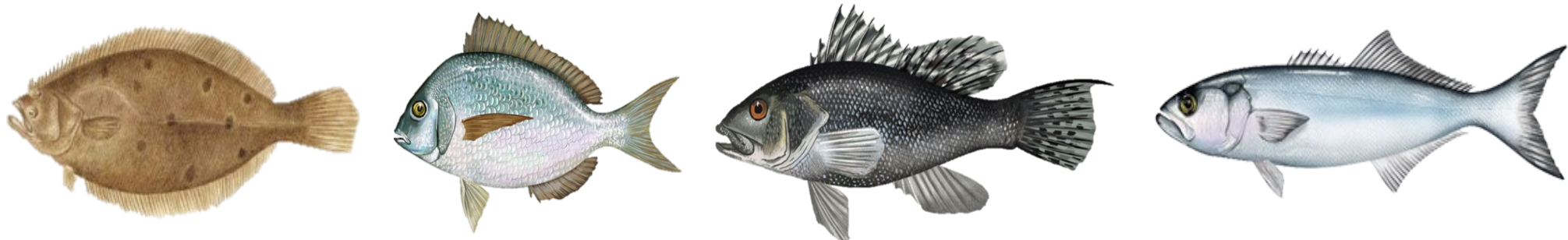


# Recreational Measures Setting Process Framework/Addenda



SSC Meeting  
May 15, 2024

- Background
- Brief overview of management alternatives
- Planned and ongoing analyses
- Timeline





**Tracey Bauer**  
ASMFC



**Julia Beaty**  
MAFMC



**Chelsea Tuohy**  
ASMFC



# FMAT/PDT



Name	Agency	Role/Expertise
Tracey Bauer	ASMFC	FMAT/PDT Co-Chair
Julia Beaty	MAFMC	FMAT/PDT Co-Chair
Chelsea Tuohy	ASMFC	FMAT/PDT Co-Chair
Mike Celestino	NJ DEP	Technical analysis and state management
Alexa Galvan	VMRC	Technical analysis and state management
Carolyn Iwicki	NMFS GARFO	Scientific and technical analysis of federal fisheries management
Emily Keiley	NMFS GARFO	Fisheries policy and legal requirements
Marianne Randall	NMFS GARFO	NEPA
Scott Steinback	NEFSC	Recreational fisheries economist
Rachel Sysak	NY DEC	Technical analysis and state management
Corinne Truesdale	RI DFW	Technical analysis and state management
Sam Truesdell	NEFSC	Stock assessments
Sara Turner	NMFS GARFO	Scientific and technical analysis of federal fisheries management

- Uncertainty and variability in MRIP data.
- Frequent changes in measures.
- Perception that measures were not reflective of stock status.
- Measures did not always have their intended effect on harvest.





# Harvest Control Rule FW/Addenda



Establish process for setting recreational measures that:

- prevents overfishing,
- is reflective of stock status,
- appropriately accounts for uncertainty in the recreational data,
- takes into consideration angler preferences, and
- provides an appropriate level of stability and predictability in changes from year to year.

- First used for 2023 measures.
- Will sunset at the end of 2025.
- Improved, longer-term process starting with 2026 measures.





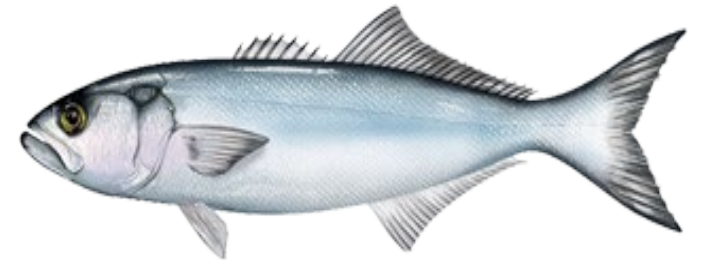
# Rec. Measures Setting Process Framework/Addenda



- New management action to consider process for 2026 and beyond.
- Draft alternatives
  - No action
  - Continued use of Percent Change Approach
  - Modified versions of Percent Change Approach
  - Biological Reference Point Approach
  - Biomass Based Matrix Approach



- None of the alternatives will change the requirements for rebuilding plans.
- Stocks in a rebuilding plan are subject to the requirements of that plan.
- Alternatives could be used to set measures for overfished stocks until a rebuilding plan is in place.



- Percent Change Approach sunsets at the end of 2025.
- Revert back to approach previously required by FMP.
- Measures set with the primary goal of allowing harvest to meet but not exceed the RHL.
- Measures set for one year at a time.





