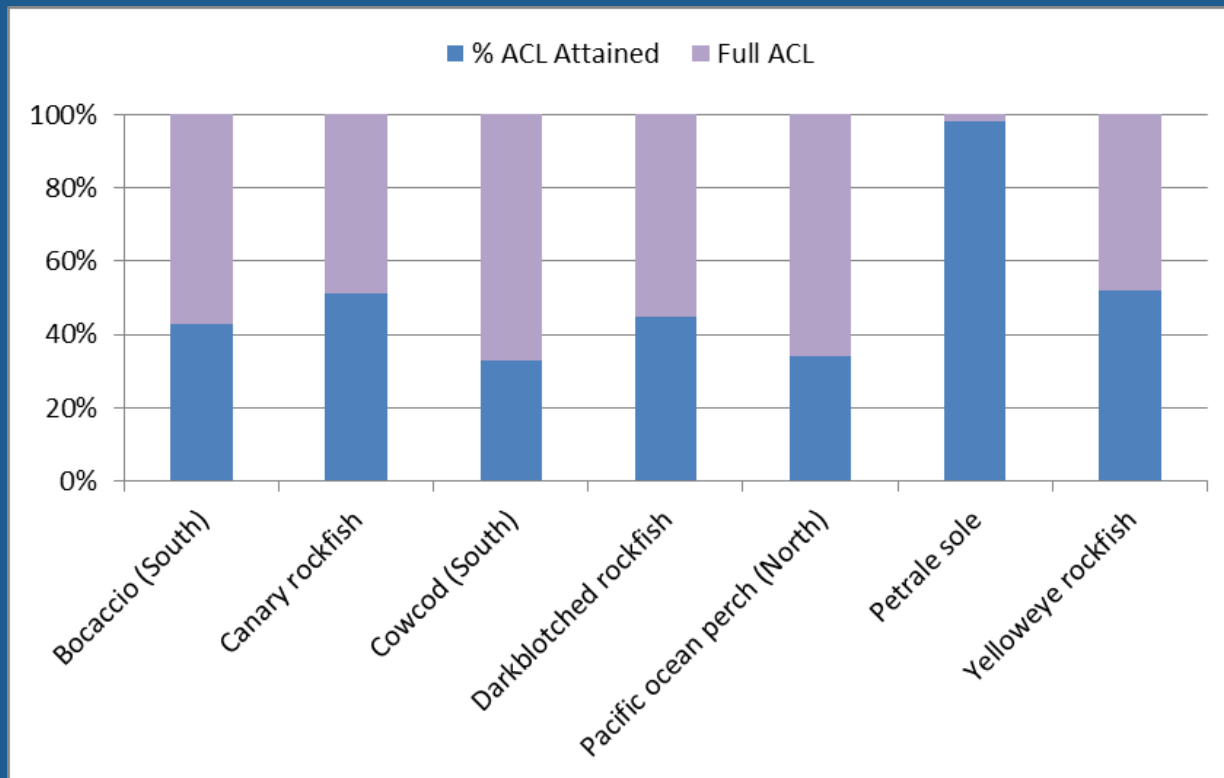
http://www.nwfsc.noaa.gov/research/divisions/fram/observer/species_management.cfm

- Major updates:
 - Harvest guidelines (ACL, OFL vs. old OY, ABC)
 - Species-specific reporting
 - IFQ/Coop management and methods

Groundfish - 2011 US West Coast Fisheries

Estimated fishing mortality – rebuilding spp.

