



Summer Flounder, Scup, & Black Sea Bass Commercial/Recreational Allocation Amendment

Joint Council and Board Meeting
December 14, 2021



April 2021 Motion

In order to prioritize work on the Recreational Reform Initiative, I move to postpone final action on this amendment until the December 2021 joint Council/Commission meeting, with an understanding of a January 2023 implementation date.

Council: DiLernia/deFur 16/2/1

Board: Borden/Gilmore

Motion passes with no objection and 2 abstentions (USFWS and NMFS)

Additional Alternatives

- In April, it was also agreed to consider new alternatives within the existing range.
- August 2021: Approved 4 new alternatives for each species as proposed by a group of Council/Board members.

Additional Alternatives

- Catch- and landings-based options for:
 - 2004-2018 base years with RHL overage years excluded.
 - 50/50 weighting of historical base years (new data) and 2004-2018 base years with RHL overage years excluded.
- All within the range of previous alternatives based on example fishery landings limit outcomes.
- Incorporated into Dec. 2021 Decision Document (revised Public Hearing Document).

Objectives for Final Action

Select preferred alternatives for:

1. Commercial/recreational allocation

- Summer flounder (set 1a)
- Scup (set 1b)
- Black sea bass (set 1c)
- Phase-in (set 1d)

2. Transfers

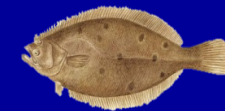
- Ability to transfer (2a or 2b)
- Transfer caps (set 2c)

3. Framework/addendum provisions (3a or 3b)

Catch vs. Landings-Based Allocations

- Main difference is step in process where allocation is applied.
- Both still require com. and rec. ACLs (catch limit), quotas and RHLs (landings limits).
- **Resulting allocation percentages not directly comparable** as allocations are applied to landings in one method and catch in another.

Summer Flounder Allocation: Set 1a



Catch based alts.	Basis
Fluke-4: 50% com., 50% rec.	50/50 weighting of status quo base years and 2004-2018, excluding years with RHL overages
Fluke-2: 45% com., 55% rec.	Average 2004-2018 catch proportions, excluding years with RHL overages
1a-1: 44% com., 56% rec.	2004-2018 base years
1a-2: 43% com., 57% rec.	Multiple approaches: 2009-2018 base years, approximate status quo harvest per sector compared to 2017/2018
1a-3: 40% com., 60% rec.	2014-2018 base years

Landings based alts.	Basis
1a-4: 60% com., 40% rec.	No action/status quo (1980-1989)
1a-5: 55% com., 45% rec.	Same base years, new data (1981-1989; 1980 data unavailable)
Fluke-3: 51% com., 49% rec.	50/50 weighting of status quo base years and 2004-2018, excluding years with RHL overages
Fluke-1: 47% com., 53% rec.	Average 2004-2018 landings proportions, excluding years with RHL overages
1a-6: 45% com., 55% rec.	Multiple approaches: 2009-2018 and 2004-2018 base years
1a-7: 41% com., 59% rec.	2014-2018 base years

Scup Allocation: Set 1b



Catch based alts.

Basis

1b-1: **78.0%** com., **22.0%** rec.

No action/status quo

1b-2: **65.0%** com., **35.0%** rec.

Same base years, new data (1988-1992)

Scup-4: **63.5%** com., **36.5%** rec.

50/50 weighting of status quo base years and 2004-2018, excluding years with RHL overages

Scup-2: **62.0%** com., **38.0%** rec.

Average 2004-2018 catch proportions, excluding years with RHL overages

1b-3: **61.0%** com., **39.0%** rec.

Multiple approaches: average 2009-2018 catch proportions and average of other approaches approved by Council/Board in June 2020

Landings based alts.

Basis

Scup-1: **59.0%** com., **41.0%** rec.

Average 2004-2018 landings proportions, excluding years with RHL overages

Scup-3: **58.0%** com., **42.0%** rec.

50/50 weighting of status quo base years and 2004-2018, excluding years with RHL overages

1b-5: **57.0%** com., **43.0%** rec.

Multiple approaches: Same base years, new data; average 2014-2018 landings proportions; average 2009-2018 landings proportions

1b-6: **56.0%** com., **44.0%** rec.

Average 2004-2018 landings proportions

1b-7: **50.0%** com., **50.0%** rec.

Approximate status quo harvest per sector compared to 2018/2019

Scup-1: **59.0%** com., **41.0%** rec.

Average 2004-2018 landings proportions, excluding years with RHL overages (i.e., 2004 and 2007-2010)

Black Sea Bass Allocation: Set 1c



Catch based alts.

Basis

BSB-4: **40.5%** com., **59.5%** rec.

50/50 weighting of /status quo base years and 2004-2018, excluding years with RHL overages

BSB-2: **36.0%** com., **64.0%** rec.

Average 2004-2018 landings proportions, excluding years with RHL overages

1c-1: **32.0%** com., **68.0%** rec.

Approximate status quo harvest per sector compared to 2018/2019

1c-2: **28.0%** com., **72.0%** rec.

Average 2004-2018 catch proportions

1c-3: **24.0%** com., **76.0%** rec.

Average 2009-2018 catch proportions

Landings based alts.

Basis

1c-4: **49.0%** com., **51.0%** rec.

No action/status quo

1c-5: **45.0%** com., **55.0%** rec.

Same base years, new data (1983-1992)

BSB-3: **41.0%** com., **59.0%** rec.

50/50 weighting of status quo base years and 2004-2018, excluding years with RHL overages

BSB-1: **37%** com., **63%** rec.

Average 2004-2018 landings proportions, excluding years with RHL overages

1c-6: **29.0%** com., **71.0%** rec.

Approximate status quo harvest per sector compared to 2018/2019

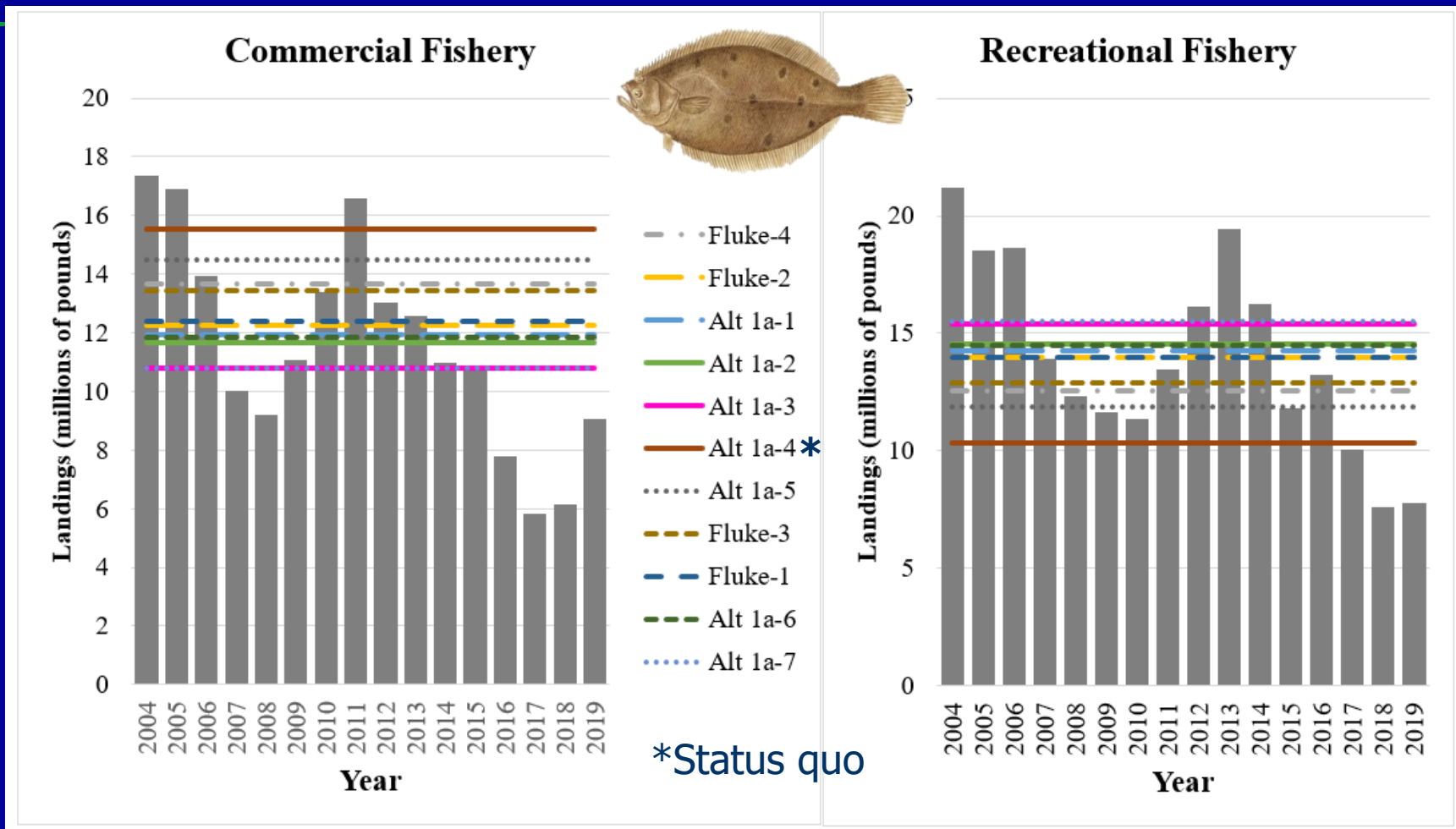
1c-7: **22.0%** com., **78.0%** rec.

Average 2009-2018 and 2014-2018 landings proportions

Allocation Revision Impacts

- **Cannot precisely predict future quotas and RHLs under current or revised allocations.**
 - Depend on future biomass projections/ABCs, and future projections of sector-specific dead discards.
- Document analysis includes **example** limits based on regression analysis to predict discards.
 - Previously based on 2020 ABCs; updated for this meeting to 2023 ABC.
 - Actual future limits will vary

Allocation Revision Impacts: Summer Flounder

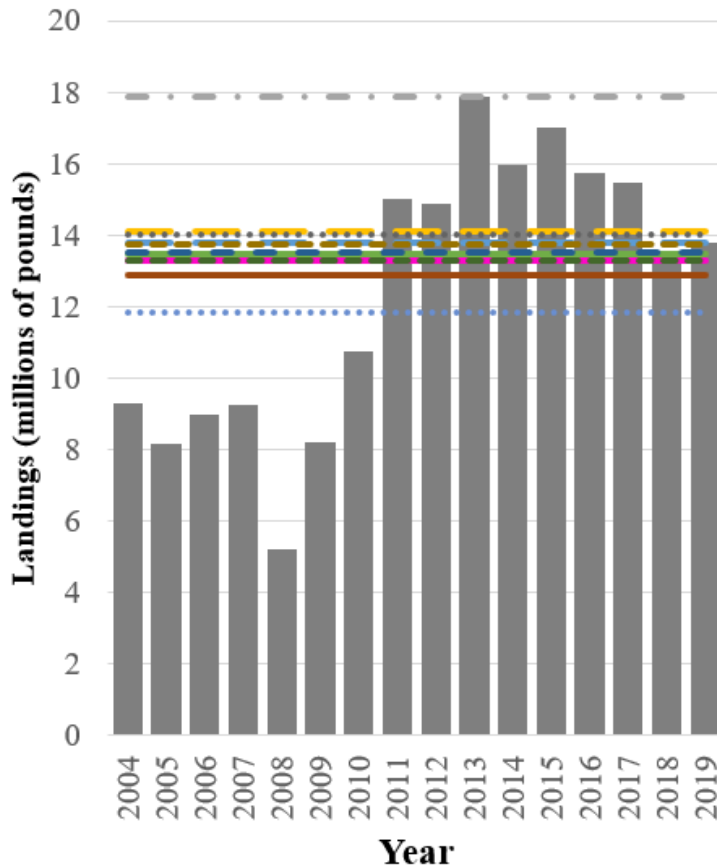


2004-2019 commercial and recreational summer flounder landings with comparison to example commercial quotas and RHLs developed using the 2023 ABC

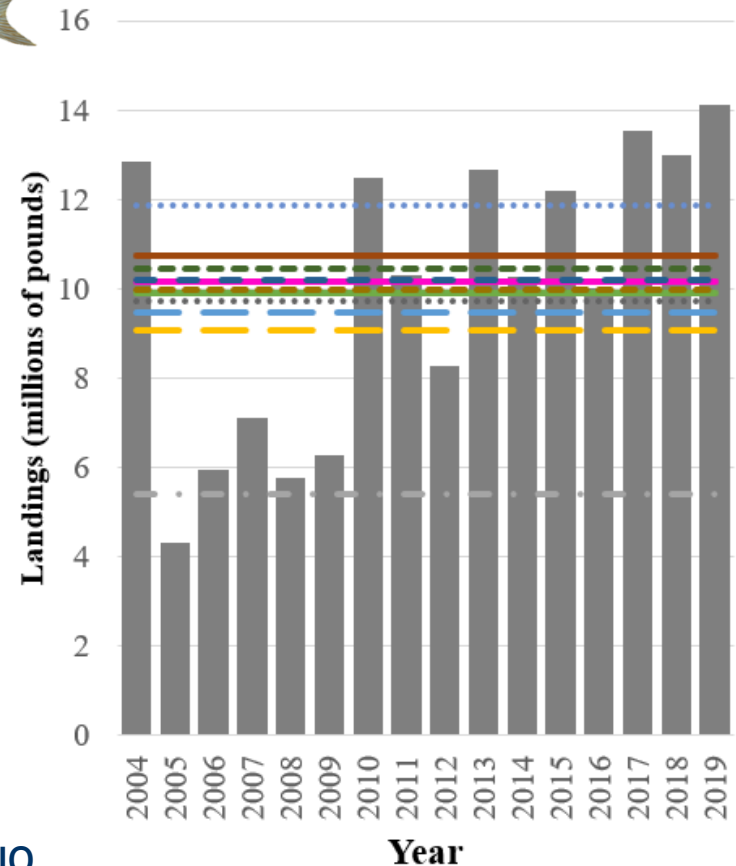
Allocation Revision Impacts: Scup



Commercial Fishery



Recreational Fishery



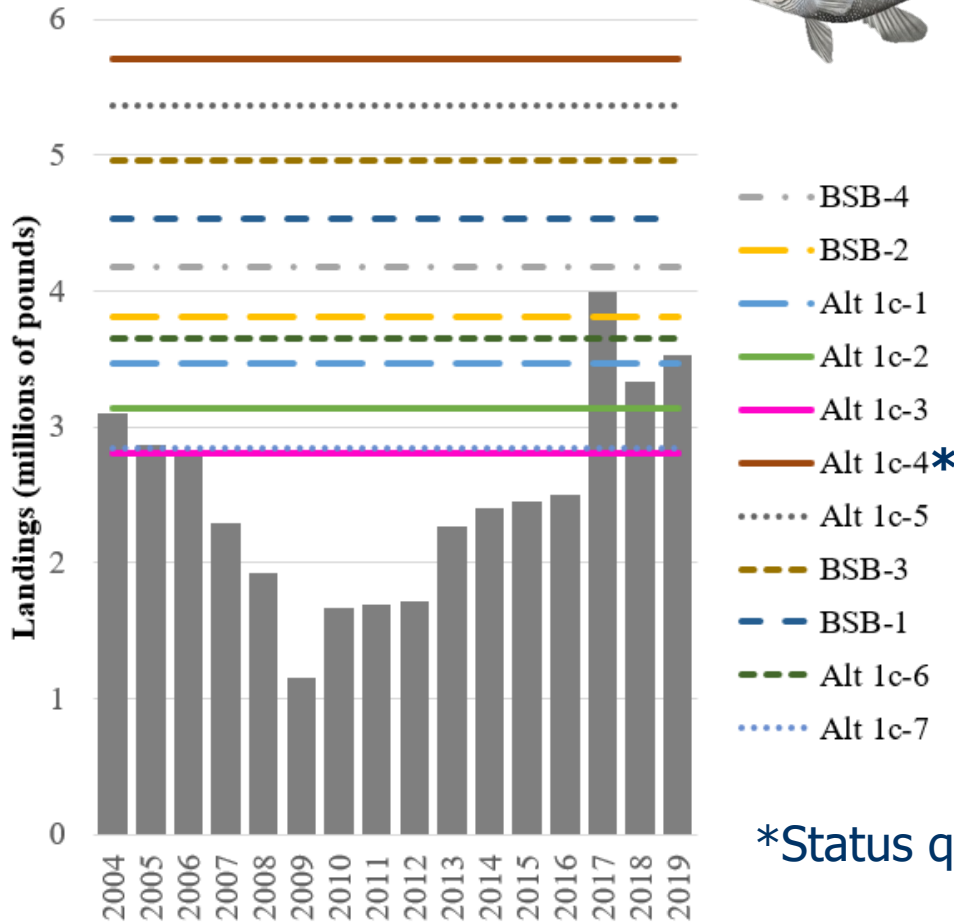
*Status quo

2004-2019 commercial and recreational scup landings with comparison to example commercial quotas and RHLs developed using the 2023 ABC

