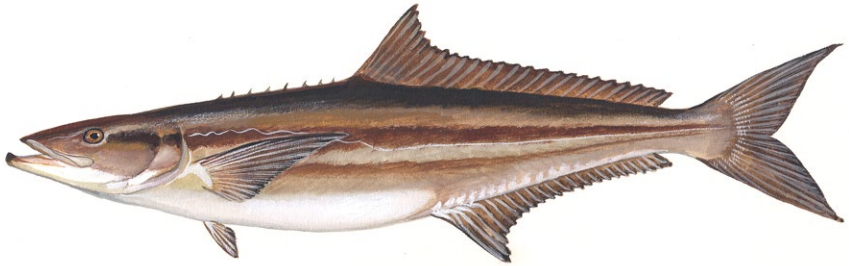
Cobia Recreational Management Measures for the Northern Region



Angela Giuliano, TC Chair
Coastal Pelagics Management Board
October 22, 2024

2021-2023 Regional Harvest Eval.

- Per Add. II, the coastwide recreational harvest quota for Atlantic cobia is allocated between the Northern Region (68.7%) and Southern Region (31.3%)
- New allocation results in new harvest targets under the current coastwide quota of 76,908 fish
- Evaluation of each region's average 2021-2023 harvest against its target to determine if management changes are needed for 2025

2021-2023 Regional Harvest Eval.

Region	Recreational Harvest Target	2021-2023 Average Recreational Harvest	Difference from Target	Mgmt. Change
Northern Region RI-VA	52,825 fish	62,832 fish	10,007 fish over target	15.9% reduction
Southern Region NC-GA	24,083 fish	23,474 fish	609 fish under target	Status Quo

Requirements for Regional Measures

- As Northern Region implements the 15.9% reduction, current state-by-state measures change to a set of regional measures
  - Same size and vessel limit from RI to VA
  - Seasons may vary by state

- Minimum size limit cannot be below 40” total length (36” fork length) per the FMP

Current Measures (Starting Point)

	2024 Size Limit	2024 Vessel Limit	2024 Season
RI, NY, NJ, DE	37” TL	1 fish	All Year
MD, PRFC, VA	40” TL *Virginia allows only 1 fish >50” per vessel*	2 fish	June 15 – September 15

Methods for New Measures

- TC developed methods to address changing the size limit, changing the vessel limit, changing the season, or changing multiple measures simultaneously
  - Combination equation to estimate cumulative reduction for multiple management changes

- For all analyses, MRIP data pooled across 2021, 2022, and 2023

Size Limit Methods

- First, RI-NY-NJ-DE increase minimum size from 37” TL to at least 40” TL per the FMP
  - Cannot be quantified due to insufficient MRIP data

- Second, use MRIP length frequencies for all states in region RI-VA to explore various size limit options
  - Assume all states start at minimum size 40” TL
  - For adequate sample size, used both imputed and non-imputed lengths
  - Analysis accounts for new releases (5% mortality rate)

Vessel Limit Methods

- If the region implements a 1-fish vessel limit, calculate reduction from MD-PRFC-VA decreasing from 2-fish vessel limit
  - MRIP trip intercept data compiled to determine harvest per trip and # of anglers
  - Trips that previously harvested 2 fish would now harvest 1 fish and release the other fish

Vessel Limit Methods

- If the region implements a 2-fish vessel limit, calculate increase from RI-NY-NJ-DE increasing from 1-fish vessel limit
  - Insufficient MRIP data to calculate increase
  - Assumed lower bound is no change in harvest (0% change to region's harvest)
  - Assumed upper bound is doubling of harvest (+2.5% increase in region's harvest)
  - Average change +1.3% in region's harvest
  - Very few differences between using upper bound and average when calculating options

Season Methods

- Season reductions only calculated for MD-VA
- Insufficient MRIP data for RI-NY-NJ-DE
  - Any change to RI-NY-NJ-DE seasons not credited toward reduction
  - Seasons may differ between states in region

- For MD-VA season reductions, calculated harvest by date (Month, Day)
  - Preferred method by date due to short season and pulse fishery (i.e., catch rates may be much higher early in the season and may only occur for part of a Wave)

Season Methods

- MD-VA could lengthen season (increase harvest) to compensate for decreasing vessel limit to 1-fish

- For MD-VA season increases, harvest by date beyond the current season is not available for recent years, so a constant daily harvest rate was used
  - Constant rate is not the preferred method, but is the only method available
  - Uncertainty due to varying daily catch rates and changing timing of cobia availability in state waters from year-to-year

