

Black Sea Bass 2023 Recreational Measures

Advisory Panel Meeting
November 30, 2022



Meeting Objectives



- Review recent recreational fishery performance.
- Review Monitoring Committee recommendations for 2023 recreational management measures.
- Provide AP input to Council and Board on 2023 recreational measures.

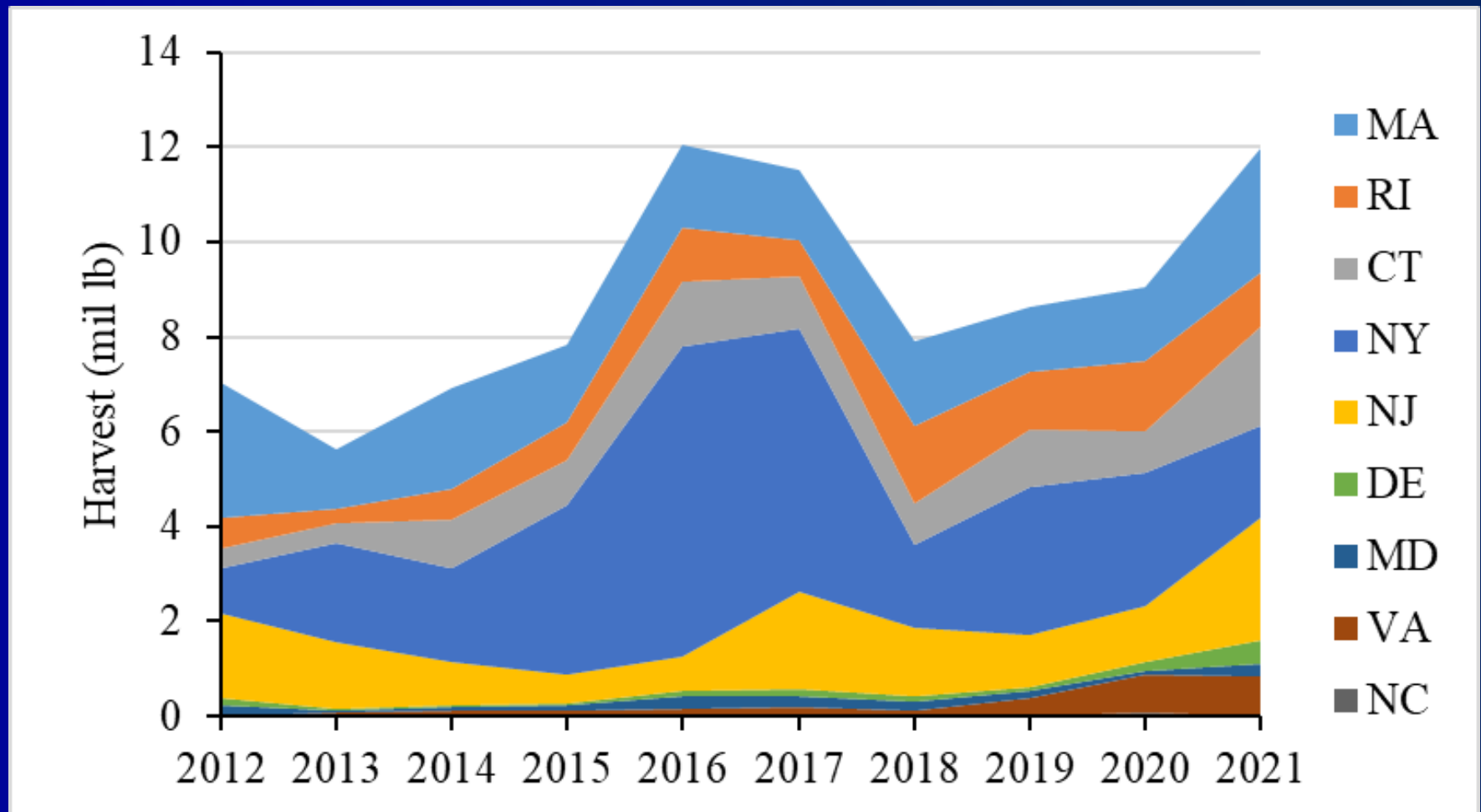
2022 State Measures

State	Min. Size	Bag Limit	Open Season
ME	13"	10 fish	May 19-Sept 21; Oct 18-Dec 31
NH	13"	10 fish	Jan 1 - Dec 31
MA	16"	4 fish	May 21- Sept 4
RI private & shore	16"	2 fish	May 22-Aug 31
		3 fish	Sept 1-Dec 31
RI for-hire		2 fish	June 18-August 31
		6 fish	September 1-December 31
CT private & shore	16"	5 fish	May 19-December 1
CT authorized party/charter monitoring program vessels		5 fish	May 19-August 31
		7 fish	September 1-December 31
NY	16"	3 fish	June 23-August 31
		6 fish	September 1-December 31
NJ	13"	10 fish	May 17-June 19
		2 fish	July 1-August 31
		10 fish	October 7-October 26
		15 fish	November 1-December 31
DE – NC (north of Hatteras)	13"	15 fish	May 15-December 11