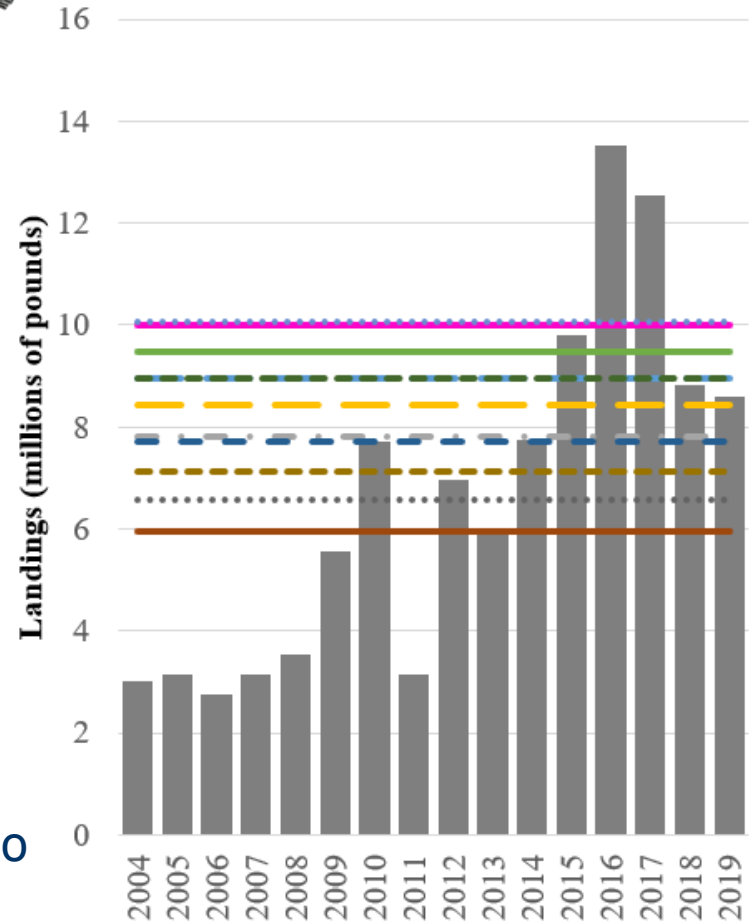
Allocation Revision Impacts: Black Sea Bass



Commercial Fishery



Recreational Fishery



*Status quo

2004-2019 commercial and recreational black sea bass landings with comparison to example commercial quotas and RHLs developed using the 2023 ABC

Allocation Change Phase-in Alternatives: Set 1d

Alternative

1d-1: No phase-in

1d-2: Allocation % shift evenly divided over **2 yrs**

1d-3: Allocation % shift evenly divided over **3 yrs**

1d-4: Allocation % shift evenly divided over **5 yrs**

Specific phase-in percent shifts under each alternative shown in Tables 11-13 in decision document.

Transfers Between Sectors: Alternative Set 2

Transfer Alternatives

2a: No action (transfers between sectors not allowed).

2b: Allow optional bi-directional transfers through the specifications process.

- Need for transfer evaluated by Monitoring Committee in July based on prior year's data (current year projections not possible)
- Council/Board decision in August; implemented with specifications rulemaking in December

Transfer Cap Alternatives

2c-1: No transfer cap; any amount of the ABC be transferred.

2c-2: Max transfer of 5% of the ABC.

2c-3: Max transfer of 10% of the ABC.

2c-4: Max transfer of 15% of the ABC.

Frameworks/Addendum Provisions: Alternative Set 3

Framework/addendum provision alternatives

3a: No action

3b: Allow future changes to com/rec allocations, transfers, and other measures included in this amendment to be made through framework actions/addenda

- Frameworks/addenda: more efficient, but fewer comment opportunities.
- Amendment may always be used if appropriate or necessary--tool in the toolbox.

Brief Recap of Public Comments

- 69% of commenters supported SQ vs. 15% who supported an allocation change for at least one species.
- Generally, com industry supports SQ with the most common comments being:
 - Cannot afford to lose quota/livelihoods are at stake.
 - Public will lose access to seafood with lower allocation.
- Generally, rec sector supports changes to allocations with the most common comment being:
 - Allocations should use new MRIP (best available science), allocations should account for recent fishery conditions.
 - Tendency to favor catch based allocations

Brief Recap of Public Comments

- Majority of comments on phase-in alt set supported no-phase-in (1d-1).
- 184 commenters supported no transfers (2a) vs. 18 commenters supported optional bi-directional transfers (2b).
- 21 commenters supported use of framework actions/addenda (3b) vs. 178 who supported no action (3a).

Brief Recap of March 2021 FMAT Recs.

- Not comfortable recommending specific allocation alternative, but favored catch-based allocations from technical & process perspective.
- No recommendation on phase in.
- Recommend no action on transfers (Alt. 2a).
- Recommend framework/addendum provisions (Alt. 3b).

Dec. 2 Council Staff Memo

- Council staff recommendations for each species, should the Council and Board choose to reallocate.
- Recommendations for phase in, transfers, and framework/addendum provisions.
- Staff recommend that the Council and Board take final action at this meeting.
 - Further postponement would create additional uncertainty for stakeholders & managers and make 2023 implementation difficult.

Council Staff Memo



Summer Flounder

- Same recommendation as April 2021
- Recommend changing to catch-based allocation.
- Updating current 1980-1989 base years with new data would be well-justified approach to align with best available data.
- However, 80-89 cannot be updated with catch due to lack of discard data; 1980 recreational landings not available from MRIP.

Council Staff Memo



Summer Flounder, Continued

- Staff recommend consideration of alternative **1a-5** (55% commercial, 45% recreational based on 1981-1989 revised data), but **applied to catch instead of landings.**
- In practice, small shift from current conditions: in recent years (2012-2023) ABC has averaged 56% commercial ACL/44% recreational ACL.
- Depending on future discard trends and projection methods, outcomes likely close to status quo landings limits.

Council Staff Memo



Summer Flounder, Continued

- Summer flounder example limits under staff-recommended 55% comm/45% rec, catch based
- Actual future limits depend on future discard projections & assumptions, as well as future ABCs

	Commercial quota	RHL
2023 actual	15.53	10.36
Example limits under new alt (using 2023 ABC)	15.14	11.12
% change	-3%	7%

Council Staff Memo



Scup

- Same recommendation as April 2021
- Allocation should remain catch-based
- Biomass estimate did not increase after incorporation of revised MRIP data into stock assessment.
- Current base years are all prior to Council/Commission mgmt.
- Staff recommend consideration of **alt 1b-2, same base years with the updated data (65% commercial, 35% recreational)**
 - Considers fisheries prior to influence of allocations/harvest constraints
 - Uses what is currently the best scientific information in those base years

Council Staff Memo



Black Sea Bass

- Different, but similar, recommendation as April 2021.
- BSB-4 (added Aug 2021): 40.5% com, 59.5% rec, catch based.
 - 50/50 weighting of current base years w/ new data and 2004-2018, excluding RHL overage years.
 - Example quota = 4.18 mil lb, example RHL = 7.83 mil lb.
- Rationale from April 2021 recommendation still applies: Balance tradeoffs among sectors based on example quotas/RHLs.
- Additional rationale: 50/50 weighting considers preferences of commercial and recreational sectors as expressed during public comment period and avoids “rewarding” recreational overages.

Council Staff Memo



Black Sea Bass, continued

- Example quota allows 19% increase in commercial landings compared to 2019.
- 59% increase in quota and RHL from 2019 to 2020.
 - Mostly due to incorporation of revised MRIP data into assessment.
 - Also impacted by above avg 2015 year class.
- Quota and RHL increased again by 9% from 2020 to 2021 due to risk policy change.
- Reasonable for both sectors to see benefits from the non-MRIP factors that resulted in increases in 2020 and 2021.

Council Staff Memo

Phase-In Provisions

- Benefits will vary depending on magnitude of allocation change and species.
- 2023 stock assessments to inform 2024-2025 limits; may offset or compound allocation changes
- Recommend no phase in, or if Council and Board wish to use phase-in, recommend 2 years (alternative 1d-2).

Council Staff Memo

Transfers

- Council staff recommend 2a (no action on transfers).
- Process-related complexities; difficulty determining need for transfer, relying on prior year data.

Council Staff Memo

Frameworks/Addenda

- Council staff recommend 3b (allow future FWs/addenda for changes in allocation percentages, transfers, etc.).
- Major changes should still be done through an amendment.
- Should be a case-by-case decision – not constrained to pre-determined conditions.

Decision Points

Select preferred alternatives for:

- **Commercial/recreational allocation**
 - Summer flounder (set 1a)
 - Council staff recommendation: 1a-5, but applied as catch
 - Scup (set 1b)
 - Council staff recommendation: 1b-2
 - Black Sea Bass (set 1c)
 - Council staff recommendation: BSB-4
 - Phase-in (set 1d)
 - Council staff recommendation: 1d-1 or 1d-2
- **Transfers**
 - Ability to transfer (2a or 2b)
 - Council staff and FMAT recommendation: 2a
 - Transfer caps (set 2c)
- **Framework/addendum provisions** (3a or 3b)
 - Council staff and FMAT recommendation: 3b

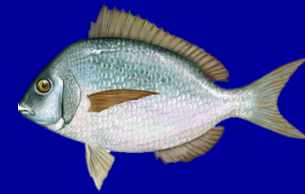
BACKUP SLIDES

Allocation Revision Impacts: Summer Flounder

Table 5: Example commercial quotas and RHLs for each allocation alternative under the 2023 ABC (33.12 million pounds) and the assumptions outlined in Appendix C, with comparison to the 2023 implemented limits. Actual future limits will vary based on future ABCs and discard assumptions. All values are in millions of pounds. Alternatives beginning with 1a represent those considered by the Council and Board during their April 2021 meeting. Alternatives beginning with “Fluke” represent those added during the August 2021 Council and Board meeting.

Alt	Fluke-4	Fluke-2	1a-1	1a-2	1a-3	1a-4 ^a	1a-5	Fluke-3	Fluke-1	1a-6	1a-7
	Catch-Based					Landings-Based					
Com. allocation	50%	45%	44%	43%	40%	60%	55%	51%	47%	45%	41%
Rec. allocation	50%	55%	56%	57%	60%	40%	45%	49%	53%	55%	59%
Example com. quota	13.69	12.24	11.95	11.66	10.79	15.53 ^b	14.48	13.42	12.37	11.84	10.79
Difference from 2023 com. quota	-12%	-21%	-23%	-25%	-31%	0%	-7%	-14%	-20%	-24%	-31%
Example RHL	12.55	13.98	14.27	14.55	15.41	10.36 ^b	11.84	12.90	13.95	14.47	15.53
Difference from 2023 RHL	21%	35%	38%	40%	49%	0%	14%	24%	35%	40%	50%

* Alt. 1a-4 is the no action/status quo and shows the actual implemented comm. quota and RHL for 2023.



Allocation Revision Impacts: Scup

Table 6: Example commercial quotas and RHLs for each allocation alternative under the 2023 ABC (29.67 million pounds) and the assumptions outlined in Appendix C, with comparison to the 2023 implemented limits. Actual future limits will vary based on future ABCs and discard assumptions. All values are in millions of pounds. Alternatives beginning with 1b represent those considered by the Council and Board during their April 2021 meeting. Alternatives beginning with “Scup” represent those added during the August 2021 Council and Board meeting.

Alternative	1b-1 ^a	1-b2	Scup-4	Scup-2	1b-3	1b-4	Scup-1	Scup-3	1b-5	1b-6	1b-7
	Catch-Based						Landings-Based				
Com. allocation	78.0%	65.0%	63.5%	62.0%	61.0%	59.0%	59.0%	58.0%	57.0%	56.0%	50.0%
Rec. allocation	22.0%	35.0%	36.5%	38.0%	39.0%	41.0%	41.0%	42.0%	43.0%	44.0%	50.0%
Example commercial quota	17.87 ^b	14.10	13.79	13.49	13.28	12.88	13.99	13.76	13.52	13.28	11.85
% Difference from 2023 commercial quota	0%	-21%	-23%	-25%	-26%	-28%	-22%	-23%	-24%	-26%	-34%
Example RHL	5.41 ^b	9.06	9.47	9.89	10.17	10.73	9.73	9.96	10.20	10.43	11.85
% Difference from 2023 RHL	0%	67%	75%	83%	88%	98%	80%	84%	88%	93%	119%

* Alt 1b-1 is the no action/status quo alternative and shows the actual implemented commercial quota and RHL for 2023.

Allocation Revision Impacts: Black Sea Bass



Table 7: Example commercial quotas and RHLs under each allocation alternative using the 2023 ABC (16.66 million pounds) and the assumptions outlined in Appendix C, with comparison to the 2023 limits. Actual future limits will vary based on future ABCs and discard assumptions. All values are in millions of pounds. Alternatives beginning with 1c represent those considered by the Council and Board during their April 2021 meeting. Alternatives beginning with “BSB” represent those added during the August 2021 Council and Board meeting.

Alternative	BSB-4	BSB-2	1c-1	1c-2	1c-3	1c-4 ^a	1c-5	BSB-3	BSB-1	1c-6	1c-7
	Catch-Based					Landings-Based					
Com. allocation	40.5%	36.0%	32.0%	28.0%	24.0%	49.0%	45.0%	41.0%	37.0%	29.0%	22.0%
Rec. allocation	59.5%	64.0%	68.0%	72.0%	76.0%	51.0%	55.0%	59.0%	63.0%	71.0%	78.0%
Example commercial quota	4.18	3.81	3.47	3.14	2.80	5.71 ^b	5.37	4.96	4.53	3.65	2.84
% Difference from 2023 commercial quota	-27%	-33%	-39%	-45%	-51%	0%	-6%	-13%	-21%	-36%	-50%
Example RHL	7.83	8.42	8.95	9.48	10.01	5.95 ^b	6.56	7.13	7.72	8.94	10.07
% Difference from 2023 RHL	32%	42%	50%	59%	68%	0%	10%	20%	30%	50%	69%

*Alt. 1c-4 is the no action/status quo and shows the actual implemented comm. quota and RHL for 2023.

Recreational Harvest Control Rule FW/Addendum

- **Goal:** establish a process for setting rec. bag/size/season limits for SF, S, BSB, and BF such that measures
 - Aim to prevent overfishing,
 - Are reflective of stock status,
 - Appropriately account for uncertainty in the rec. data,
 - Take into consideration angler preferences, and
 - Provide an appropriate level of stability and predictability in changes from year to year.
- Will not change the MSA requirements for ACLs and prevention of overfishing.