Uncertainty and Considerations

TC emphasizes sources of uncertainty and management considerations

- Analysis assumes fish availability, size frequencies, and angler effort are the same in future years
- If cobia's range continues to expand, more fish could become available to northern states and harvest could increase despite management measures to reduce harvest
- If some states see primarily larger fish, a maximum slot limit could limit the available fish for harvest

Uncertainty and Considerations

TC emphasizes sources of uncertainty and management considerations

- Season expansion analysis assumes a constant daily harvest due to lack of recent data outside of the current seasons
- Difficult to measure large cobia, so measuring a large fish to comply with a maximum size limit or a much higher minimum size limit could result in injury and resulting increase in dead releases
- Effect of gaffing may not be fully captured in the assumed release mortality rate (Note Virginia has prohibited gaffing since 2021)

Uncertainty and Considerations

TC emphasizes sources of uncertainty and management considerations

- Virginia's current size limit allows only 1 of 2 fish per vessel to be over 50
  - If this provision is implemented for the entire region, there is the potential for high grading
  - If this provision is removed in favor of a slot limit with a 2-fish vessel limit, there could potentially be more harvest of larger fish (e.g., 2 fish harvested up to 53")
  - However, in 2021-2023 only one-third of the MD-VA trips intercepted by MRIP harvested the full 2-fish vessel limit
  - Overall, difficult to quantify potential impacts of this provision

Management Options

- TC Memo includes management options estimated to achieve at least a 15.9% reduction in the Northern Region

- Each option has three components: size limit, vessel limit, season (MD-VA only)

- This is not an exhaustive list; TC could provide other combinations of size limits/seasons
  - Memo does not include options for every possible season start or close date (e.g., Memo lists close date of Aug 31 and Sep 5, but Sep 1, 2, 3, 4 not listed)

Management Options

Size Limit for RI-VA (TL)	Vessel Limit for RI-VA	Season for MD-VA	Total Estimated Cumulative Reduction
40” minimum	1-fish	June 8 – September 15, OR June 15 – September 22	-16.6%
40” minimum	2-fish	June 15 – August 25**, OR June 30 – September 15	-16.7% -24.4%
41” minimum	2-fish	June 15 – August 31, OR June 27 – September 15	-17.5% -17.1%
42” minimum	2-fish	June 15 – August 31, OR June 27 – September 15	-20.4% -20.1%
43” minimum	2-fish	June 15 – September 15	-20.5%

**All options in the table were calculated assuming the upper bound of RI-DE increasing their vessel limit (2.5%). If the average 1.3% increase for RI-DE was applied, this season end date could be August 27 with an estimated reduction of 16.0%.

Management Options

Size Limit for RI-VA (TL)	Vessel Limit for RI-VA	Season for MD-VA	Total Estimated Cumulative Reduction
40” – 51” slot	2-fish	June 15 – September 15	-16.4%
40” – 52” slot	2-fish	June 15 – August 31, OR June 20 – September 15	-23.4% -17.3%
40” – 54” slot	2-fish	June 15 – August 31 OR June 27 – September 15	-19.3% -18.9%
40” – 55” slot	2-fish	June 15 – August 27, OR June 30 – September 15***	-18.3% -27.4%
41” – 52” slot	2-fish	June 15 – September 15	-19.1%
42” – 54” slot	2-fish	June 15 – September 15	-17.8%

***All options in the table were calculated assuming the upper bound of RI-DE increasing their vessel limit (2.5%). If the average 1.3% increase for RI-DE was applied, the season start date would be one day earlier on June 29 with an estimated reduction of 16.1%.

Questions?

Timeline for Selecting and Implementing New Regional Measures for Atlantic Cobia

Coastal Pelagics Management Board
October 2024

Possible Timelines

- Timeline for selecting new Northern Region measures and 2025 implementation date is a Board decision
- Board can set Northern Region measures for 2025-2026 to align with the current total harvest quota which is in place through 2026

Possible Timelines

- Possible Timeline 1: Board selects Northern Region measures at the 2024 Annual Meeting. States in the Northern Region submit implementation plans by specified date for Board consideration via email vote.

Possible Timelines

- Possible Timeline 2: Board approves the TC methodology or range of options at the 2024 Annual Meeting. States in the Northern Region take time after the Annual Meeting to consider options. If States in the Northern region can come to consensus on which measures to implement, States submit implementation plans by specified date for Board consideration via email vote.