2022 Conservation Equivalency

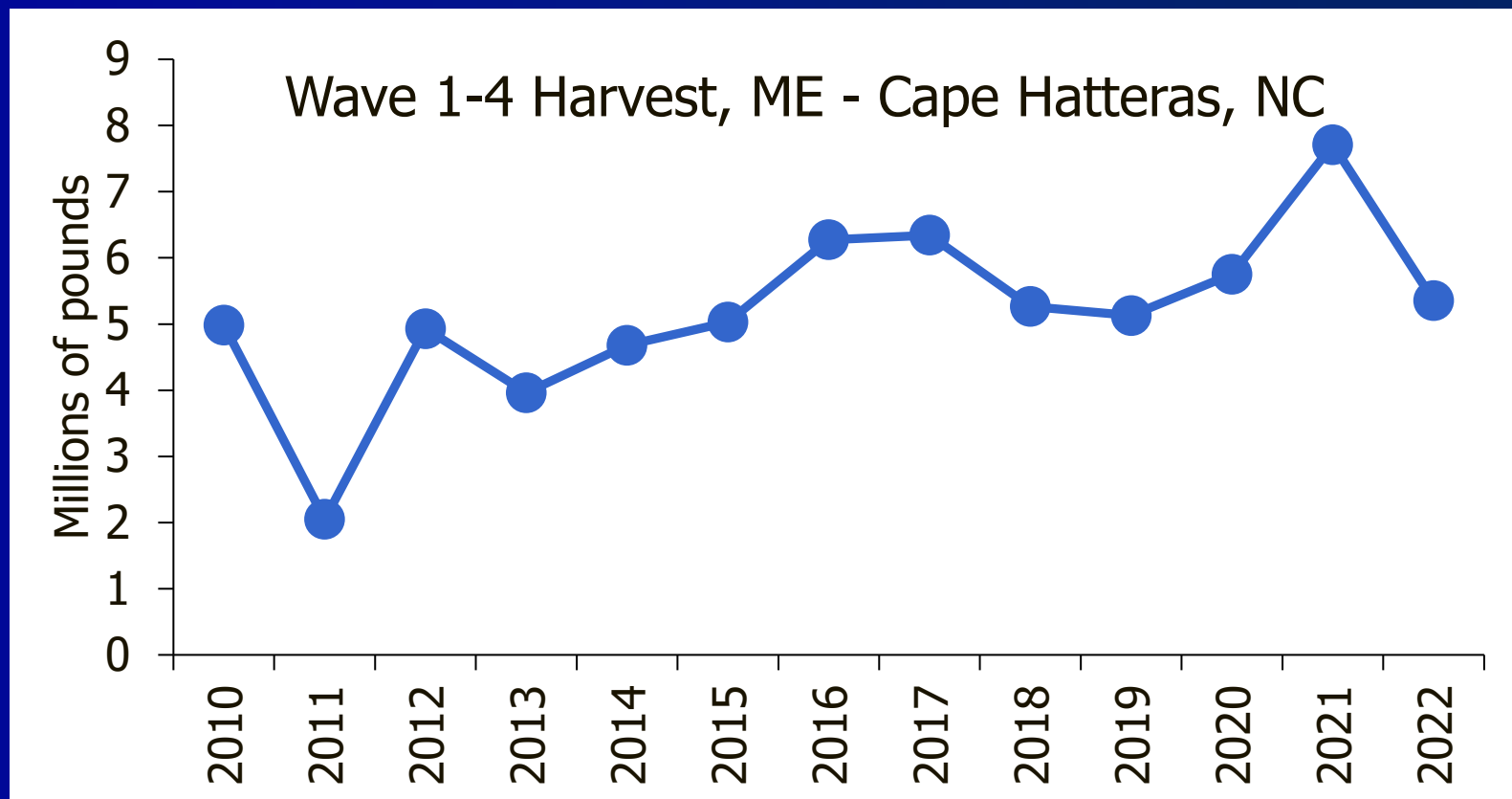
- Non-preferred coastwide measures
 - Implemented in federal regulations, but waived in favor of state regulations
 - 14-inches, 5 fish, May 15 - Oct 8
- Precautionary default
 - “Deterrent” measures
 - 16-inch TL, 3 fish, June 24 – Dec 31