# Percent Change Approach



<i>Column 1</i> <b>Future RHL vs Estimated Harvest</b>	<i>Column 2</i> <b>Biomass compared to target level (<math>B/B_{MSY}</math>)</b>	<i>Column 3</i> <b>Change in Harvest</b>
Future 2-year avg. RHL is <b>greater than</b> the upper bound of the harvest estimate CI (harvest expected to be lower than the RHL)	<b>Very high</b> ( $>150\% SSB_{MSY}$ )	<b>Liberalization</b> percent equal to difference between harvest estimate and 2-year avg. RHL, not to exceed 40%
	<b>High</b> (at least $B_{MSY}$ , but no higher than 150% of $B_{MSY}$ )	<b>Liberalization</b> percent equal to difference between harvest estimate and 2-year avg. RHL, not to exceed 20%
	<b>Low</b> (below $B_{MSY}$ )	Liberalization: 10%
Future 2-year avg. RHL is <b>within</b> harvest estimate CI (harvest expected to be close to the RHL)	<b>Very high</b> ( $>150\% SSB_{MSY}$ )	Liberalization: 10%
	<b>High</b> (at least $B_{MSY}$ , but no higher than 150% of $B_{MSY}$ )	No liberalization or reduction: 0%
	<b>Low</b> (below $B_{MSY}$ )	Reduction: 10%
Future 2-year average RHL is <b>less than</b> the lower bound of the harvest estimate CI (harvest is expected to exceed the RHL)	<b>Very high</b> ( $>150\% B_{MSY}$ )	Reduction: 10%
	<b>High</b> (at least $B_{MSY}$ , but no higher than 150% of $B_{MSY}$ )	<b>Reduction</b> percent equal to difference between harvest estimate and 2-year avg. RHL, not to exceed 20%
	<b>Low</b> (below $B_{MSY}$ )	<b>Reduction</b> percent equal to difference between harvest estimate and 2-year avg. RHL, not to exceed 40%

<i>Column 1</i> <b>Future RHL vs Estimated Harvest</b>	<i>Column 2</i> <b>Biomass compared to target level (SSB/SSB<sub>MSY</sub>)</b>	<i>Column 3</i> <b>Change in Harvest</b>
Future 2-year avg. RHL is <b>greater than</b> the upper bound of the harvest estimate CI (harvest expected to be lower than the RHL)	<b>Very high</b> (150+%)	<b>Liberalization</b> % = difference between harvest estimate and 2-year avg. RHL, <b>not to exceed 40%</b>
	<b>High</b> (110% - 150%)	<b>Liberalization</b> % = difference between harvest estimate and 2-year avg. RHL, <b>not to exceed 20%</b>
	<b>Around the target</b> (90% - 110%)	<b>Liberalization: 10%</b>
	<b>Low</b> (50% - 90%)	<b>No liberalization or reduction: 0%</b>
Future 2-year avg. RHL is <b>within</b> harvest estimate CI (harvest expected to be close to the RHL)	<b>Very high to low</b> (at least 50%)	<b>No liberalization or reduction: 0%</b>
Future 2-year avg. RHL is <b>less than</b> the lower bound of the harvest estimate CI (harvest expected to exceed the RHL)	<b>Very high</b> (150+%)	<b>No liberalization or reduction: 0%</b> Unless an AM is triggered
	<b>High</b> (110% - 150%)	<b>Reduction: 10%</b>
	<b>Around the target</b> (90% - 110%)	<b>Reduction</b> % = difference between harvest estimate and 2-year avg. RHL, <b>not to exceed 20%</b>
	<b>Low</b> (50% - 90%)	<b>Reduction</b> % = difference between harvest estimate and 2-year avg. RHL, <b>not to exceed 40%</b>

<b>Biomass compared to target level (SSB/SSB<sub>MSY</sub>)</b>	<b>Change in Harvest</b>
<b>Overfished</b> (<50%)	No liberalizations allowed. Reduction % = difference between harvest estimate and 2-year avg. RHL. To be replaced with rebuilding plan measures as soon as possible