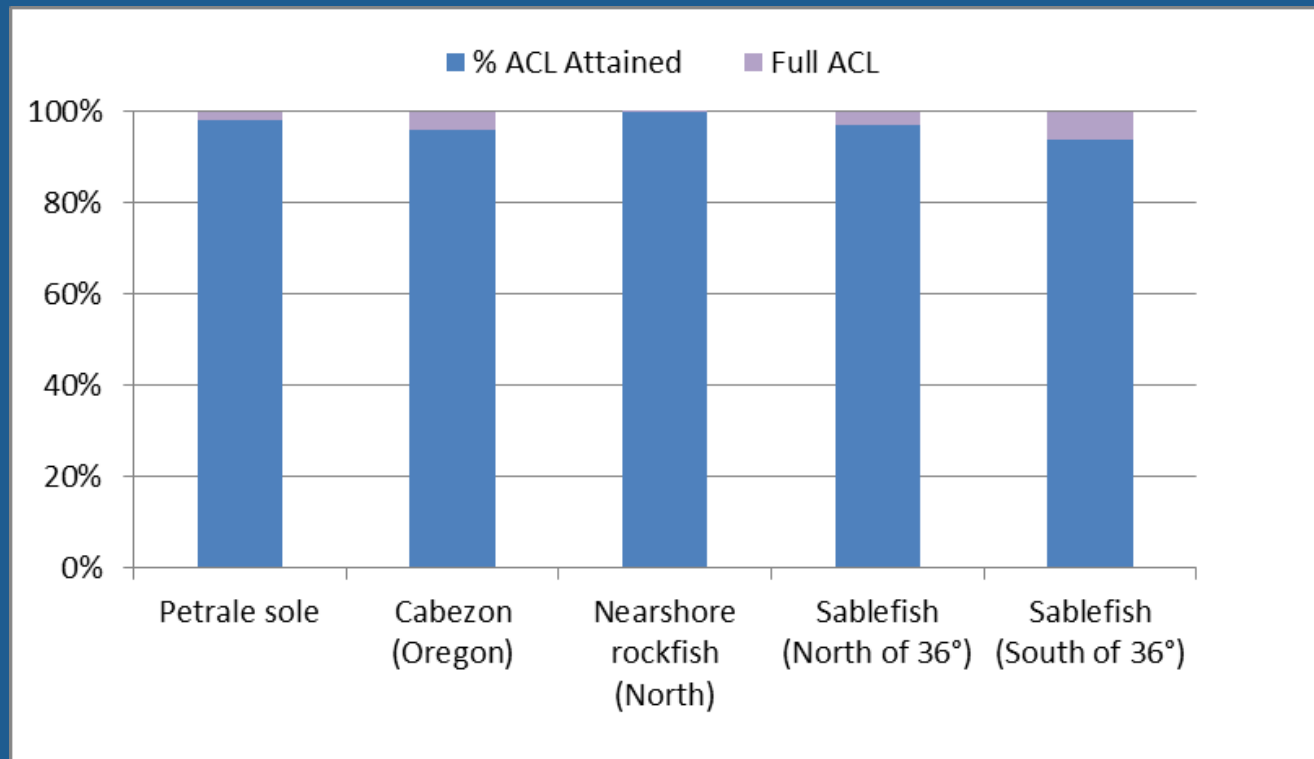
- All species within 2011 harvest guidelines



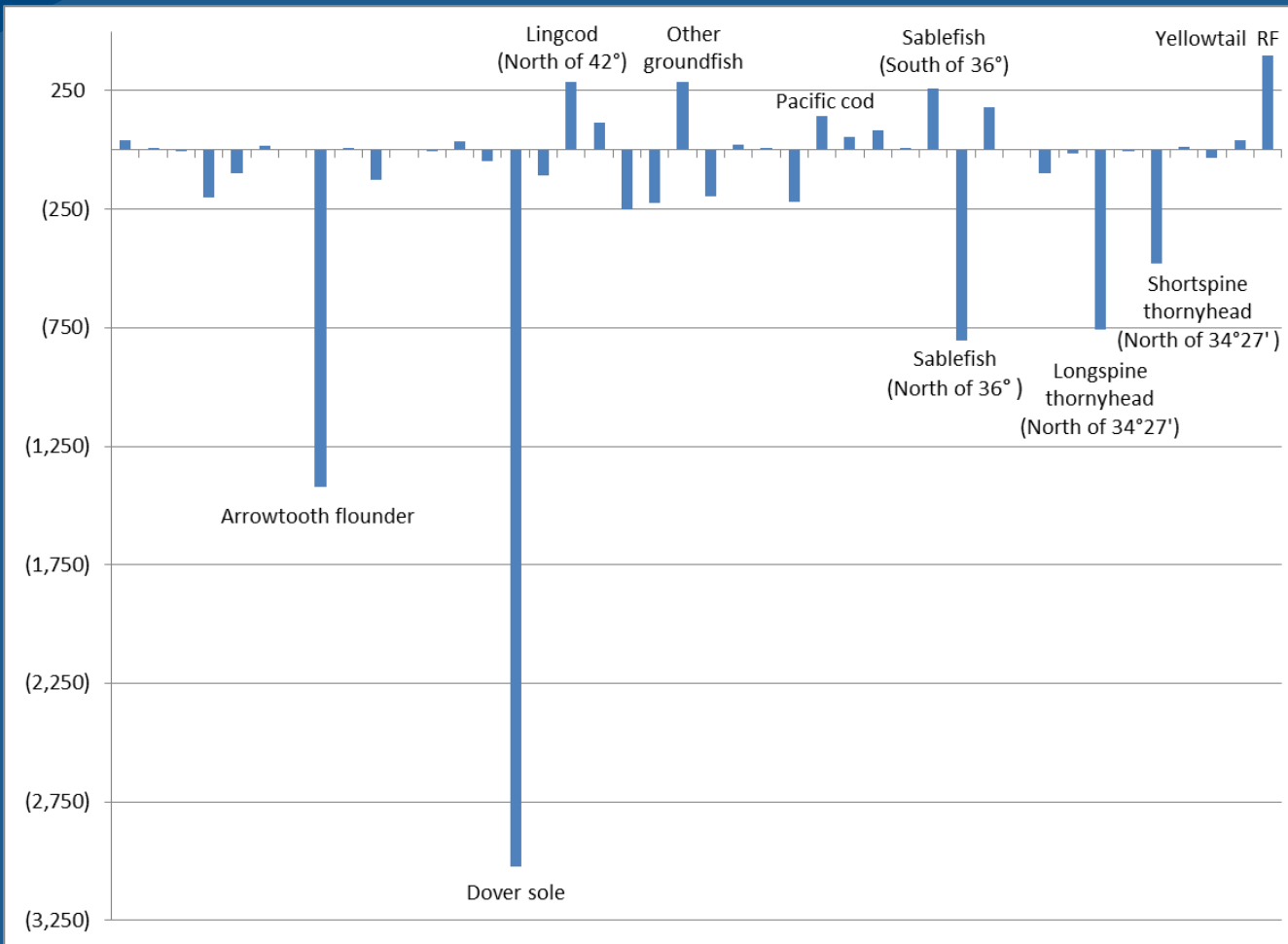
Groundfish - 2011 US West Coast Fisheries