Rec. Harvest by State, 2012-2021



Preliminary 2022 Wave 1-4

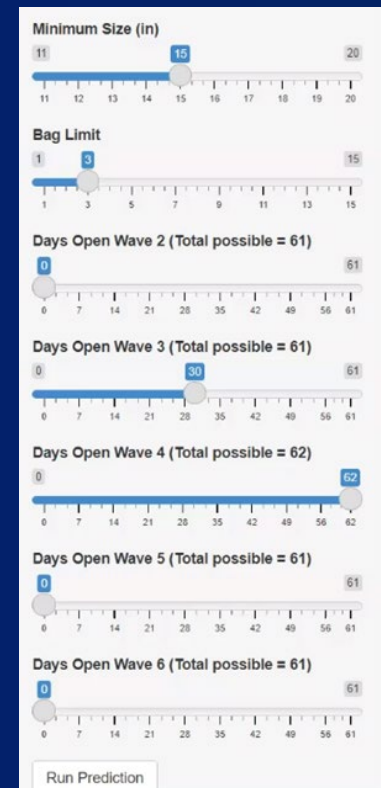
- 5.36 mil lb
- 31% lower than 2021 wave 1-4
- Within 1% of 2018-2020 avg wave 1-4



<i>Column 1</i> 2023 RHL vs expected harvest under 2022 measures	<i>Column 2</i> Biomass compared to target level (SSB/SSB_{MSY})	<i>Column 3</i> Change in Harvest
RHL greater than upper bound of expected harvest CI (RHL underage expected)	Very high greater than 150% of target	Liberalization % = difference between harvest estimate and 2023 RHL, not to exceed 40%
	High at least target, but no higher than 150% of target	Liberalization % = difference between harvest estimate and 2023 RHL, not to exceed 20%
	Low below target stock size	Liberalization: 10%
RHL within expected harvest CI (harvest expected to be close to RHL)	Very high greater than 150% of target	Liberalization: 10%
	High at least target, but no higher than 150% of target	No liberalization or reduction: 0%
	Low below target stock size	Reduction: 10%
RHL less than lower bound of expected harvest CI (RHL overage expected)	Very high greater than 150% of target	Reduction: 10%
	High at least target, but no higher than 150% of target	Reduction % = difference between harvest estimate and 2023 RHL, not to exceed 20%
	Low below target stock size	Reduction % = difference between harvest estimate and 2023 RHL, not to exceed 40%

New Tools for Predicting Harvest

- Recreation Demand Model (RDM).
- Recreational Fleet Dynamics Model (RFDM).
- Both are an improvement over past methods.
- Neither are required under the Percent Change Approach.
- **MC recommends use of RFDM for setting 2023 black sea bass rec. measures**
 - Similar predictions of 2023 harvest as RDM
 - Predicted past MRIP estimates reasonably well
 - Can easily be used by MC/TC



Confidence Interval Recommendation

- MC recommends use of **80% CI** for all 3 species in 2023
 - Recommended by Harvest Control Rule FMAT/PDT based on evaluation of MRIP data
 - Higher percentage CIs result in wider range of values; may result in action under Percent Change Approach that is not appropriate for “true” fishery condition
- MC supported continued discussion of this topic in 2023 for setting measures for 2024 and beyond.

2023 Harvest Under 2022 Measures

- Required for first step under Percent Change Approach.
- Under MC's recommendation to use Rec. Fleet Dynamics Model:
 - Predicted 2023 harvest under 2022 measures = 11.96 mil. lb*
 - 80% CI around that estimate = 8.17 to 16.81 mil lb*

**Updated since 11/10/22 staff memo was finalized. Converted from numbers of fish to weight using avg. weight of harvested fish in 2021 (most recent year for model run shown here).*
- 2023 RHL of 6.74 mil lb is below the CI.
 - I.e., harvest very likely to exceed 2023 RHL if measures left unchanged.