# Biological Reference Point Approach



Biomass Compared to Target Level	Overfishing is Not Occurring	Overfishing is Occurring
<b>Very High</b> At least 150% of the target level	R↑ R↓ B↑ liberal B↓ initial	R↑ R↓ Recent harvest B↑ initial limits not exceeded B↓ restrictive
		Recent harvest B↑ restrictive limits exceeded B↓ restrictive
<b>High</b> At least the target, but below 150% of the target level	R↑ R↓ B↑ liberal B↓ initial	R↑ R↓ Recent harvest B↑ initial limits not exceeded B↓ restrictive
		Recent harvest B↑ restrictive limits exceeded B↓ restrictive
<b>Low</b> Below the target level, but at least 50% of the target level	R↑ R↓ B↑ initial B↓ restrictive	R↑ R↓ Recent harvest B↑ initial limits not exceeded B↓ restrictive
		Recent harvest B↑ restrictive limits exceeded B↓ restrictive
<b>Overfished</b> Less than 50% of the target level	<b>Most restrictive/rebuilding plan</b>	

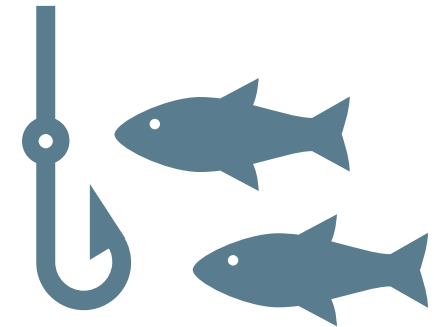


# Biomass Based Matrix Approach



B/Bmsy	Biomass Trend		
	Increasing	Stable	Decreasing
<b>Very High</b> ≥ 150%	Bin 1		
<b>High</b> 100-150%	Bin 1	Bin 2	
<b>Low</b> 50-100%	Bin 3	Bin 4	
<b>Overfished</b> <50%	Bin 5	Bin 6	

- Not management alternatives
- Considered in the context of the alternatives.
  - **Accountability measures**
  - **Target metric for setting measures**
    - E.g., a target level of recreational harvest, dead catch, or fishing mortality
  - **Starting point for measures**
  - **Management uncertainty**
  - **Impacts to the commercial sector**





# Addressing 2022 SSC Review



- New management action with a new name – not a “harvest control rule”
- Recreation Demand Model is now available and is being used
  - Angler behavior and preferences.
  - Availability at length.
- MSE analysis
- F-based analysis
- Addition of an “around the target” biomass category
- More status quo outcomes under the Percent Change Approach

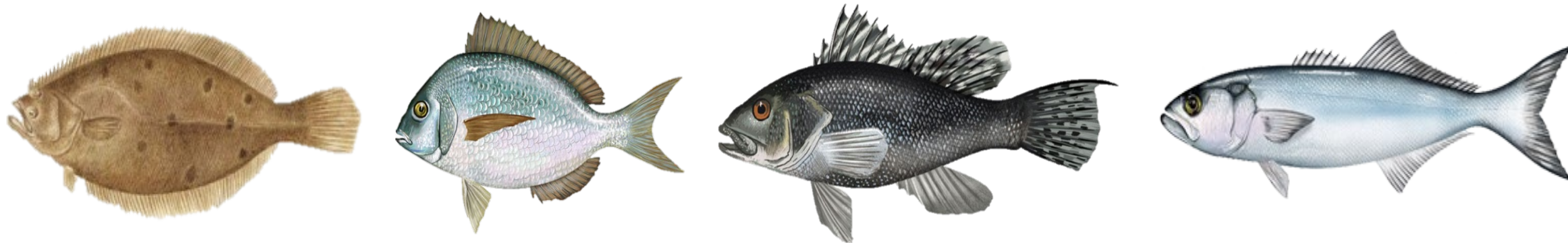


- FMAT/PDT, MSE team, and others assisting with several analyses.
  - F-based mgmt.
  - MSE analysis
  - Other topics
- End of July deadlines.
- Reviewed by FMAT/PDT.
- Alternatives can be revised as appropriate before approval of public hearing document.





# Questions?





# Backup Slides





# Terms of Reference (slide 1/3)



- 1) Provide feedback on the potential effects the alternatives might have on future ABC recommendations and scientific uncertainty considerations.
  - a) Provide an evaluation of the potential biological impacts on the stocks and potential quota impacts to the commercial sector.
  
- 2) Compare and provide a relative ranking of all alternatives in terms of their potential to: 1) provide stability in recreational measures, 2) appropriately respond to changes in stock status, and 3) prevent overfishing. Comment on other socioeconomic considerations (e.g., angler welfare) if possible based on available information. Describe tradeoffs in these considerations inherent in each alternative. These considerations can be ranked separately; they need not be combined into one ranking system. The SSC should not select an overall preferred alternative.