Recreational Reform Initiative

Goals:

- **Stability** in rec. mgmt. measures (bag/size/season)
- **Flexibility** in the mgmt. process
- **Accessibility** aligned with availability/stock status*

Technical Guidance Document	Framework/Addendum	Amendment
<ul style="list-style-type: none"> • Process for identifying and smoothing outlier MRIP estimates • Use of preliminary current year MRIP data • Guidelines for maintaining status quo measures 	<ul style="list-style-type: none"> • Harvest Control Rule (in progress) • Envelope of uncertainty approach for determining if changes to rec. management measures are needed • Multi-year recreational management measures • Changes to the timing of recommending federal waters measures 	<ul style="list-style-type: none"> • Rec. sector separation • Rec. catch accounting

Catch vs. Landings-Based Allocations

Catch-based allocations

- Allocation **applied to entire ABC** (landings + dead discards)
- Changes in landings and dead discards in one sector do not influence the other sector's Annual Catch Limit (ACL).
- Dead discards projected for each sector; subtracted from sector ACLs to determine landings limits.

Landings-based allocations

- Allocation **applied only to landings portion of ABC**. Requires first splitting ABC into expected landings & dead discards.
- Dead discards are split by sector usually based on recent trends.
- Changes in landings and dead discards in one sector influence the catch and landings limits of the other sector.

Under Both Approaches:

- Com. and rec. ACLs, ACTs, commercial quota and RHL are required. Does not change the way the fisheries are managed under these limits.
- Dead discards must be projected and accounted for by sector.
- Separate Accountability Measures (AMs) still required for each sector

Main difference: the step in the calculations at which the com/rec allocation percentages are applied.

March 23 Advisory Panel Meeting

- 7 supported status quo allocations
 - E.g., MRIP uncertainty, commercial fishery cannot afford to lose quota, concerns about remaining challenges for recreational management
- 3 supported updating the allocations
 - E.g., data changes, recent ABC increases due to MRIP, can help address rec. discards
- 3 supported catch-based approach or a catch-based alternative
 - Less complexity, discards, ecosystem considerations
- 3 spoke against transfers
 - Data lags, underages can help the stock

Advisory Panel Meeting

- Rec Reform should be pursued first
 - E.g., concerns about discards, limited constraints on rec. fishery
- Comment tallies don't accurately represent interest from recreational sector
 - Organizations represent many individuals; hard for rec. anglers to get involved and understand the issues
- Adversarial attitude between stakeholders distracts from goal of maintaining a sustainable fishery
- Allocation approach doesn't recognize changes in technology and management – fundamentally different fisheries today

Appendices in the Decision Document

- Appendix A: Catch vs. landings-based allocations
- Appendix B: Basis for allocation alts.
- Appendix C: Example commercial quotas and RHLs
- Appendix D: Acronyms and abbreviations

Amendment Purposes & Alternatives

1. Consider potential modifications to the allocations of catch or landings between the commercial and recreational sectors for summer flounder, scup, and black sea bass: **Alternative set 1**
2. Consider the option to transfer a portion of the allowable landings each year between the commercial and recreational sectors: **Alternative set 2**
3. Consider whether future modifications to the com/rec allocation and/or transfer provisions can be achieved through an FMP addendum/framework action: **Alternative set 3**

Need for Action

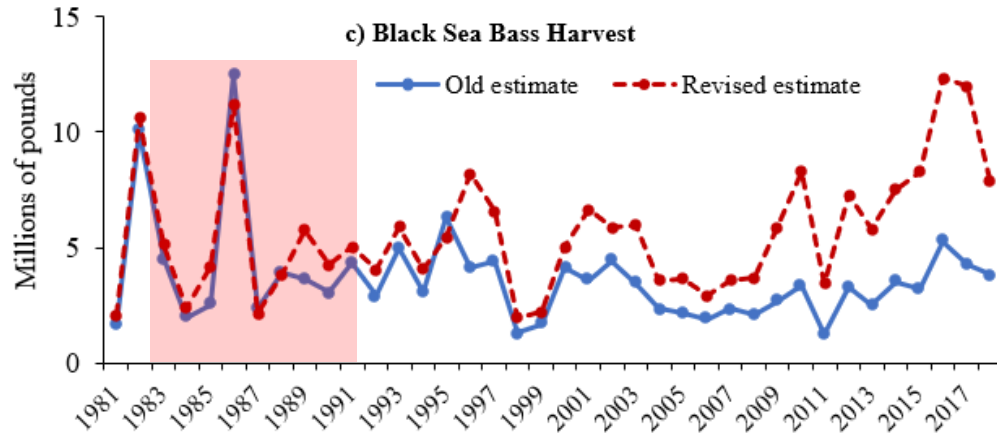
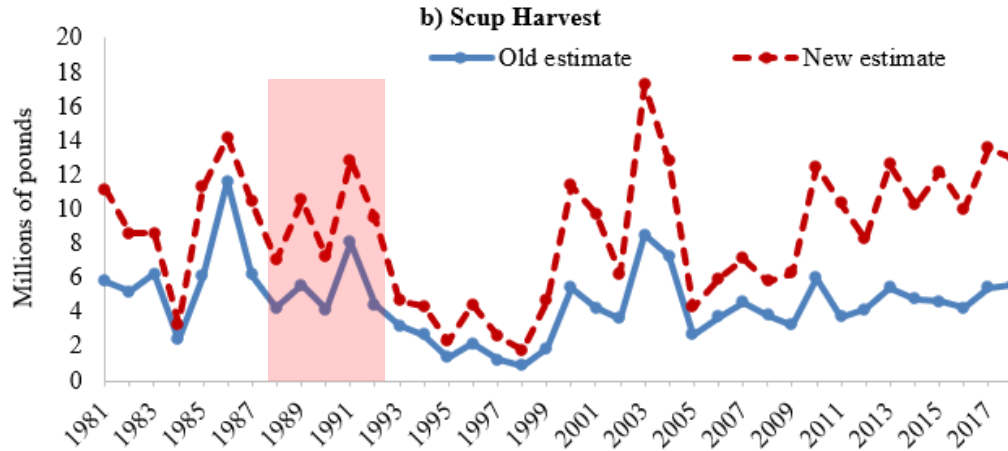
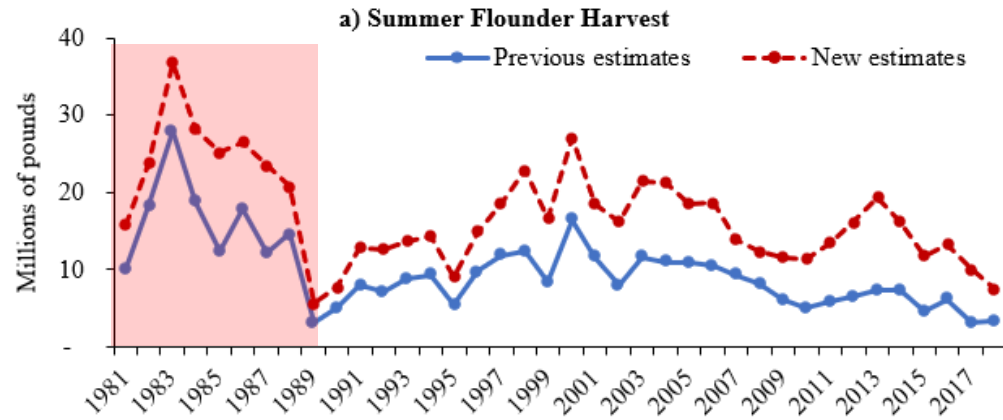
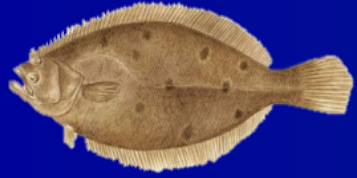
- Revised MRIP estimates were incorporated into stock assessments in 2018-2019, impacting biomass estimates and catch limits
- **Due to fixed allocations in the FMP, Recreational Harvest Limits resulting from new assessments generally did not increase to the same degree as the revised MRIP harvest estimates**
- Management implications due to discrepancy between the current levels of estimated rec. harvest and the sector allocations (based on old data)

Management Implications of MRIP Transition

- **Summer flounder** harvest limits increased by ~49% in 2019, but new MRIP harvest estimate close to new RHL. Rec. liberalizations not possible for 2019-2021.
- **Scup** harvest limits *decreased* in 2020 due to declining stock biomass. 2019 MRIP estimates 54% higher than 2020 RHL.
- **Black sea bass** limits increased by 59% in 2020. However, even with this increase, 2019 MRIP estimates 48% higher than 2020 RHL.
- Status quo rec measures for BSB and scup justified as a temporary solution while allocation is evaluated.
 - **If allocations not modified, near-term restrictions in rec. measures (possibly severe) for scup and BSB are likely.**

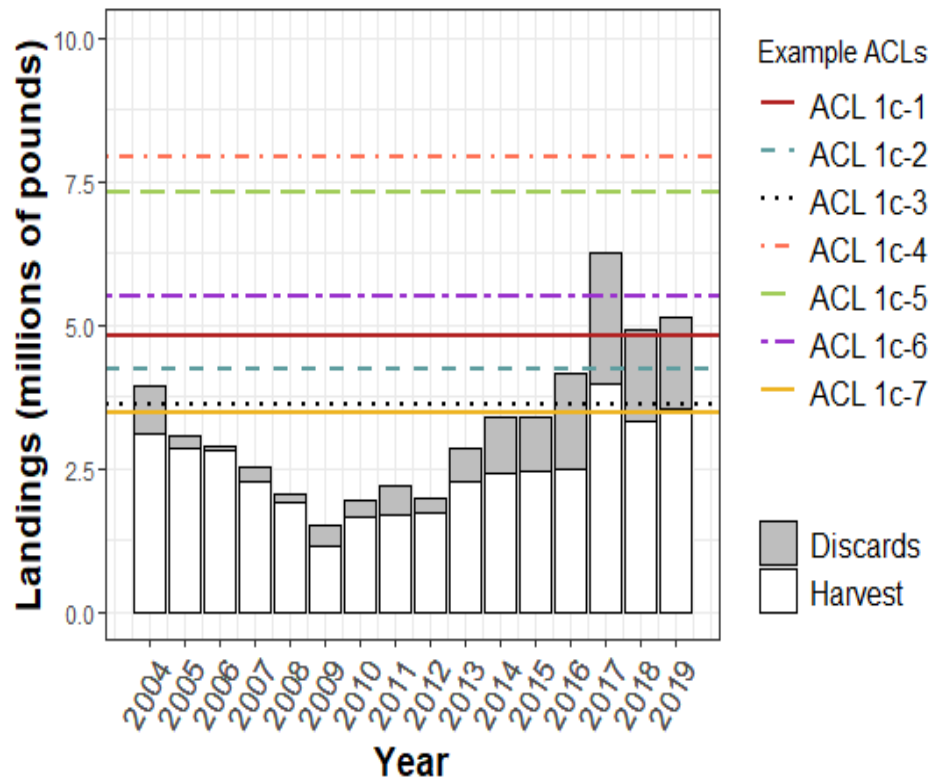
Why are changes being considered?

- Allocations currently based on historic (1980s/1990s) proportions of harvest or catch from each sector; have not been revised since set in early/mid 1990s
- Our understanding of historic & recent harvest proportions has changed due to major revisions to MRIP data
 - New effort estimation and angler intercept methods resulted in higher recreational estimates going back to 1981
- Some changes also made to commercial data since allocations set