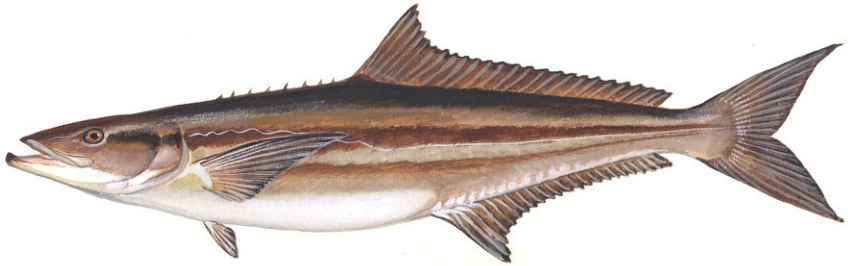
Possible Timelines

- Possible Timeline 3: Board approves the TC methodology or range of options at the 2024 Annual Meeting. States in the Northern Region take time after the meeting to consider options. If States in the Northern Region cannot come to consensus, a full Board webinar will be scheduled to vote on measures for the Northern Region. States submit implementation plans by specified date for Board consideration via email vote.

- Other Timelines?

Questions?

Technical Committee Input on Confidence Interval Approach for Recreational Harvest Evaluations



Angela Giuliano, TC Chair

Coastal Pelagics Management Board

October 22, 2024

Board Task

- Board Task: TC discuss the Addendum II Confidence Interval Approach and its potential application to the new regional allocation framework
  - Include discussion of other confidence interval levels in addition to the 95% level specified in Addendum II

Current Rolling Average Approach

- Each region's average recreational landings evaluated against regional target
  - Average of up to five years under the same management measures
- If region's average landings exceed the target, region must adjust measures to reduce harvest to target
- If region's annual harvest is below the target for at least two consecutive years, region may liberalize not to exceed target

Add II. Confidence Interval Provision

- Board can vote to switch from current rolling average approach to confidence interval (CI) approach for harvest target evaluation
- Intention is to more directly account for uncertainty around MRIP point estimates with CIs
- Instead of comparing rolling average against harvest target, compare 95% CIs to harvest target for each year
  - Evaluation includes up to five years under the same management measures

Confidence Interval Provision

- If entire CI is above the harvest target for a majority of years, harvest has been above the target and the region must take a reduction
- If entire CI is below the target for a majority of years, harvest has been below the target and the region could liberalize
- If harvest target falls within the CIs for a majority of years, region maintains status quo
- If CI evaluation indicates action is needed, the average landings are used to calculate % reduction or liberalization relative to target

Confidence Interval Provision

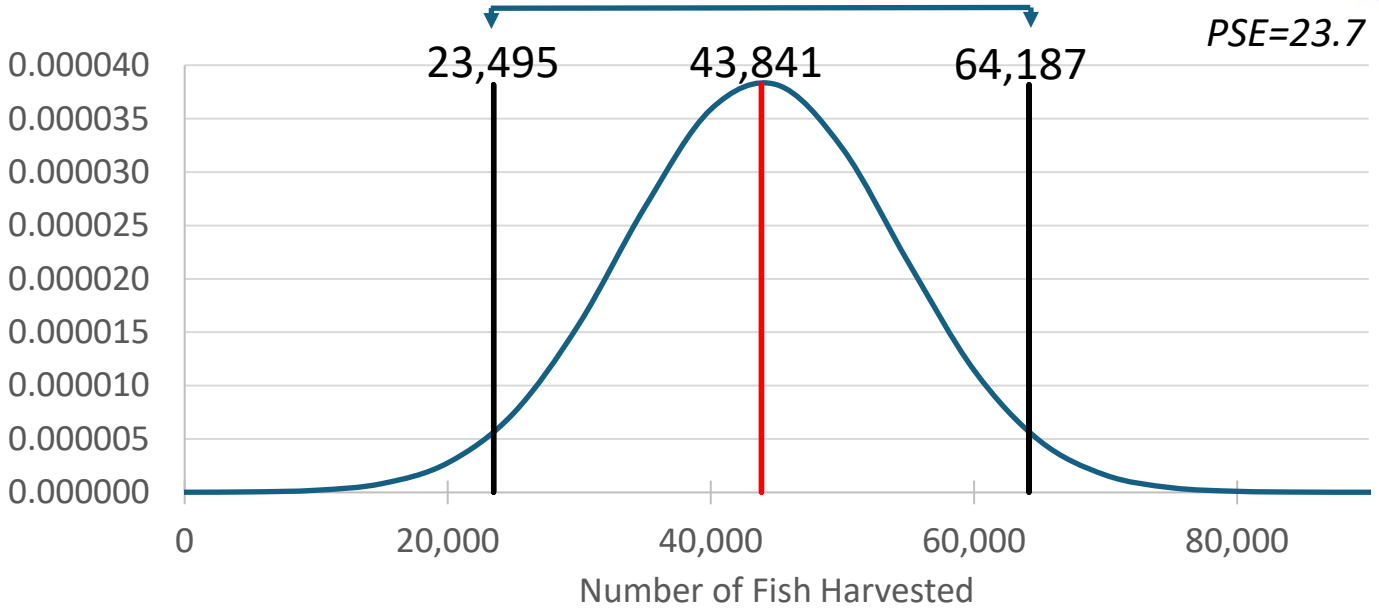
- 'Majority of years' determines management action
  - 3 of 5 years, or 2 of 3 years
  - If 2 out of 4 years, or 1 out of 2 years, then TC recommendation on management action
- Years with PSE > 50 excluded from CI evaluation
- Years with PSE between 30-50 reviewed by TC to determine whether to include in evaluation