# Terms of Reference (slide 2/3)



- 3) Are the fishery and stock status indicators and associated threshold values reasonably defined for determining when a change in recreational management measures is needed?
- 4) Review the approaches for defining F targets for recreational measures and use of F indicators for determining when measures should change.
  - a) Review and provide feedback on the analyses to support these approaches. Are the methods sound and applied appropriately for potential application in management?
  - b) Evaluate the scientific and biological appropriateness and identify any uncertainties of partitioning stock-wide F reference points and F projections into sector-specific reference points and projections for use in management.
  - c) Comment on whether the potential recreational F-based approaches could allow recreational measures to more appropriately respond to changes in stock status compared to setting measures based on a harvest target.

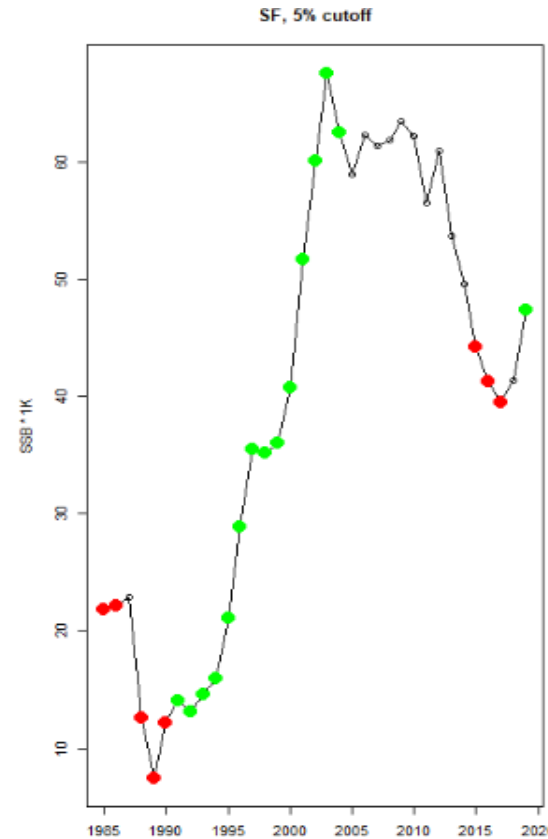
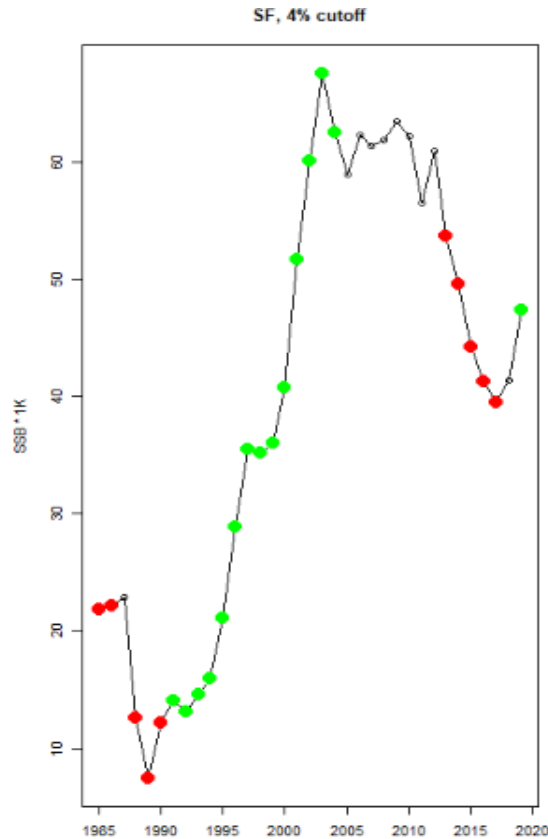
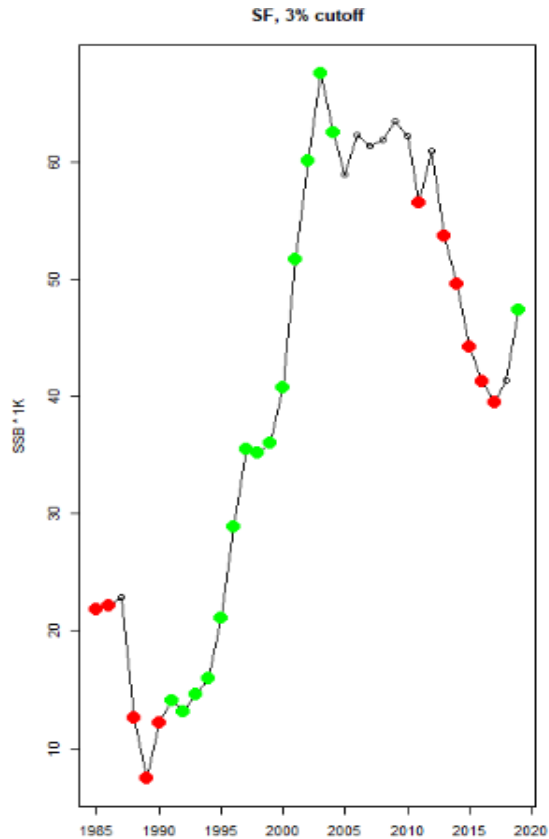