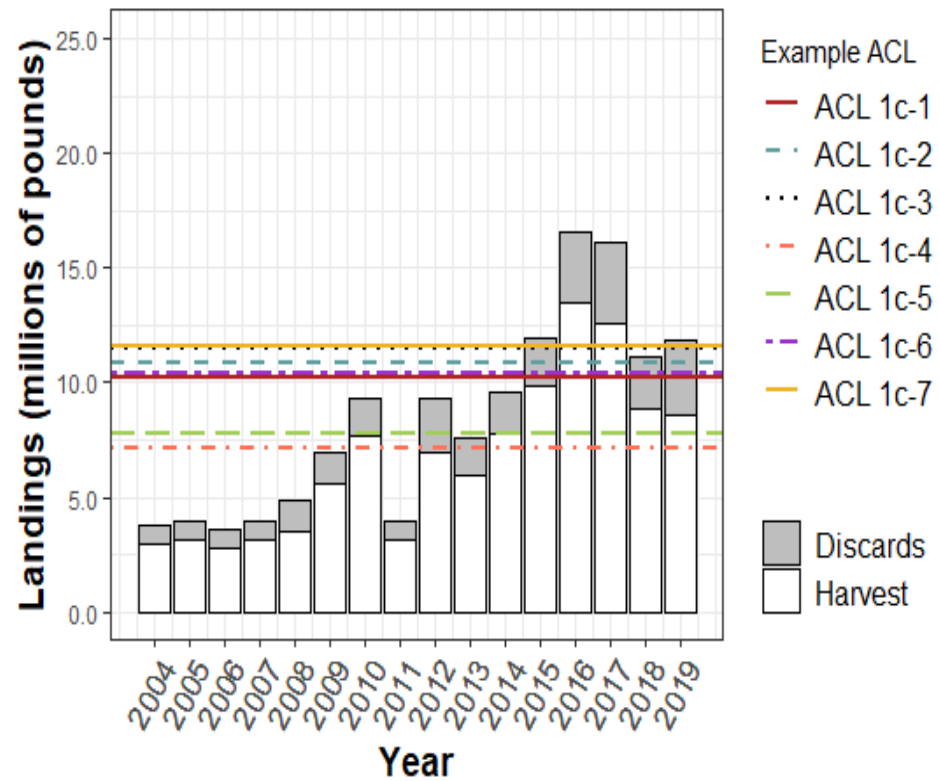


Black Sea Bass: Example ACLs

Commercial

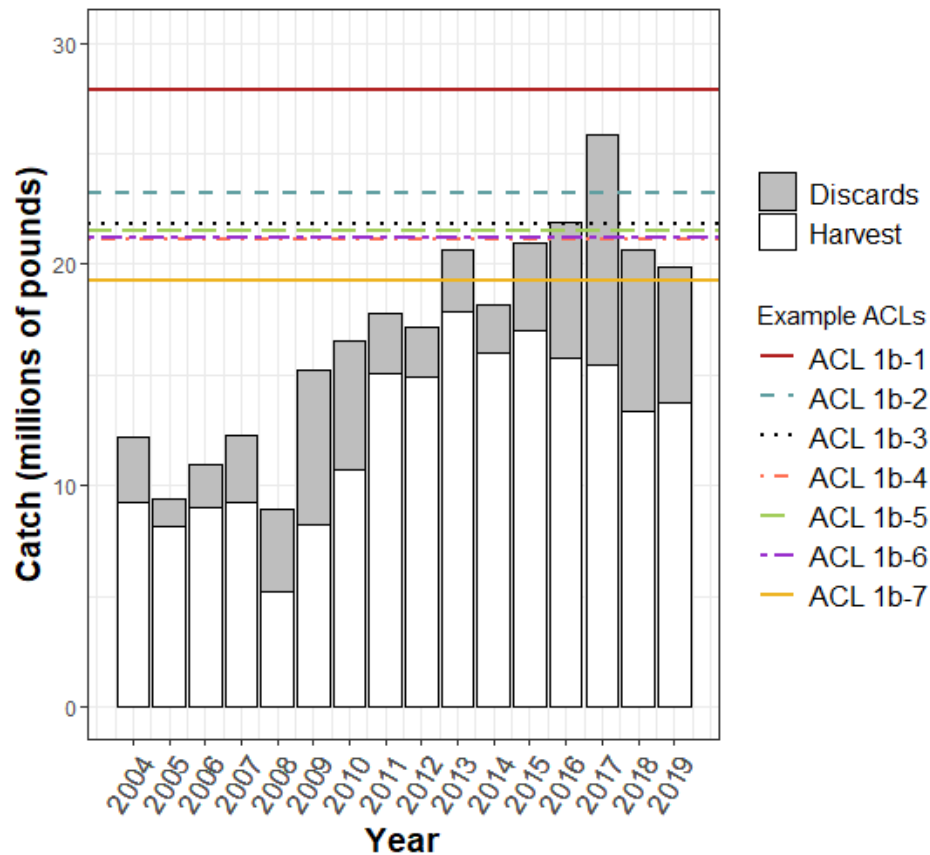


Recreational

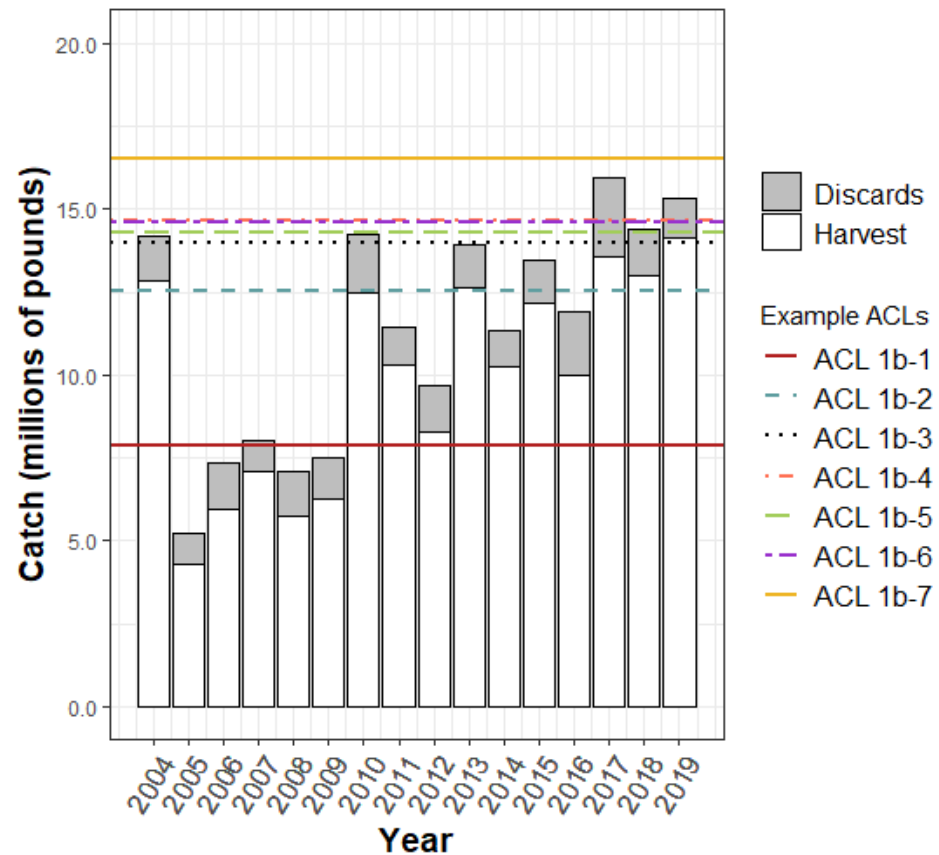


Scup: Example ACLs

Commercial

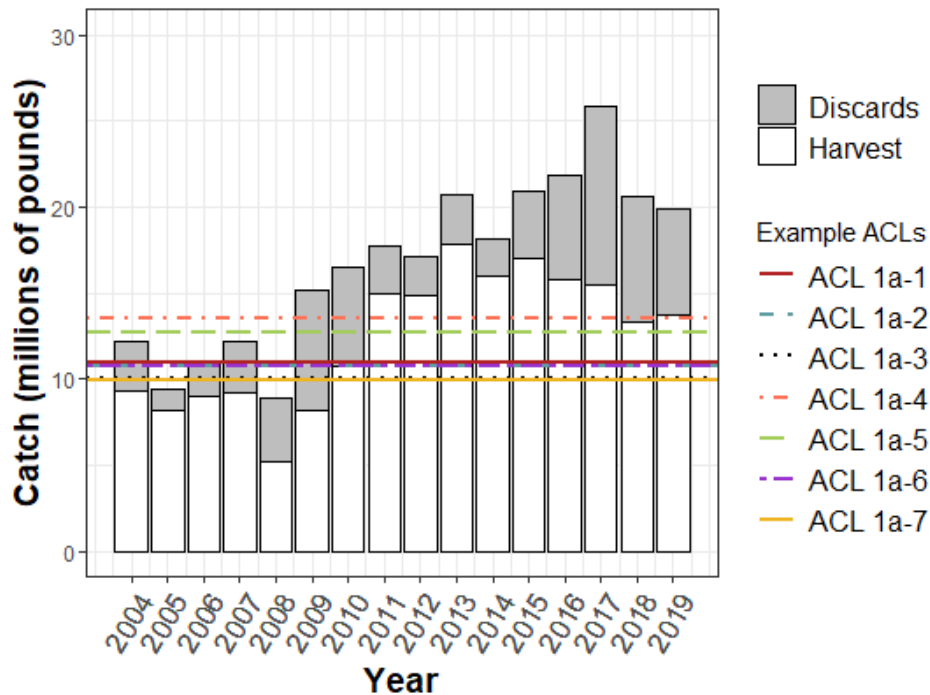


Recreational

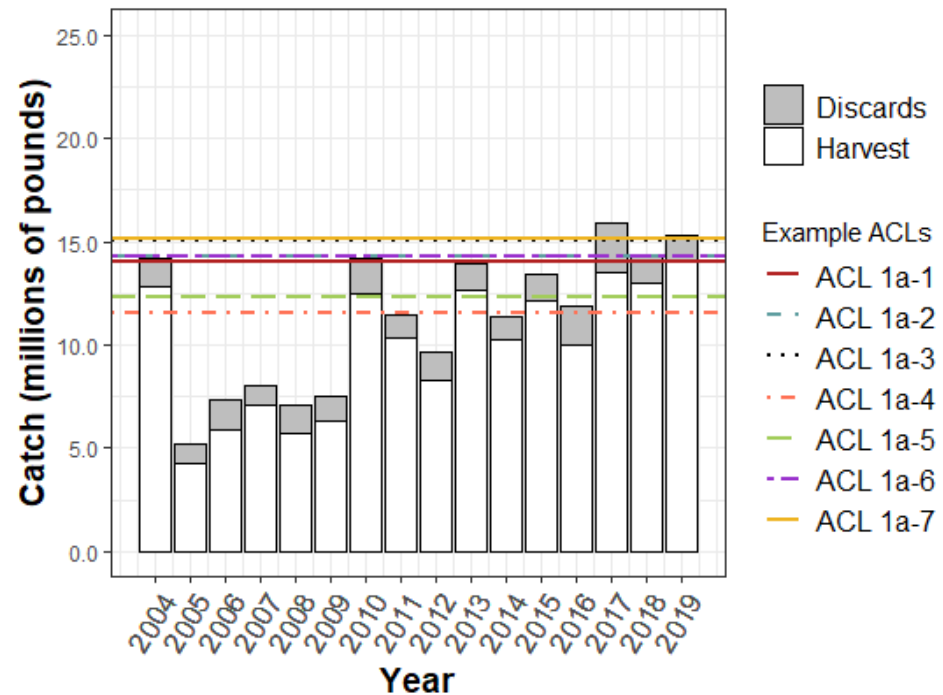


Summer Flounder: Example ACLs

Commercial



Recreational



Allocation Revision Impacts

Impacts to commercial sector:

- Aside from status quo, all alternatives would reduce the commercial allocation (=lower commercial quotas)
 - Likely losses in revenue, though the price/volume relationship varies across species
 - For scup, lower quota may not result in lower landings depending on scale of decrease/other factors such as stock biomass and market demand
 - Impacts will not be felt equally across all commercial industry participants

Allocation Revision Impacts

Impacts to recreational sector:

- Depending on the alternative/species, an increased rec allocation may or may not allow for liberalized rec measures compared to recent years.
 - In some cases, restrictions may still be needed depending on alternative and the magnitude of recent MRIP estimates
- Changes in measures (liberalizations or restrictions) impact fishing opportunities/demand, angler satisfaction, retention ability, revenues for for-hire and supporting businesses

Sector Variability Analysis

- A preliminary analysis considering the different levels of precision of the estimates of landings and dead discards in each sector for all three species suggests that the risk of exceeding the ABC does not vary greatly under a wide range of different proportions of total dead catch from each sector.
- This suggests that changes in the commercial/recreational allocation, especially changes within the range currently under consideration, may not have notably different impacts on the risk of exceeding the ABC.

Sector Variability Analysis

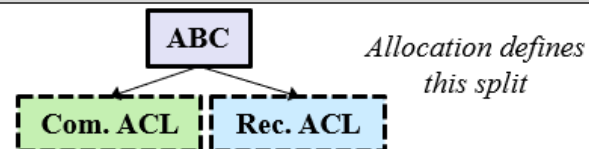
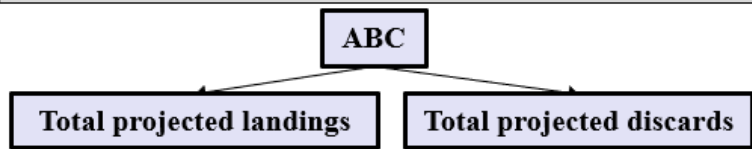
- Summary of average CVs for commercial and recreational landings and dead discards, 2010-2019.

	Commercial CVs		Recreational CVs	
Species	Landings	Discards	Landings	Discards
Summer flounder	0.01	0.127	0.089	0.078
Scup	0.01	0.104	0.134	0.127
Black Sea Bass	0.01	0.31	0.126	0.102

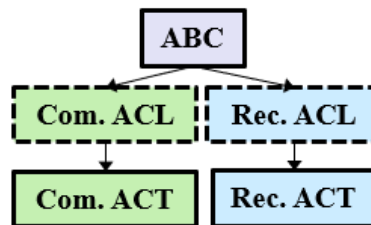
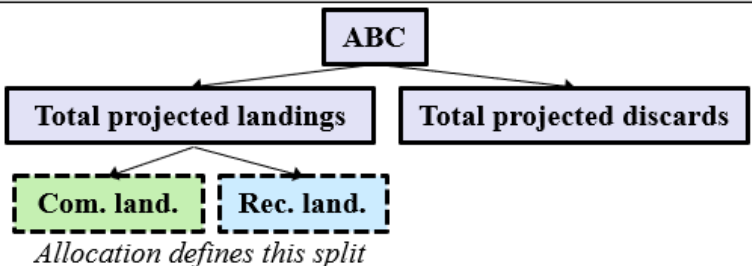
Landings-Based Allocation

Catch-Based Allocation

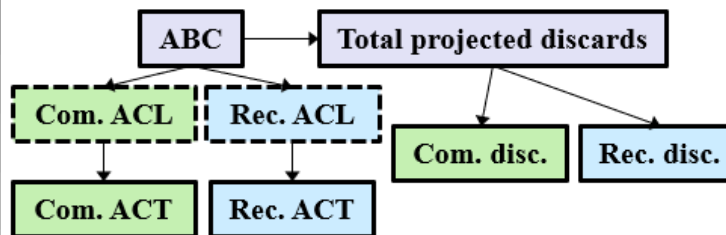
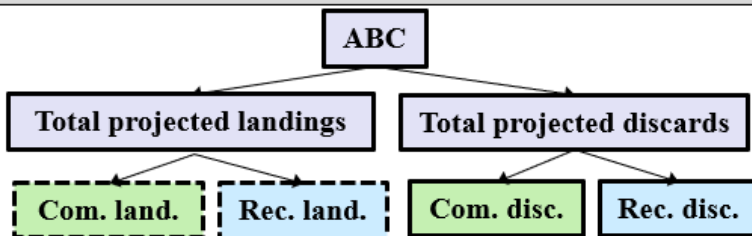
Step 1



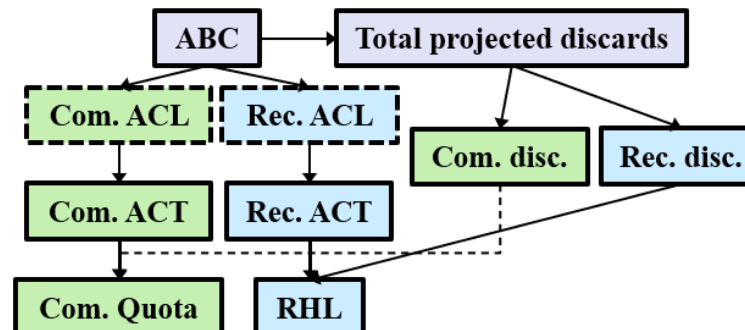
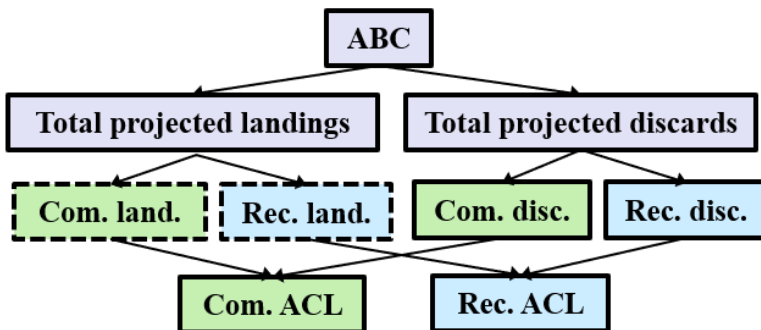
Step 2