TC Discussion

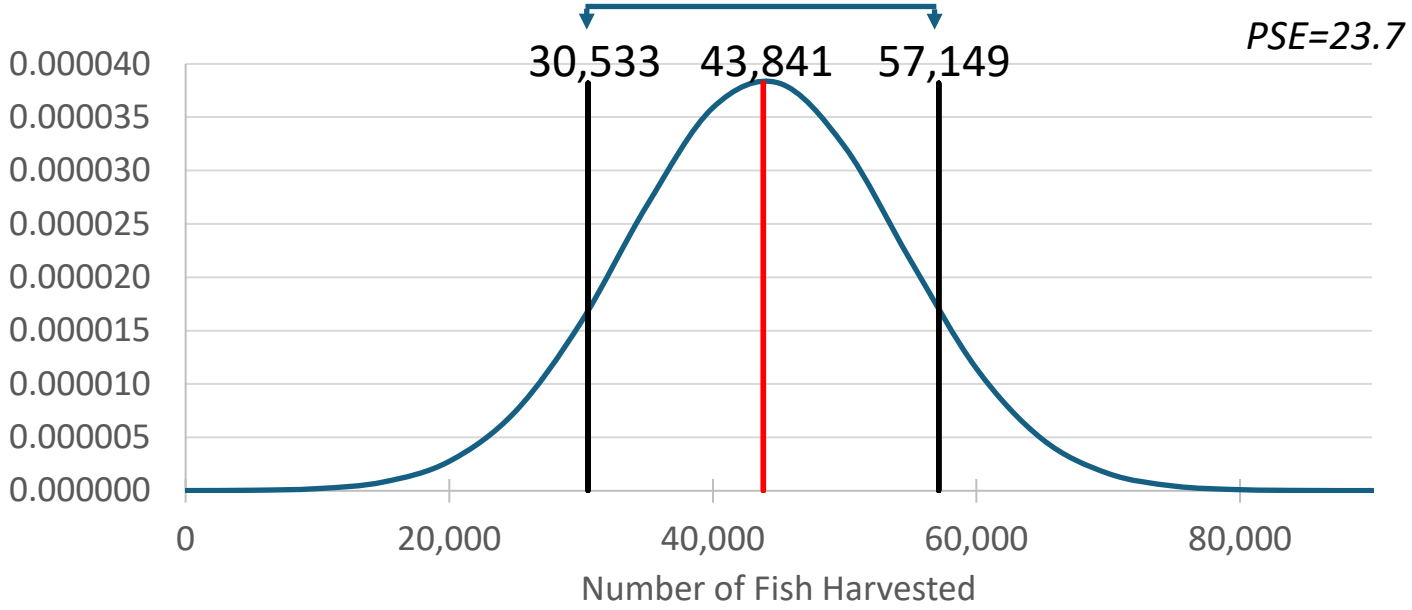
- TC applied CI approach to current 2021-2023 and previous 2017-2019 harvest evaluations
  - Note: 2017-2019 evaluation was state-by-state; TC assumed regional framework for this exercise
- TC applied 95%, 90%,85%, 80%, and 50% CIs to explore range
- TC noted observations and initial input for the Board