# Terms of Reference (slide 3/3)



- 5) Address the following for the MSE conclusions, if applicable:
  - a) Given the limited scope of this analysis, what are the most important results, conclusions, and caveats in the MSE report for the Council and the Commission's Policy Board to consider when selecting a preferred alternative?
  - b) Given the MSE is specific to summer flounder, are there other factors and/or areas of uncertainty to consider for scup, black sea bass, and bluefish?
  
- 6) If appropriate, provide recommendations for additional work that could be completed by the FMAT/PDT or the MSE team prior to public hearings. Any additional analysis should help the public understand the alternatives and their impacts and should help the Council and Policy Board select their preferred alternative(s). It must not result in the identification of new alternatives outside the range of alternatives approved for public hearings.

- **Stable:** avg. change of +/-4% over most recent three years.
- **Increasing:** increase of at least 4% on avg over the most recent 3 years.
- **Decreasing:** decrease of at least 4% on avg over the most recent 3 years.







# Recruitment



- **High:** most recent 3 yr avg  $\geq$  median from time series for ABC projections
- **Low:** most recent 3 yr avg  $<$  median from time series for ABC projections



# Recent Recreational Overages



- **Yes:** most recent two-year average rec. ACL or RHL was exceeded.
- **No:** most recent two-year average rec. ACL or RHL was not exceeded.



# SSB/SSB<sub>MSY</sub> over time



Year	Summer flounder
2010	100%
2011	95%
2012	82%
2014	65%
2015	58%
2017	78%
2019	86%
2022	83%

Year	Scup
2010	202%
2011	207%
2014	210%
2016	206%
2018	198%
2019	196%
2022	246%

Year	BSB
2008	102%
2011	102%
2015	229%
2018	237%
2019	206%

Year	Bluefish
2010	95%
2011	90%
2013	84%
2014	85%
2018	46%
2019	48%
2022	60%

- 80-120% (11)
- 90-110% (6)
- 95-105% (5)



## Current Rec. AMs (simplified)



**1. If the stock is overfished, under a rebuilding plan, or the stock status is unknown:**

Payback of exact overage amount

**2. If biomass is above the threshold, but below the target, and the stock is not under a rebuilding plan:**

**a. If only the rec. ACL has been exceeded:** rec. measures adjusted.

**b. If most recent  $F > F_{MSY}$ :** Payback, but less than full overage amount, scaled based on  $B/B_{MSY}$

**3. If biomass is above the target:**

Rec. measures adjusted



# Current Rec. Accountability Measures



## 1. If the stock is overfished, under a rebuilding plan, or the stock status is unknown:

The exact amount, in pounds by which the most recent 3-year avg. rec. ACL has been exceeded will be deducted in the following year, or as soon as possible once catch data are available. This payback may be evenly spread over 2 years if doing so allows for use of identical rec. measures across the upcoming 2 years.

## 2. If biomass is above the threshold, but below the target, and the stock is not under a rebuilding plan:

**a. If only the rec. ACL has been exceeded**, then adjustments to the rec. measures, taking into account the performance of the measures and conditions that precipitated the overage, will be made in the following year, or as soon as possible thereafter, once catch data are available, as a single-year adjustment.