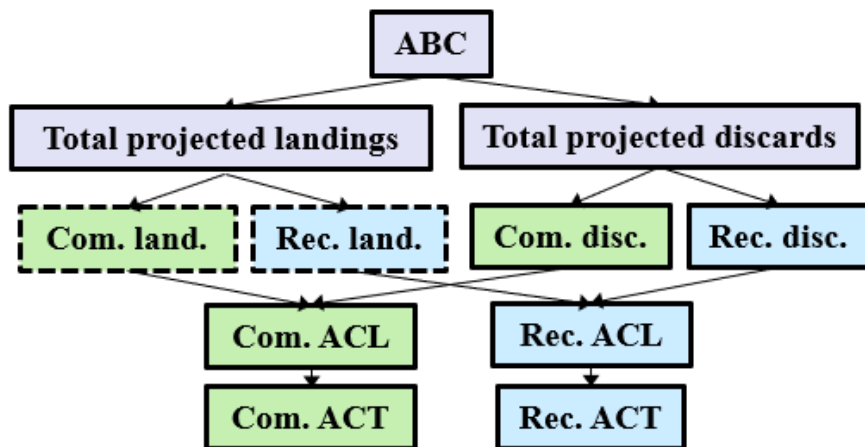
Step 3



Step 4

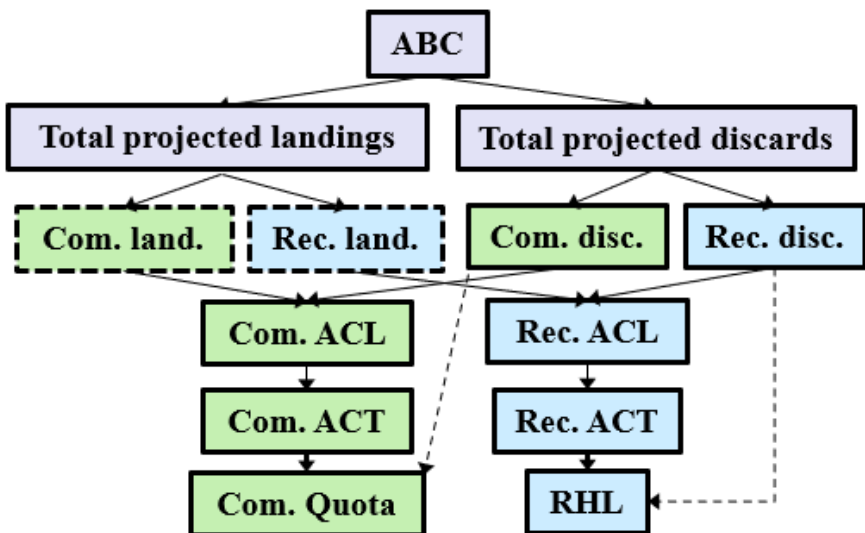


Step 5



N/A

Step 6



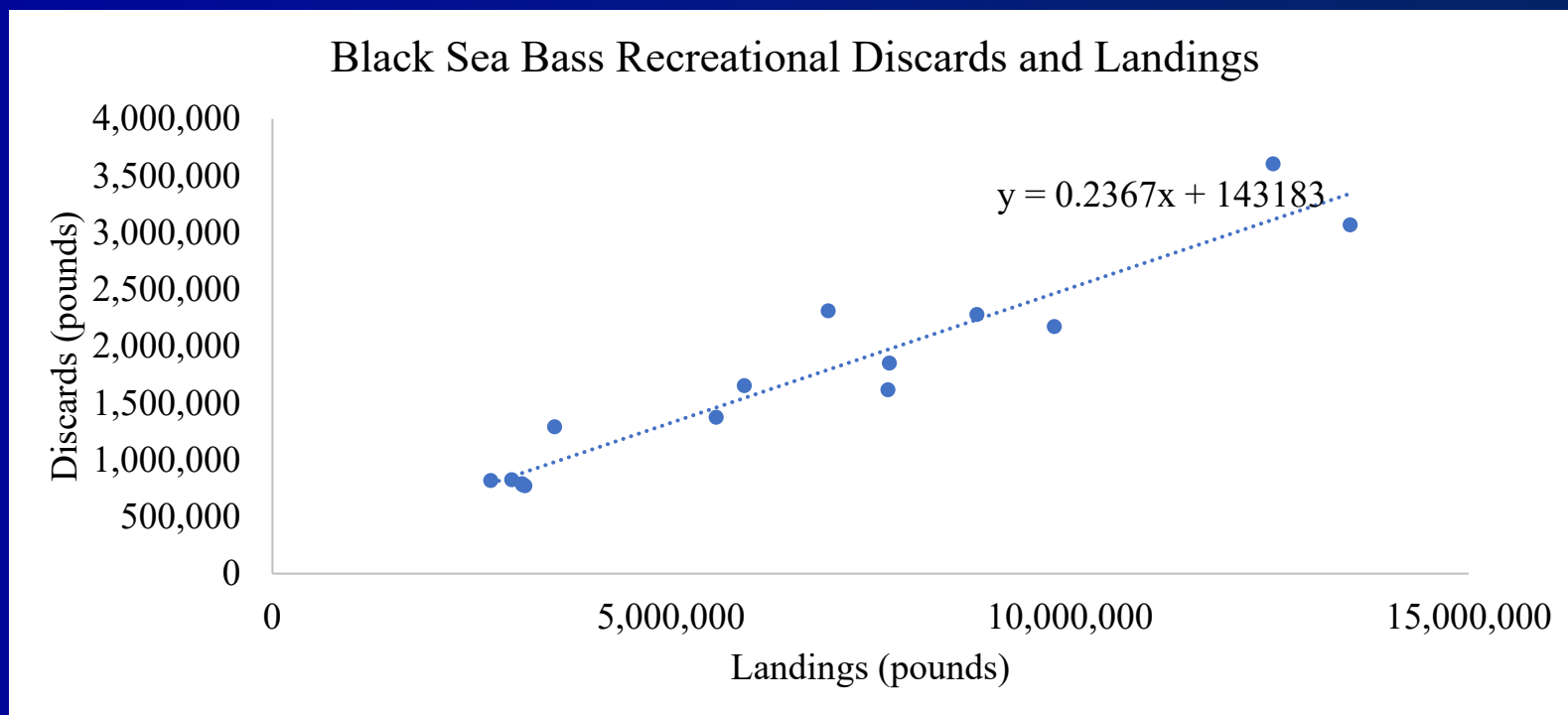
N/A

Notes:

- The ABC, ACLs and ACTs include catch and dead discards in all cases. The commercial quota and RHL include only landings.
- A dashed border indicates the step defined by the commercial/recreational allocation.

Appendix C: Example Quotas and RHLs

- Regression analysis used to project sector-specific discards based on relationship between discards and landings or catch 2004-2019



4.3.2 Phase-in Impacts

Table 9: The currently implemented recreational/commercial split for total landings, dead discards, and total dead catch for 2022 specifications. The current FMP-specified allocations for each species are highlighted in yellow.

Currently Landings-Based Allocations						
	Comm. % of TAL (allocation)	Rec. % of TAL (allocation)	Expected comm. % of discards in 2022	Expected rec. % of discards in 2022	Comm. ACL % of ABC in 2022	Rec. ACL % of ABC in 2022
Summer flounder	60	40	41	59	56	4
Black sea bass	49	51	64	36	54	46
Currently Catch-Based Allocation						
	Comm. % of TAL in 2022	Rec. % of TAL in 2022	Expected comm. % of discards in 2022	Expected rec. % of discards in 2022	Comm. ACL % of ABC (allocation)	Rec. ACL % of ABC (allocation)
Scup	77	23	83	17	78	22

Phase-in Impacts: Summer Flounder

Table 11: Percent shift in summer flounder allocation per year for 2, 3, and 5 year phase-in options for all summer flounder allocation change alternatives.

Alternatives	Total allocation shift ^a	1d-2: 2 year phase-in	1d-3: 3 year phase-in	1d-4: 5 year phase-in
Catch-Based				
Fluke-4: 50% com., 50% rec.	6%	3% per year	2% per year	1.2% per year
Fluke-2: 45% com., 55% rec.	11%	5.5% per year	3.7% per year	2.2% per year
1a-1: 44% com., 56% rec.	12%	6% per year	4% per year	2.4% per year
1a-2: 43% com., 57% rec.	13%	6.5% per year	4.3% per year	2.6% per year
1a-3: 40% com., 60% rec.	16%	8% per year	5.3% per year	3.2% per year
Landings-Based				
1a-4 (status quo): 60% com., 40% rec.	0%	N/A	N/A	N/A
1a-5: 55% com., 45% rec.	5%	2.5% per year	1.7% per year	1% per year
Fluke-3: 51% com., 49% rec.	9%	4.5% per year	3% per year	1.8% per year
Fluke-1: 47% com., 53% rec.	13%	6.5% per year	4.3% per year	2.6% per year
1a-6: 45% com., 55% rec.	15%	7.5% per year	5% per year	3% per year
1a-7: 41% com., 59% rec.	19%	9.5% per year	6.3% per year	3.8% per year



Phase-in Impacts: Scup

Table 12: Percent shift in scup allocation per year for 2, 3, and 5 year phase-in options for all scup allocation change alternatives.

Alternatives	Total allocation shift ^a	1d-2: 2 year phase-in	1d-3: 3 year phase-in	1d-4: 5 year phase -in
Catch-Based				
1-b1 (status quo): 78.0% com., 22.0% rec.	0%	N/A	N/A	N/A
1b-2: 65.0% com., 35.0% rec.	13%	6.5% per year	4.3% per year	2.6% per year
Scup-4: 63.5% com., 36.5% rec.	14.5%	7.3% per year	4.8% per year	2.9% per year
Scup-2: 62.0% com., 38.0% rec.	16%	8% per year	5.3% per year	3.2% per year
1b-3: 61.0% com., 39.0% rec.	17%	8.5% per year	5.7% per year	3.4% per year
1b-4: 59.0% com., 41.0% rec.	19%	9.5% per year	6.3% per year	3.8% per year
Landings-Based				
Scup-1: 59.0% com., 41.0% rec.	18%	9% per year	6% per year	3.6% per year
Scup-3: 58.0% com., 42.0% rec.	19%	9.5% per year	6.3% per year	3.8% per year
1b-5: 57.0% com., 43.0% rec.	20%	10% per year	6.7% per year	3.4% per year
1b-6: 56.0% com., 44.0% rec.	21%	10.5% per year	7% per year	4 % per year
1b-7: 50.0% com., 50.0% rec.	27%	13.5% per year	9% per year	5.4% per year



Phase-in Impacts: Black Sea Bass

Table 13: Percent shift in black sea bass allocation per year for 2, 3, and 5 year phase-in options for all black sea bass allocation change alternatives.

Alternatives	Total allocation shift ^a	1d-2: 2 year phase-in	1d-3: 3 year phase-in	1d-4: 5 year phase-in
Catch-Based				
BSB-4: 40.5% com., 59.5% rec.	13.5%	6.8% per year	4.5% per year	2.7% per year
BSB-2: 36.0% com., 64.0% rec.	18%	9% per year	6% per year	3.6% per year
1c-1: 32.0% com., 68.0% rec.	22%	11% per year	7.3% per year	4.4% per year
1c-2: 28.0% com., 72.0% rec.	26%	13% per year	8.7% per year	5.2% per year
1c-3: 24.0% com., 76.0% rec.	30%	15% per year	10% per year	6% per year
Landings-Based				
1-c4 (status quo): 49.0% com., 51.0% rec.	0%	N/A	N/A	N/A
1c-5: 45.0% com., 55.0% rec.	4%	2% per year	1.3% per year	0.8% per year
BSB-3: 41.0% com., 59.0% rec.	8%	4% per year	2.7% per year	1.6% per year
BSB-1: 37.0% com., 63.0% rec.	12%	6% per year	4% per year	2.4% per year
1c-6: 29.0% com., 71.0% rec.	20%	10% per year	6.7% per year	4% per year
1c-7: 22.0% com., 78.0% rec.	27%	13.5% per year	9% per year	5.4% per year



Transfers Between Sectors

Proposed transfer process:

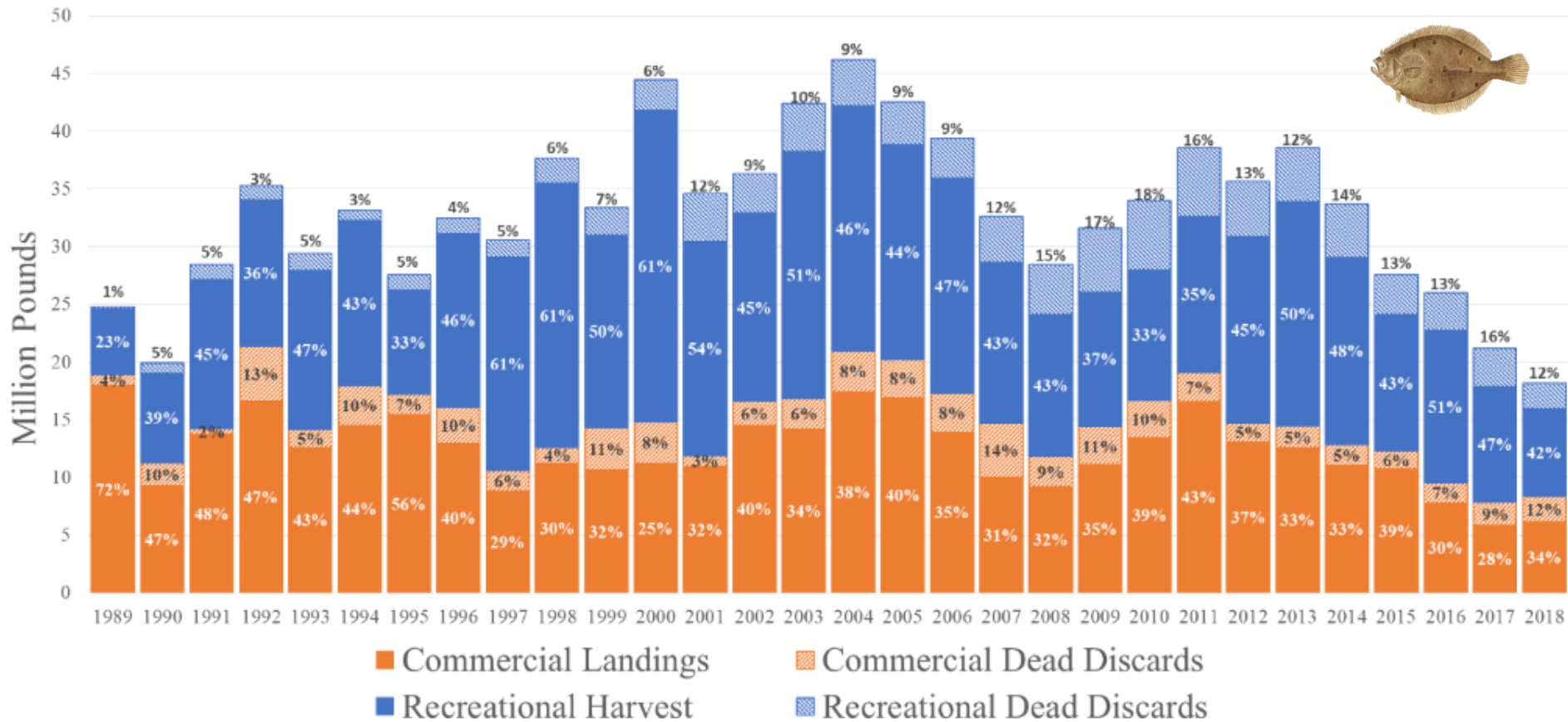
July	Assess need for transfer based on prior year(s) data and next year's expected landings limits - Current year projections of com. and rec. landings will not be available
August	Council and Board recommend transfer and amount (if desired)
Nov/Dec	Recreational measures developed using likely post-transfer RHL (may not yet be implemented)
Dec	Final rule with landings limits published, including any transfers

Transfer Cap Impacts

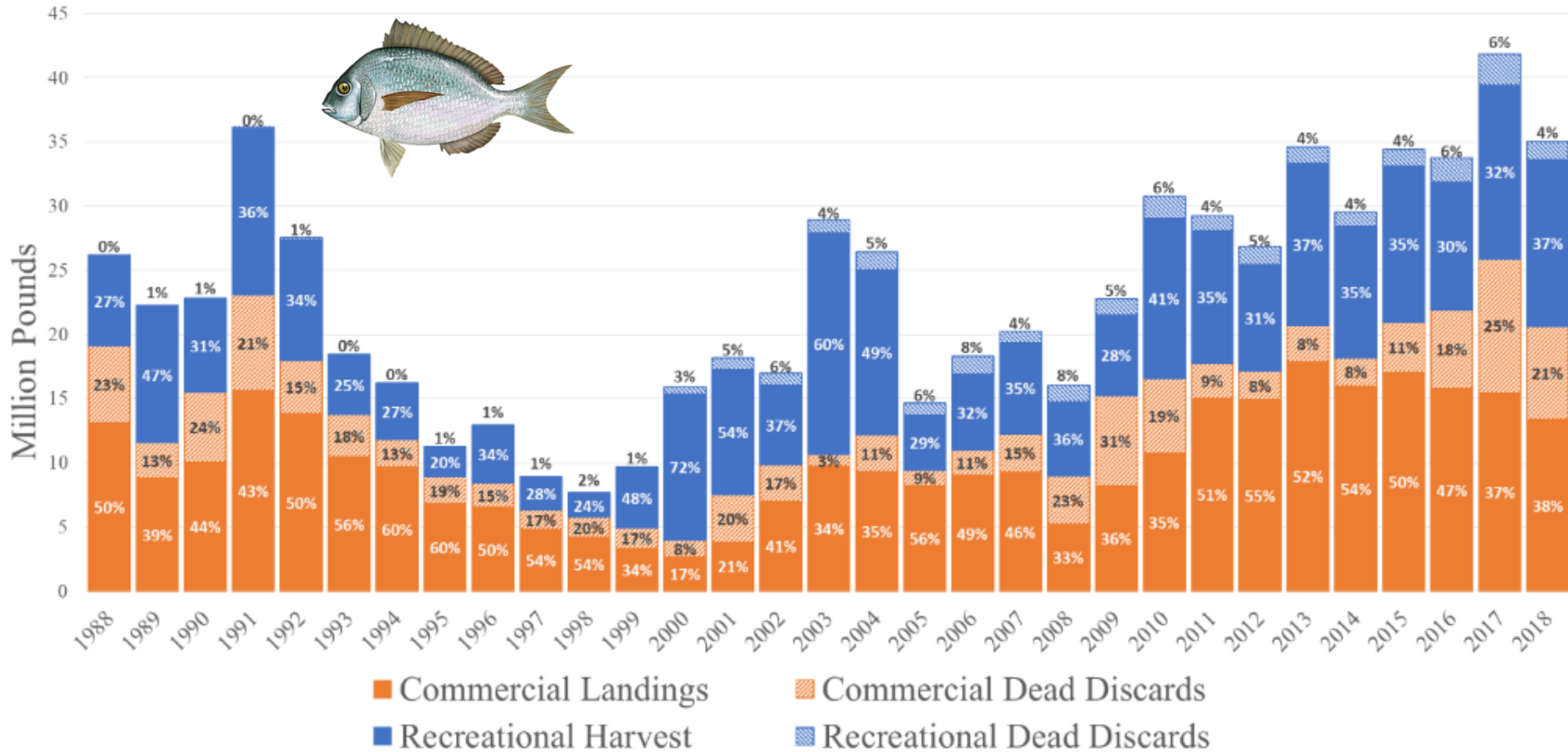
- Example transfer cap amounts under recent high and low ABCs, 2017-2023 (all values in millions of pounds)
- Examples only; not theoretical max. or min. transfer amount