Resulting Percent Change for 2023

- 10% reduction in harvest needed.
- Applied to estimate of 2023 harvest under 2022 measures.
- Under MC recommendation using RFDM: 11.96 mil lb – 10% = **10.78 mil lb harvest target for 2023.**

2023 RHL vs expected harvest under 2022 measures	Biomass compared to target level	Change in Harvest
RHL greater than upper bound of CI (RHL underage expected)	Very high	Liberalization % = difference between harvest estimate and 2023 RHL, not to exceed 40%
	High	Liberalization % = difference between harvest estimate and 2023 RHL, not to exceed 20%
	Low	Liberalization: 10%
RHL within CI (harvest expected to be close to RHL)	Very high	Liberalization: 10%
	High	No liberalization or reduction: 0%
	Low	Reduction: 10%
RHL less than lower bound of expected harvest CI (RHL overage expected)	Very high	Reduction: 10%
	High	Reduction % = difference between harvest estimate and 2023 RHL, not to exceed 20%
	Low	Reduction % = difference between harvest estimate and 2023 RHL, not to exceed 40%

Accountability Measures

If biomass is above the target: Adjustments to measures will be made, taking into account the performance of the measures and conditions that precipitated the overage.

Year	Rec. ACL	Rec. harvest	Rec. dead discards	Rec. dead catch	% Over (+) or Under (-) ACL
2019 old MRIP	4.59	3.46 ^a	0.50 ^a	3.96 ^a	-14%
2020 new MRIP	8.09	9.05	3.46 ^b	12.50	+55%
2021 new MRIP	7.93	11.97	4.20 ^b	16.16	+104%
2019-2021 avg	6.87	8.16	2.72	10.87	+58%

^a Provided to GARFO by the NEFSC.

^b Provided by GARFO based on alternative methods due to lack of discard data in weight using typical methods.

Accountability Measures

- GARFO letter to Council: Due to recent actions taken by Council/Commission, no additional action needed beyond changes required by Percent Change Approach.
- MC recommends no additional restrictions beyond 10% reduction required under Percent Change Approach.

MC Recommendation for Measures

- Continued use of conservation equivalency for 2023 to waive federal waters measures.
- Current non-preferred coastwide measures are too liberal (14 inches, 5 fish, May 15 – Oct 15).
- Additional model runs needed after MC meeting to finalize recommendation – *still in progress*.
 - 15", 3 fish, June 1 – August 31 might work, but may be too restrictive – need to check one aspect of the model
- Non-preferred coastwide measures are intended to be waived in favor of state measures; not intended to be implemented.

Precautionary Default Measures

- MC recommends 16", 2 fish, June 1 – August 31.
- Current precautionary default measures (16", 3 fish, June 24 – Dec 31) may be too liberal considering current measures in each state and need to restrict harvest by 10% in 2023.
- Precautionary default measures only used for states/regions that do not follow ASFMC conservation equivalency guidelines.

VA 2023 February Opening

- VA is proposing the same process for opening their February fishery and monitoring February harvest as prior years.
- The Board will consider approval of this proposal on Dec. 13.
- Monitoring Committee had no concerns with this proposal.

Questions/Discussion



- Monitoring Committee recommendations:
 - Use Rec. Fleet Dynamics Model for setting 2023 measures.
 - Under Percent Change Approach, must reduce expected coastwide harvest by 10%.
 - Use conservation equivalency to waive federal waters measures in favor of state waters measures.
 - MC recommendation for non-preferred coastwide measures still in development.
 - Recommended precautionary default measures: 16", 2 fish, June 1 – August 31.

Backup Slides

Model	Estimated 2023 harvest under 2022 measures	95% CI	90% CI	80% CI	2023 RHL
RDM (median)	11.05	9.17 – 13.29	9.53 – 12.67	10.00 – 11.96	6.74
RFDM* (median)	11.96	6.93 – 20.86	7.49 – 18.98	8.17 – 16.81	

** Updated since briefing memo was finalized.* Converted from numbers of fish to weight using avg weight of harvested fish in 2021 (most recent year for model run shown here).