CI Explanation

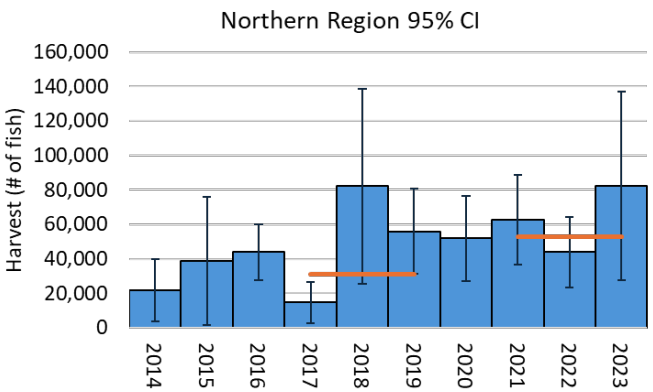
95% confidence interval

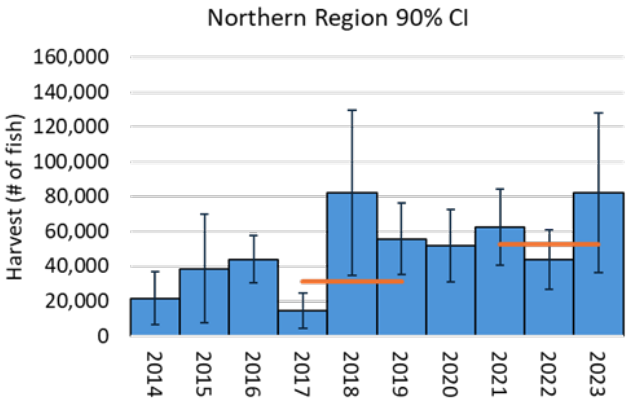


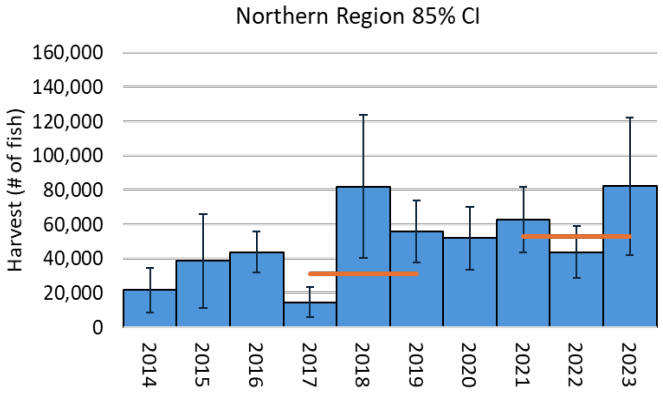
80% confidence interval

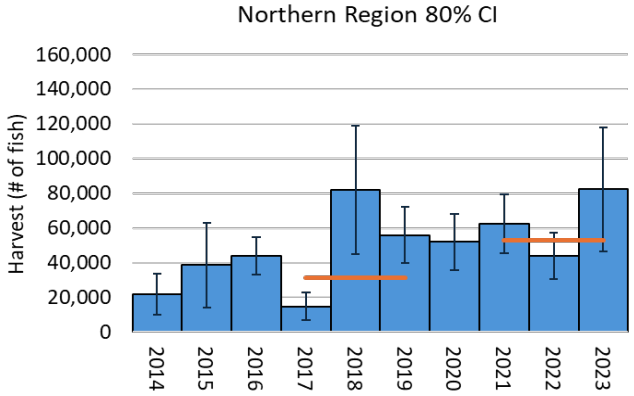


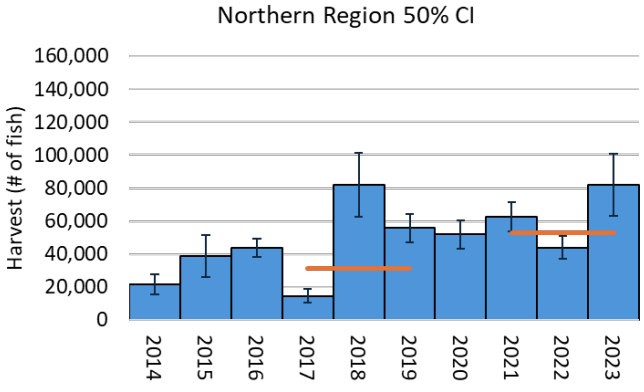
Northern Region CI Figures



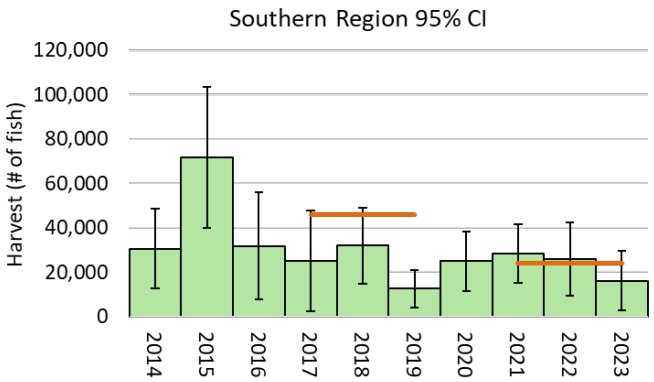


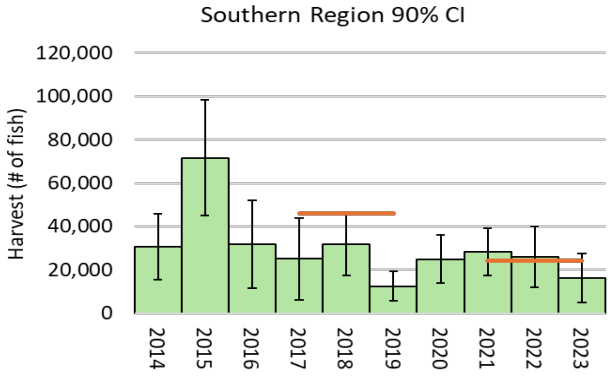


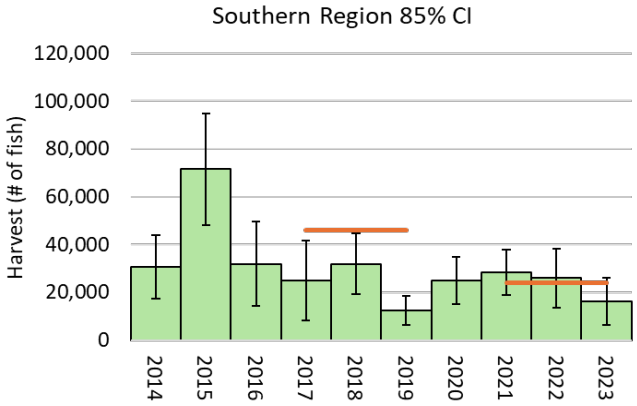