		Summer Flounder	Scup	Black Sea Bass
ABC for comparison	2017-2023 Low ABC	11.30	28.40	8.94
	2017-2023 High ABC	33.12	39.14	18.86
2c-2: 5% of ABC	Low ABC example cap	0.57	1.42	0.45
	High ABC example cap	1.66	1.96	0.94
2c-3: 10% of ABC	Low ABC example cap	1.13	2.84	0.89
	High ABC example cap	3.31	3.91	1.89
2c-4: 15% of ABC	Low ABC example cap	1.70	4.26	1.34
	High ABC example cap	4.97	5.87	2.83

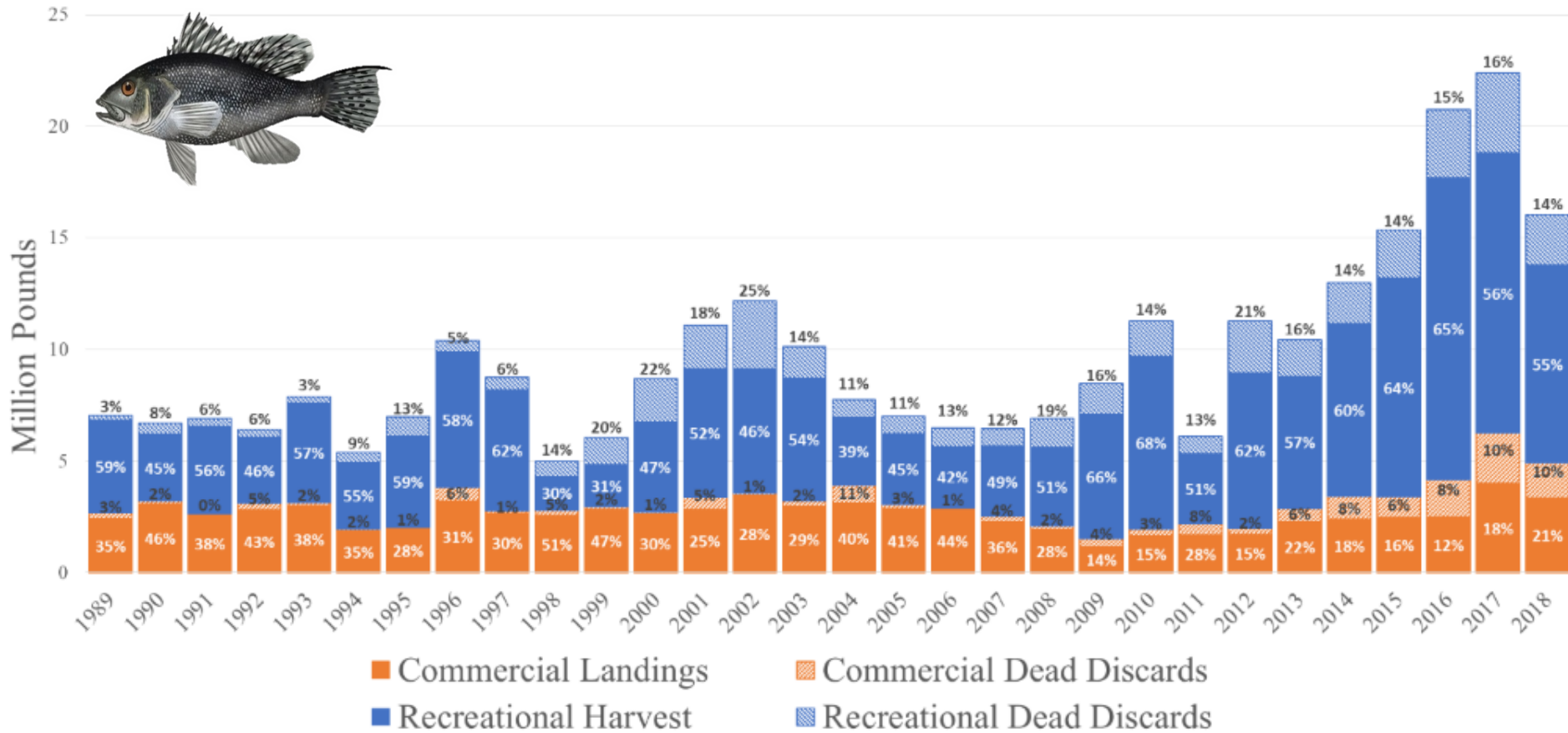
Commercial and recreational summer flounder landings and dead discards, 1982-2018

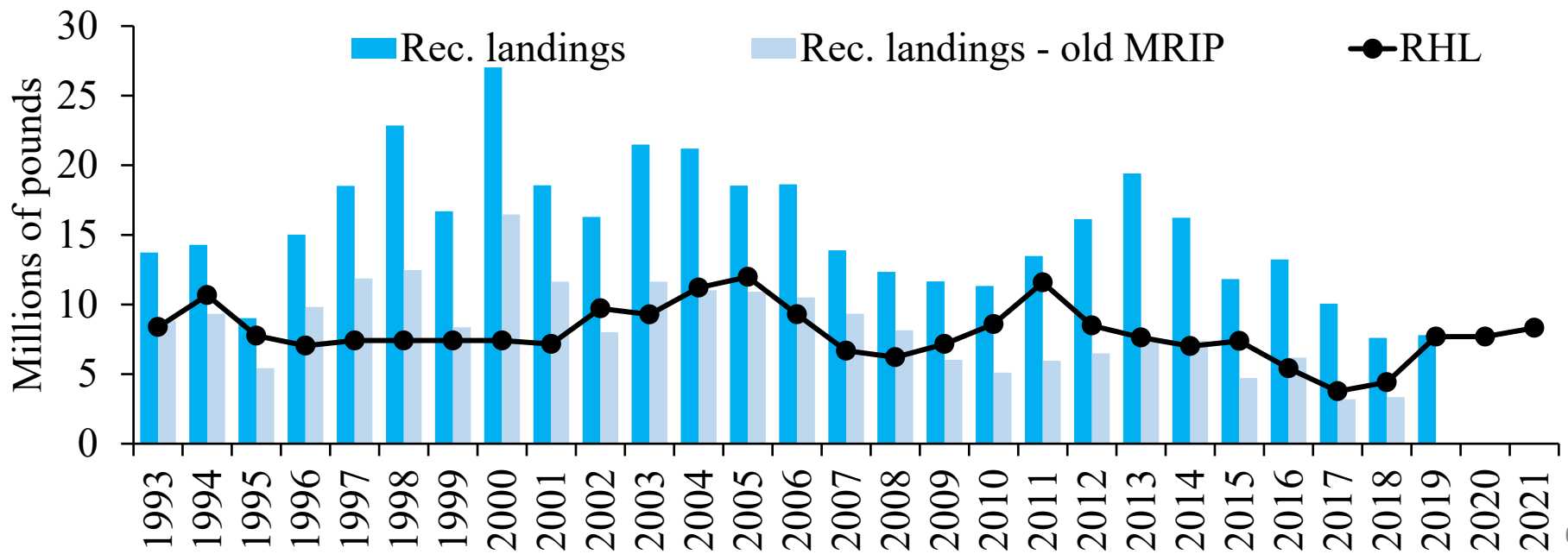
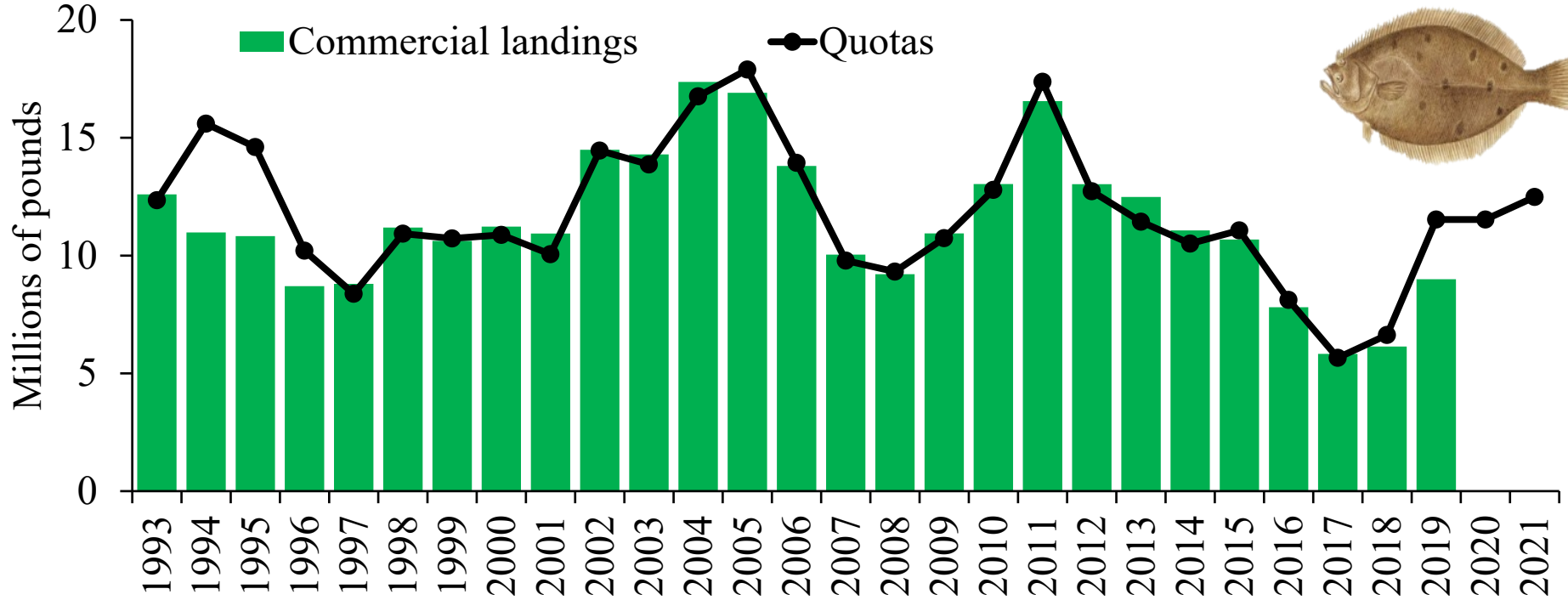


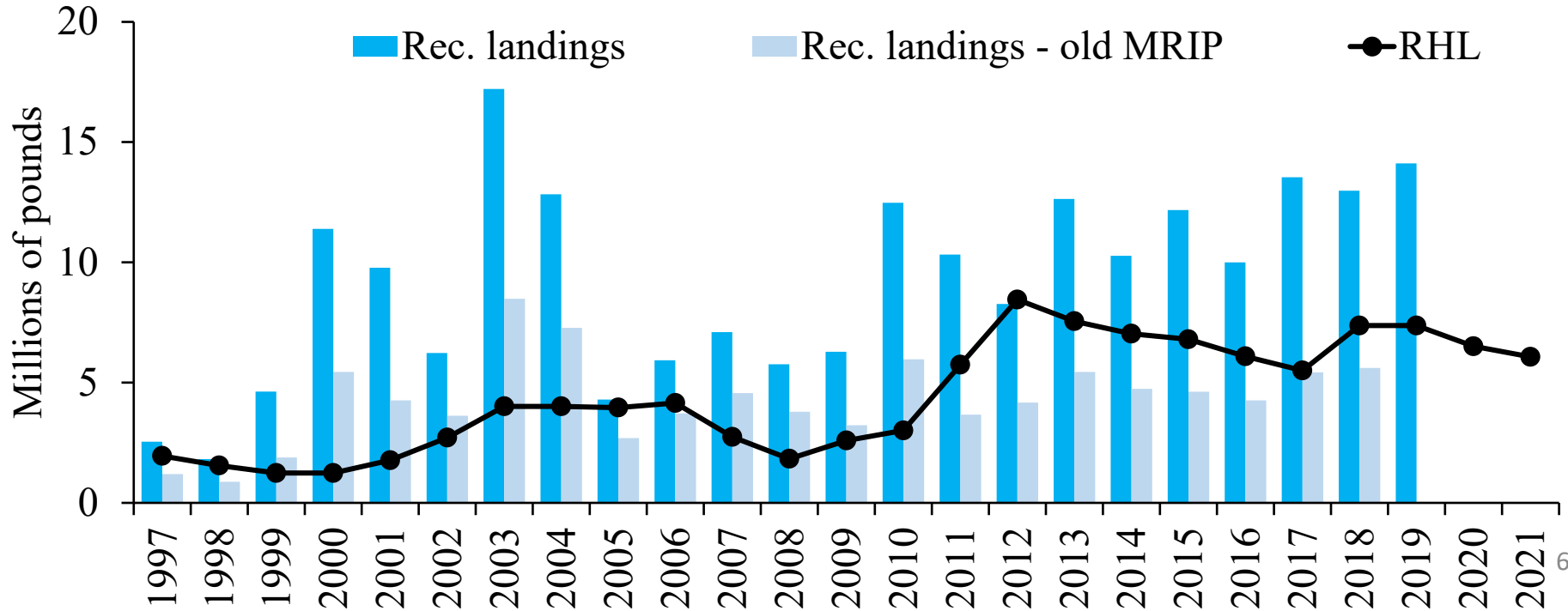
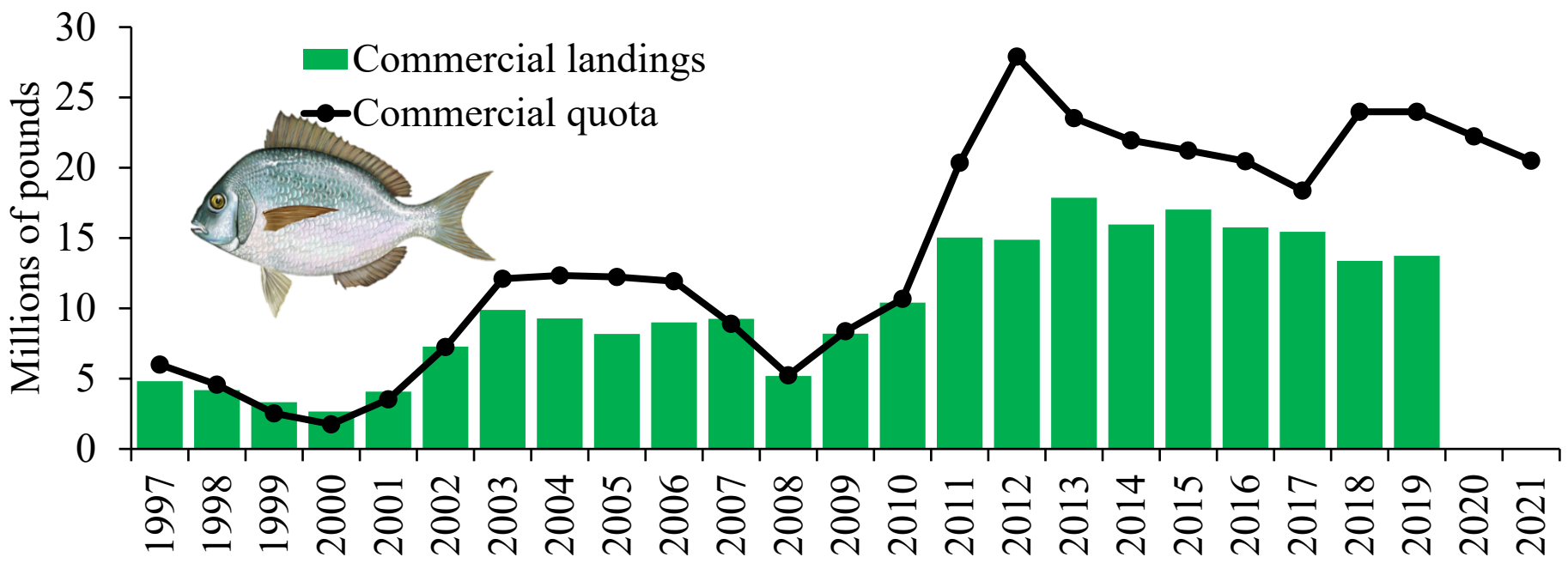
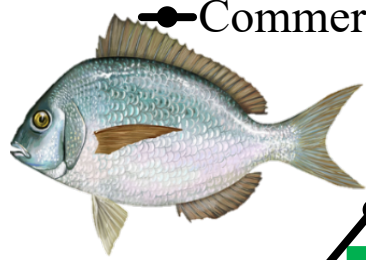
Commercial and recreational scup landings and dead discards, 1981-2018