Percent Change Approach vs. Targeting 2023 RHL

Stock	Model	Expected 2023 harvest under 2022 measures	2023 RHL	Percent Change Approach Requirement	Change Necessary for Harvest to Meet RHL
Summer flounder	RDM	8.38	10.62 mil lb	10% liberalization	27% liberalization
Scup	RFDM	14.42*	9.27 mil lb	10% liberalization	35% reduction
Black sea bass	RFDM	11.96*	6.57 mil lb	10% reduction	45% reduction

**Converted to pounds based on average weight of harvest in 2021 from MRIP data*

Rec. Accountability Measures

- 1. If the stock is overfished, under a rebuilding plan, or stock status is unknown:** Exact overage amount must be paid back as soon as possible. Payback may be evenly spread over 2 years if doing so allows for identical measures for the upcoming 2 years.
- 2. If biomass is above the threshold, but below the target, and the stock is not under a rebuilding plan:**
 - **If only the ACL exceeded:** Adjust bag/size/season, taking into account performance of the measures and conditions that precipitated the overage.
 - **If most recent F exceeds Fmsy:** adjustment to the rec. ACT will be made as soon as possible as a payback that will be scaled based on stock biomass where $\text{payback} = (\text{overage amount}) * (B_{\text{msy}} - B) / \frac{1}{2} B_{\text{msy}}$. Payback may be evenly spread over 2 years if doing so allows for identical measures for the upcoming 2 years. If F/Fmsy not available for most recent year of catch data, catch vs ABC comparison will be used.
- 3. If biomass is above the target:** Adjustments to measures will be made, taking into account the performance of the measures and conditions that precipitated the overage.

Year	Rec. harvest		RHL	RHL overage/ underage ^b	Rec. dead discards		Rec. dead catch		ACL	ACL overage/ underage ^b
	Old MRIP units	New MRIP units			Old MRIP units ^a	New MRIP units ^c	Old MRIP units	New MRIP units		
2012	3.26	7.04	1.32	+147%	0.80	2.31	4.07	9.35	1.86	+119%
2013	2.64	5.69	2.26	+17%	0.65	1.65	3.29	7.34	2.9	+13%
2014	3.85	7.24	2.26	+70%	0.84	1.85	4.69	9.09	2.9	+62%
2015	4.11	9.06	2.33	+76%	0.82	2.17	4.93	11.23	2.9	+70%
2016	5.19	12.05	2.82	+84%	1.21	3.07	6.40	15.12	3.52	+82%
2017	4.50	11.50	4.29	+5%	1.27	3.60	5.77	15.10	5.38	+7%
2018	3.82	7.92	3.66	+4%	1.1	2.28	4.92	10.20	4.59	+7%
2019	3.46	8.61	3.66	-5%	0.5	3.24	3.96	11.85	4.59	-14%
2020	NA	9.05	5.81	+56%	NA	3.46	NA	12.51	8.09	+55%
2021	NA	11.97	6.34	+89%	NA	4.20	NA	16.17	7.93	+104%

^a Based on the data update provided by the NEFSC in 2018 (most recent data from NEFSC in “old” MRIP units). Values for 2018 and 2019 were provided by GARFO.

^b Based on a comparison with old MRIP data through 2019 and new MRIP data starting in 2020.

^c Values through 2019 are from the 2021 management track stock assessment. Values for 2020-2021 were provided by GARFO.

Average proportion of black sea bass recreational harvest in weight from federal and state waters, 2019-2021.

State	Federal waters	State waters
MA	6%	94%
RI	27%	73%
CT	21%	79%
NY	41%	59%
NJ	68%	32%
DE	96%	4%
MD	99%	1%
VA	88%	12%
NC	83%	17%

Proportion of recreational black sea bass harvest in weight by wave within each state in 2021. North Carolina is the only state in the management unit which conducts MRIP sampling during wave 1 (Jan/Feb).

State	Wave 1 Jan/Feb	Wave 2 Mar/Apr	Wave 3 May/June	Wave 4 Jul/Aug	Wave 5 Sept/Oct	Wave 6 Nov/Dec
MA	0%	0%	89%	8%	3%	0%
RI	0%	0%	2%	46%	40%	12%
CT	0%	0%	35%	14%	50%	2%
NY	0%	0%	13%	29%	31%	27%
NJ	0%	0%	58%	13%	14%	15%
DE	0%	0%	19%	18%	15%	48%
MD	0%	0%	54%	13%	25%	9%
VA	0%	0%	52%	17%	10%	22%
NC	3%	10%	34%	30%	16%	6%
ME-NC	0%	0%	46%	18%	23%	13%

Next Steps

- Council/Board meeting – Dec 13. Will adopt:
 - Overall % change
 - 2023 non-preferred coastwide and precautionary default measures for SF and BSB
 - 2023 federal waters measures for scup
- TC meeting #1 – early 2023
 - Establish guidelines for state/regional proposals
- States/regions submit proposals - early 2023
- TC meeting #2 – early 2023
 - Review state/regional proposals
- Board meeting – early 2023
 - Review state/regional proposals and TC recommendations. Consider approval of proposals.