Estimated fishing mortality

- Species within 90% of ACL



2011 versus 2010 (mt)



Alternate values with new mortality rates

		Without GMT Discard Mortality Rates	With Discard Mortality Rates
Longnose Skate			
Mortality		1133	969
ACL	1349	84%	72%
ABC	2990	38%	32%
OFL	3128	36%	31%
Spiny Dogfish (component of Other Groundfish)			
Mortality		2521	2448
ACL	5575	45%	44%
ABC	7742	33%	32%
OFL	11150	23%	22%

Alternate values with new mortality rates

		Without GMT Discard Mortality Rate	With GMT Discard Mortality Rate
Longnose Skate (mt)			
2011 Mortality		1133	969
ACL	1349	84%	72%
ABC	2990	38%	32%
OFL	3128	36%	31%
Spiny Dogfish (mt)			
2011 Mortality		1662	1589
(Species Contribution to Other Fish Complex)			
ABC	1100	76%	72%
OFL	2200	76%	72%

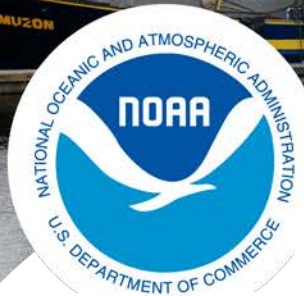
Original slide (#19) and presentation did not fully explain that spiny dogfish contribution was included in the numbers for the 'Other Groundfish' OFL/ABC/ACL. This slide separates out spiny dogfish mortality only and demonstrates that this species did not reach management targets.

2011 WCGOP Observer Coverage

IFQ Fishery	Coverage Rate (Hauls)
Trawl Gear	94.8% (of catch)
Hook-and-Line Gear	99.9% (of catch)
Pot Gear	99.7% (of catch)
Shoreside Hake	99.9% (of Pacific hake catch)
LE California Halibut	99.0% (of CA halibut landings)

100% of IFQ fishing trips in 2011 carried an observer.

Fishery	Coverage Rate (% Fleet Landings)	Trend (relative to 2010)
LE Sablefish Primary	25%	Lower, but landings down
LE Non-sablefish Fixed Gear	10%	Higher, but landings increase
Nearshore Fixed Gear	6%	Higher, but landings increase
Pink Shrimp Trawl	14%	Higher, but landings increase
OA California Halibut	14%	Higher, but landings down
OA Fixed Gear	6%	Higher, but landings down



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NWFSC

Presentation and Discussion— Joint Survey 2012 (Hake-Sardine)

Emerald Bay II

Monday, Nov. 5, 7 pm.