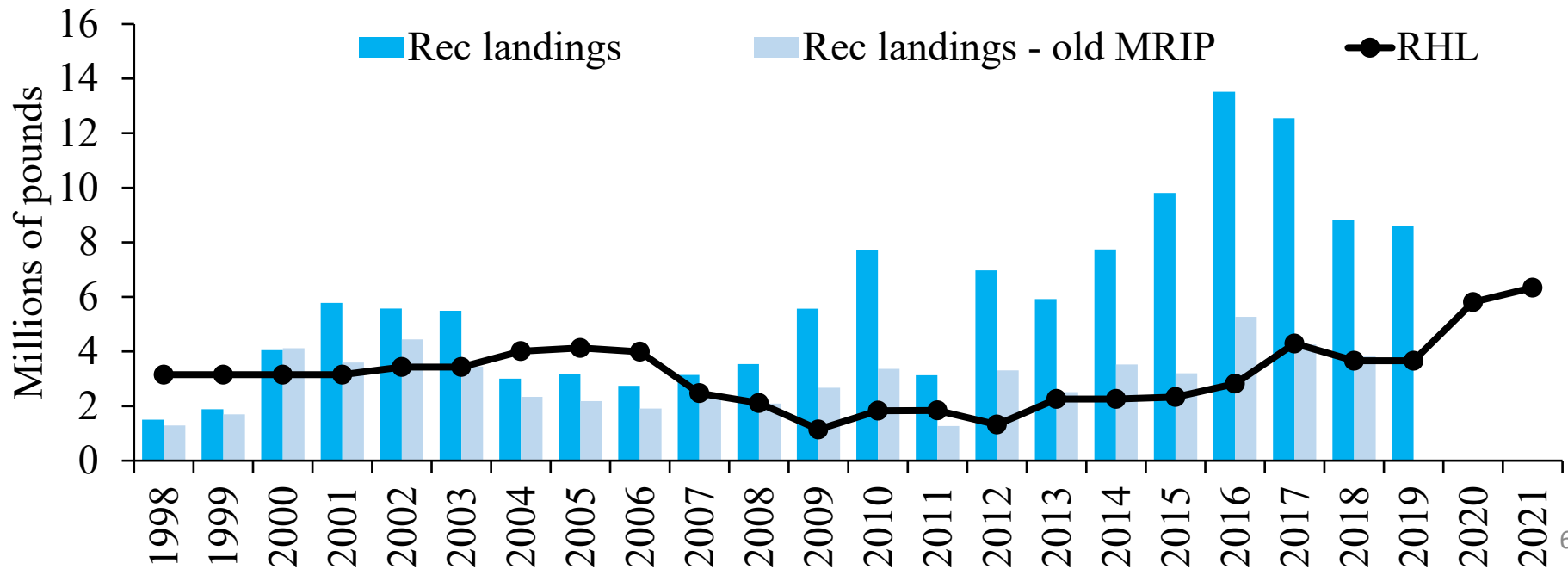
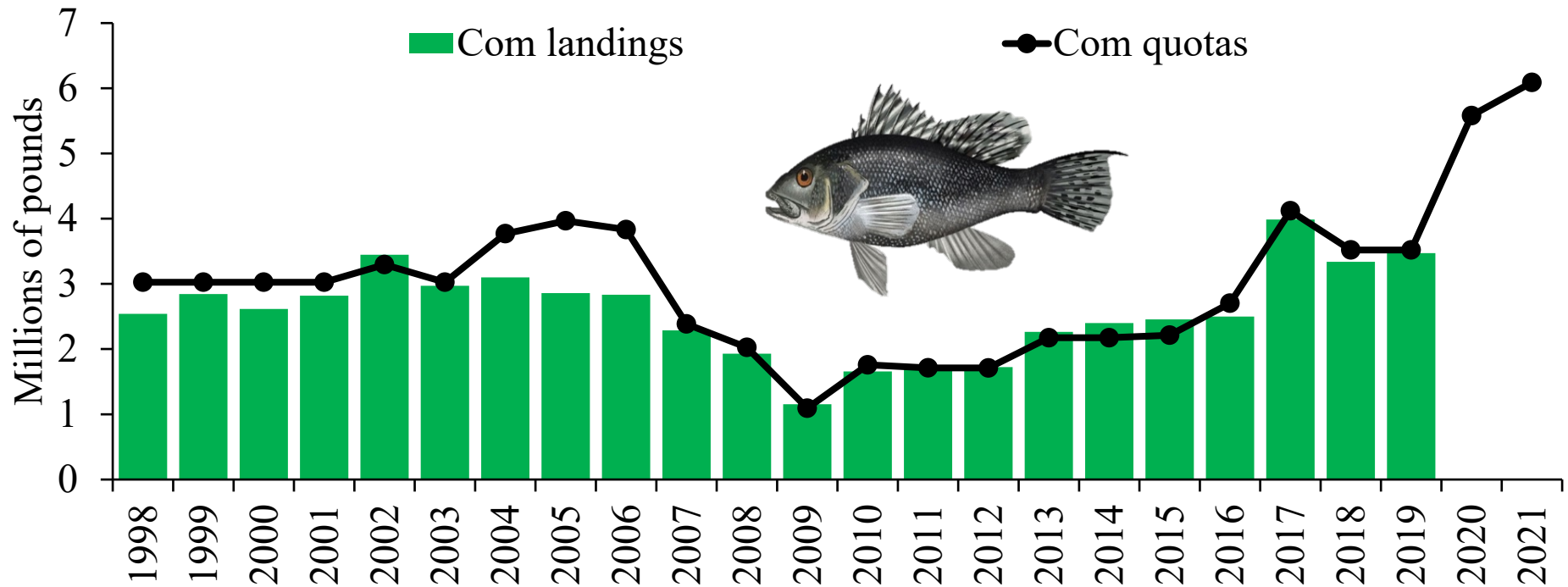


Commercial and recreational black sea bass landings and discards, 1989-2018









Commercial Discard Estimation Methodology (NEFSC)

- Exact methods vary by species
 - Different stratification by area, gear, etc.
 - See assessment reports (<https://www.fisheries.noaa.gov/resource/publication-database/northeast-stock-assessment-documents-search-tool>)
- All use Standardized Bycatch Reporting Methodology (SBRM)
- NEFOP (observer) data used in combination with dealer data to scale discard estimates

Commercial Estimate CVs

- Summary of average CVs for commercial landings and dead discards, 2010-2019.

	Commercial CVs	
Species	Landings	Discards
Summer flounder	0.01	0.127
Scup	0.01	0.104
Black Sea Bass	0.01	0.31

Recreational Discard Estimation Methodology

- MRIP provides estimates of:
 - Harvest ($A + B1$: kept or released dead) in numbers and weight
 - Live discards ($B2s$: released alive) in numbers of fish
- Dead discards in numbers: apply assumed discard mortality rate to live discard ($B2$) estimates
 - Summer flounder: 10%
 - Scup and black sea bass: 15%

Recreational Discard Estimation Methodology

- Dead discards in weight:
 - Length-weight equation applied to expanded discard length frequencies
 - Discard lengths from multiple sources (party/charter sampling, ALS database, special sampling programs, volunteer angler surveys)
 - Same discard mortality rates applied to convert live discard estimates to dead discards (10% summer flounder, 15% scup and BSB)

Recreational Estimate CVs

- Summary of average CVs for recreational landings and dead discards, 2010-2019.

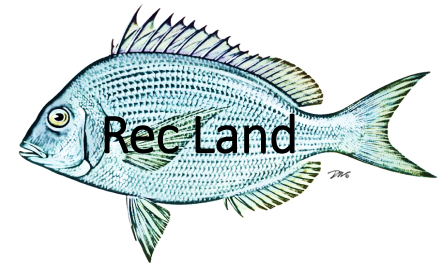
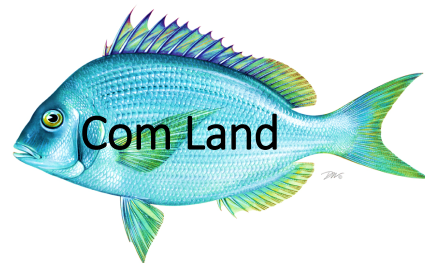
	Recreational CVs	
Species	Landings	Discards
Summer flounder	0.089	0.078
Scup	0.134	0.127
Black Sea Bass	0.126	0.102



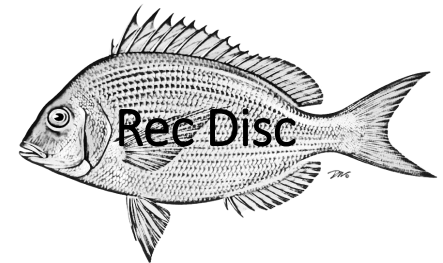
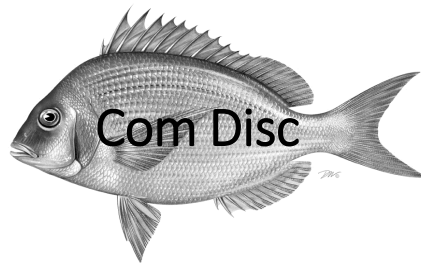
Catch vs. Landings Based Allocations Explained

Commercial
Recreational

Landings =



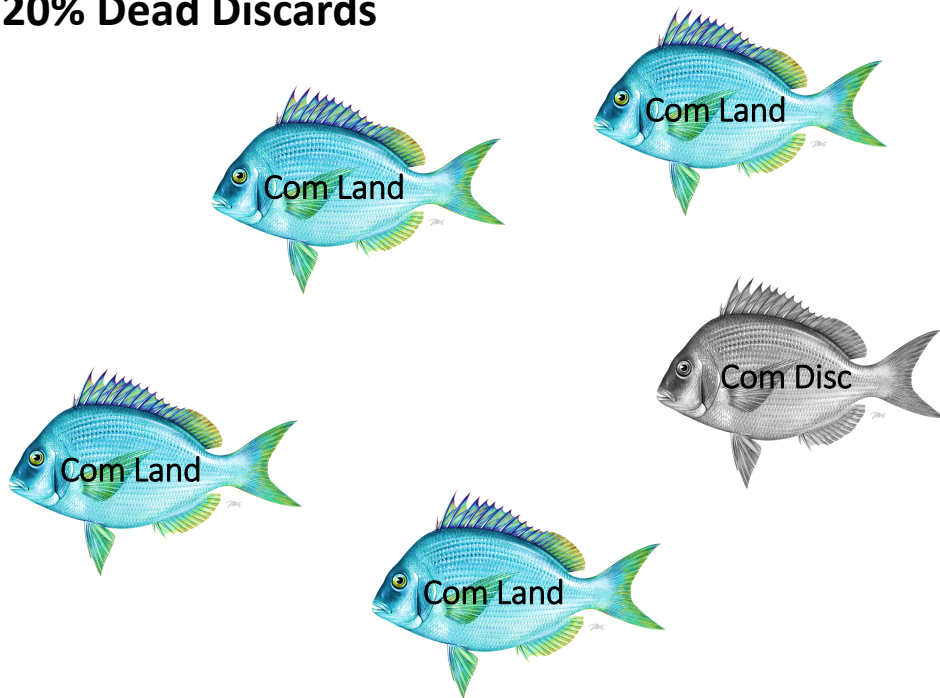
Dead
Discards =



Hypothetical Recent Catch

Commercial

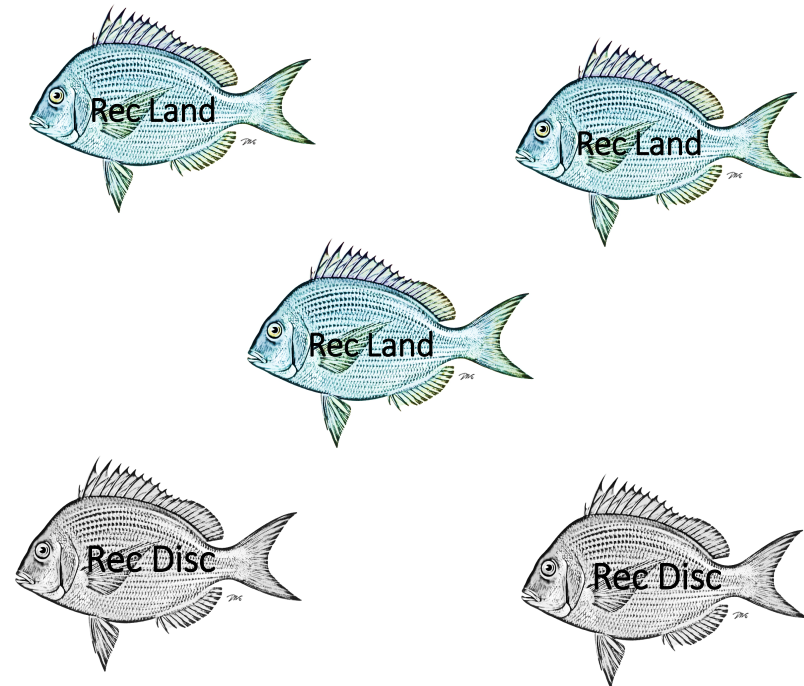
80% Landings
20% Dead Discards



Remember:
Catch = Landings + Dead Discards

Recreational

40% Landings
60% Dead Discards





Specifications for the new year

Start with:

Acceptable Biological Catch (ABC)



Specifications for the new year

Start with:

Acceptable Biological Catch (ABC)

Remember:

Catch = Landings + Dead Discards



Specifications for the new year

Start with:

Acceptable Biological Catch (ABC)

Remember:

Catch = Landings + Dead Discards

To determine:

Commercial Annual
Catch Limit (ACL)

Recreational Annual
Catch Limit (ACL)



Specifications for the new year

Start with:

Acceptable Biological Catch (ABC)

Remember:

Catch = Landings + Dead Discards

To determine:

Commercial Annual
Catch Limit (ACL)

Recreational Annual
Catch Limit (ACL)

At some point we must subtract

Projected Dead Discards

Largely informed by
proportions of recent
dead discards vs. catch





Specifications for the new year

Start with:

Acceptable Biological Catch (ABC)

Remember:

Catch = Landings + Dead Discards

To determine:

Commercial Annual
Catch Limit (ACL)

Recreational Annual
Catch Limit (ACL)