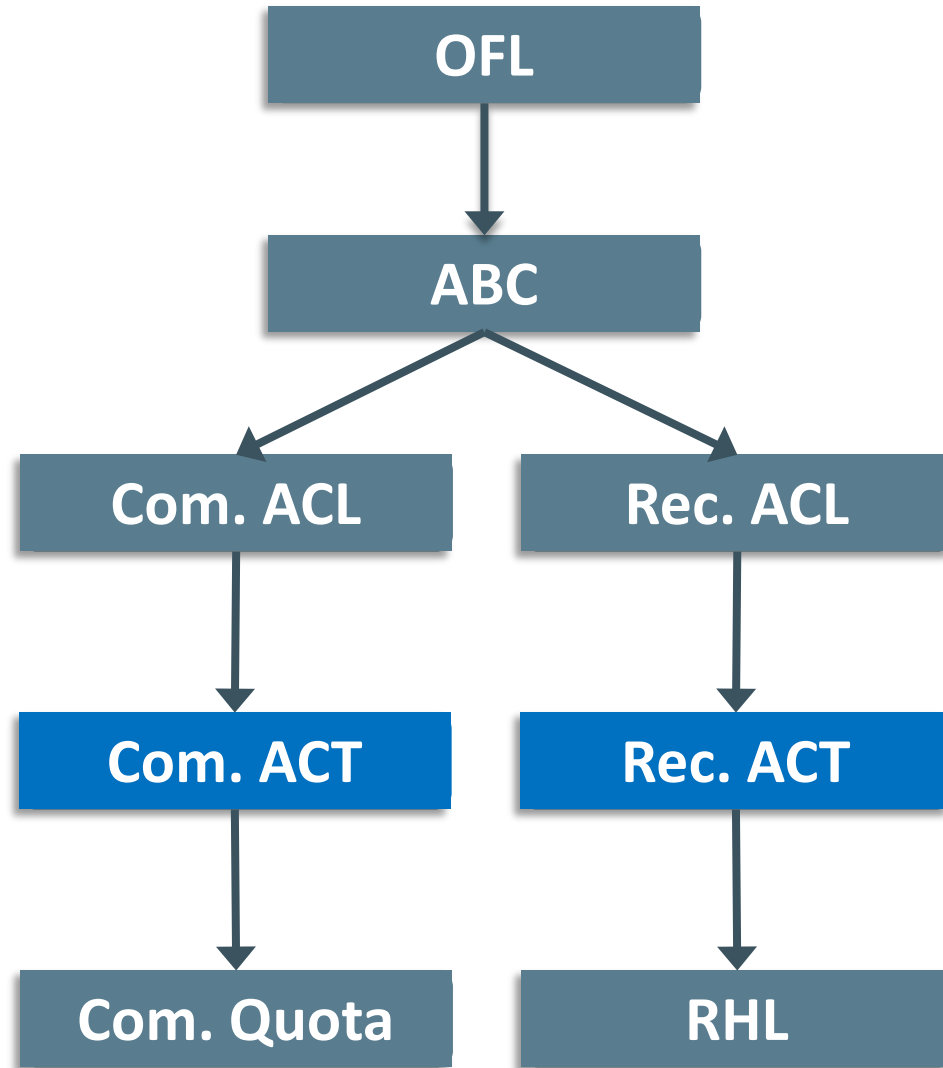
**b. If the most recent estimate of total fishing mortality exceeds  $F_{MSY}$** , then an adjustment to the rec. ACT will be made as soon as possible as a payback that will be scaled based on stock biomass.

The calculation for the payback amount in this case is: (3-year avg. overage amount) \*  $(B_{MSY} - B) / \frac{1}{2} B_{MSY}$ .

This payback may be evenly spread over 2 years if doing so allows for use of identical rec. measures across the upcoming 2 years. If an estimate of total F is not available for the most recent complete year of catch data, then a comparison of total catch relative to the ABC will be used.

## 3. If biomass is above the target:

Adjustments to the rec. measures, taking into account the performance of the measures and conditions that precipitated the overage, will be made in the following fishing year, or as soon as possible thereafter, once catch data are available, as a single-year adjustment.



### Annual Catch Limits

Defined by com/rec allocations

### Annual Catch Targets

Less than or equal to ACLs to account for management uncertainty

### Landings Limits

ACTs minus expected discards



Move to further develop Alt. B (Pct Change Approach), Alt. D (Biological Reference Point Approach) and Alt. E (Biomass Based Matrix Approach) for implementation no later than the beginning of the 2026 fishing year. Further development should consider, at minimum, F-based approaches for Alt. B and development of measures using modeling or other approaches for Alts. D and E. Further evaluate the issue of “borrowing” as raised by the SSC for alt B, D, and E.

Council: Motion carries by consent

Policy Board: Motion carries by consent