At some point we must subtract

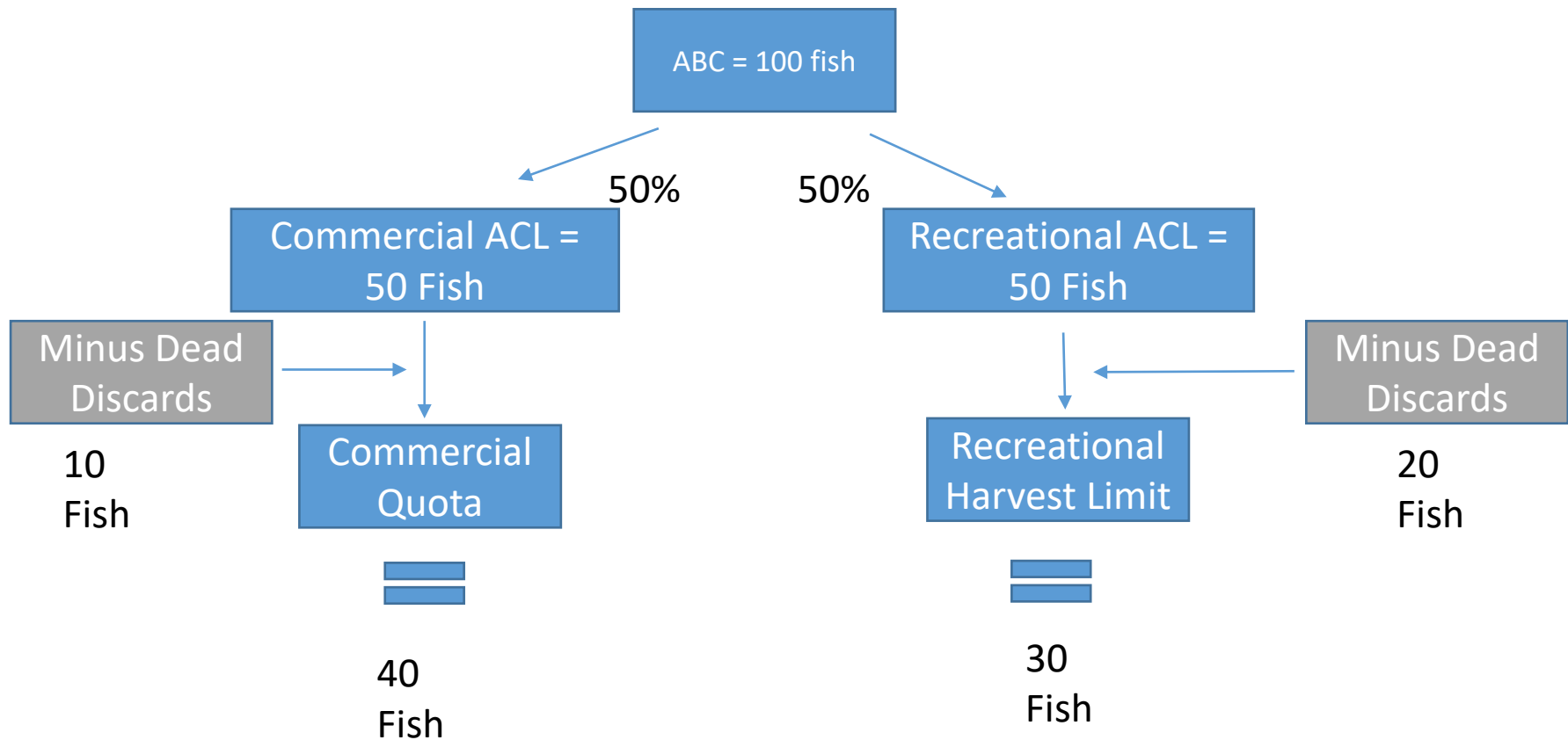
Dead Discards

To calculate

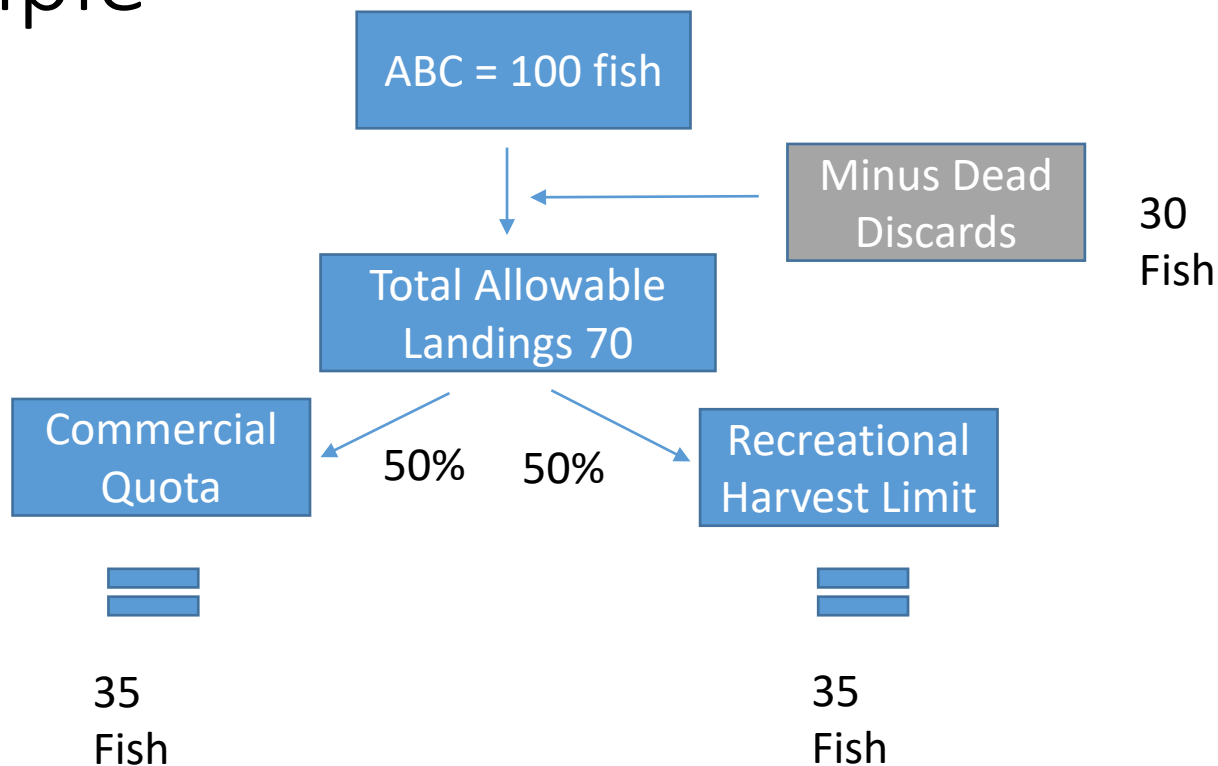
Commercial Quota

Recreational Harvest
Limit (RHL)

50%/50% Catch-Based Allocation Example



50%/50% Landings-Based Allocations Example

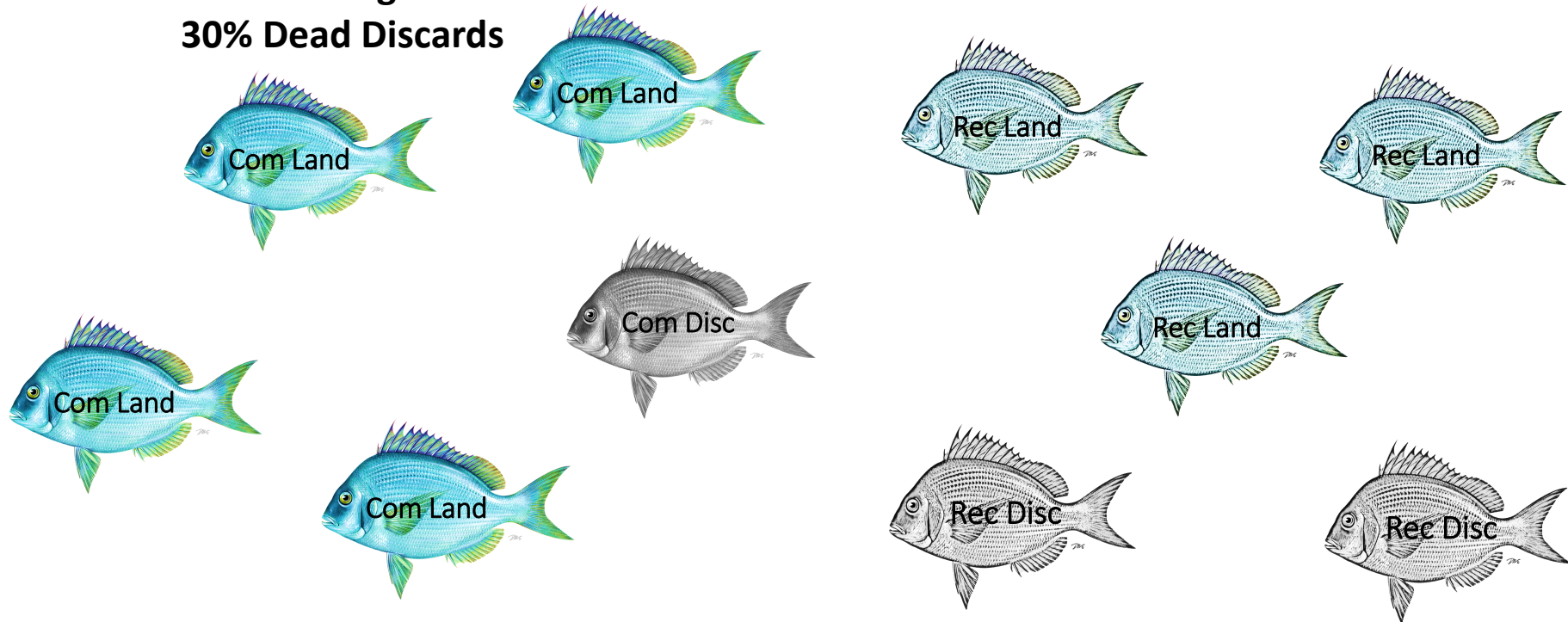


Hypothetical Recent Catch

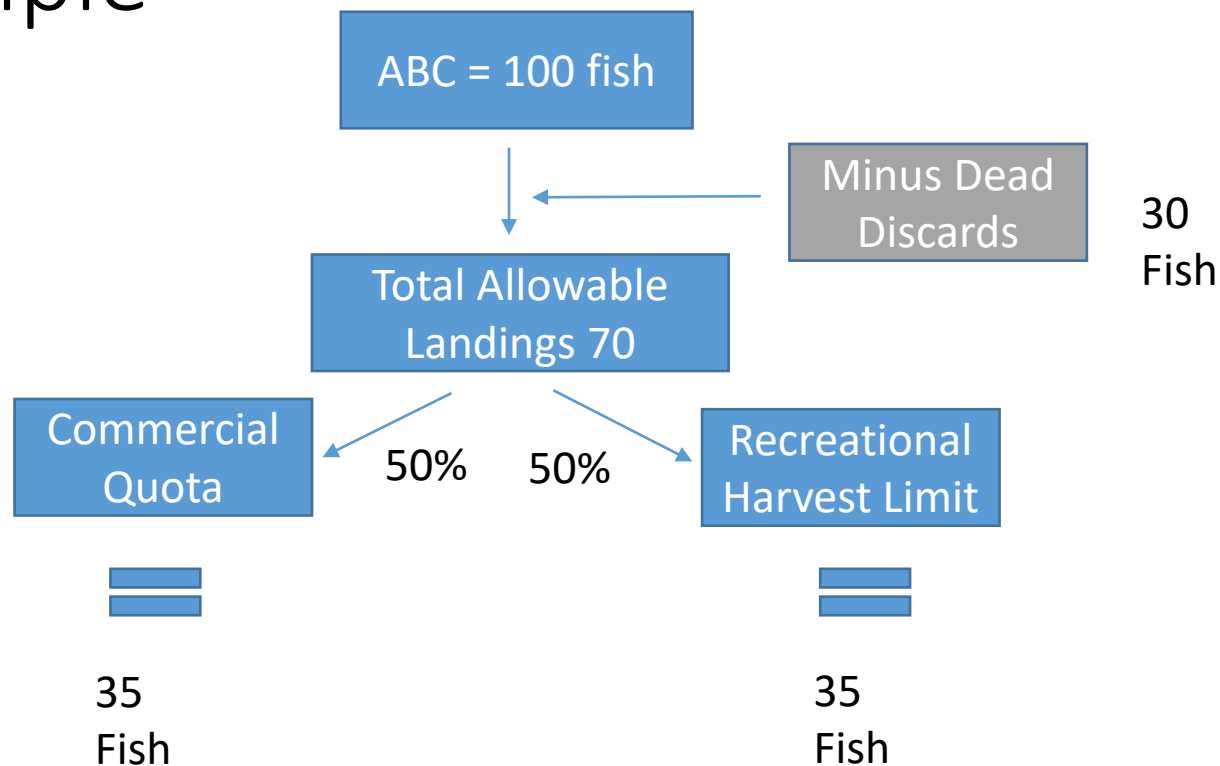
Remember:
Catch = Landings + Dead Discards

Entire Fishery Landings vs. Dead Discards Trends

70% Landings
30% Dead Discards



50%/50% Landings-Based Allocations Example





Same Allocation Percentages

Catch-Based
Allocations

Commercial
50%

Recreational
50%

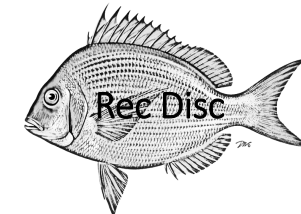
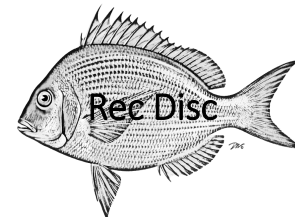
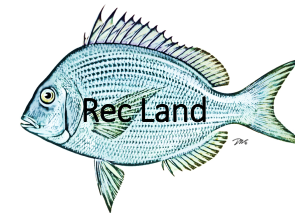
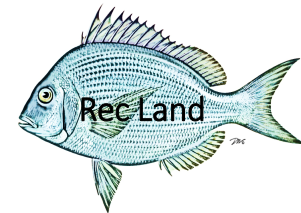
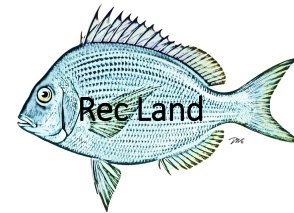
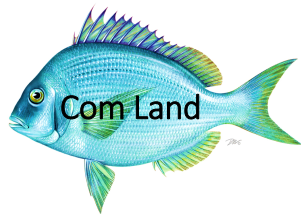
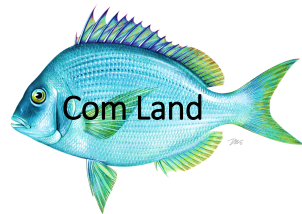
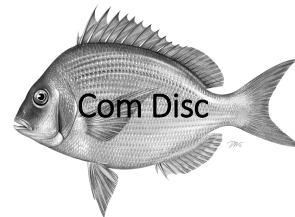
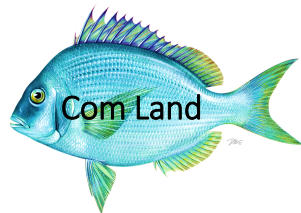
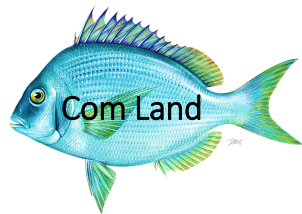
Landings-Based
Allocations

Commercial
50%

Recreational
50%

Same landings and dead discards data

Commercial
Recreational





Same Allocation Percentages

Catch-Based
Allocations

Landings-Based
Allocations

50%

50%

50%

50%

But different outcomes!!!

Commercial
Quota = 40 Fish

Recreational Harvest
Limit = 30 Fish

Commercial
Quota = 35 Fish

Recreational Harvest
Limit = 35 Fish



Same Allocation Percentages

Catch-Based
Allocations

50% 50%

Landings-Based
Allocations

50% 50%

But different outcomes!!!

Commercial
Quota = 40 Fish

Recreational Harvest
Limit = 20 Fish

Commercial
Quota = 30 Fish

Recreational Harvest
Limit = 30 Fish

Catch-based allocations will reward a sector that reduces dead discards in proportion to their total catch!



Catch-based allocations will reward a sector that reduces dead discards in proportion to their total catch!

Over time....

Less Dead Discards = Higher Landings limits