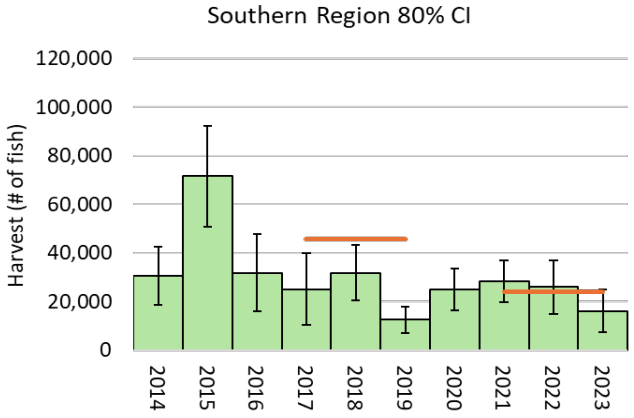


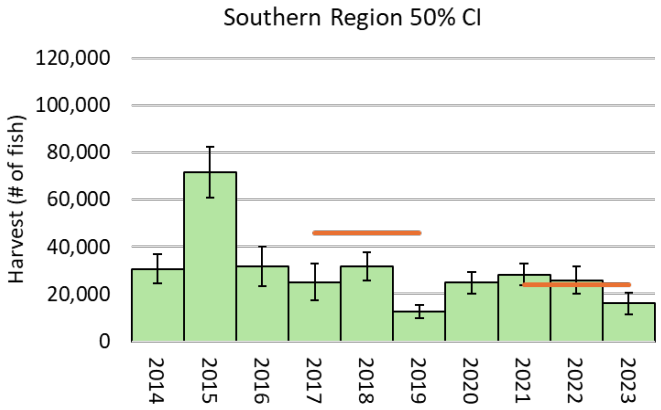
Southern Region CI Figures











TC Discussion

TC Observations and Initial Input

- 95% CIs are large due to uncertainties in cobia data
- Using 95% CIs would likely result in less frequent management changes (i.e., more status quo determinations)
- Current rolling average approach does not account for data uncertainties, but does allow for quicker response to changes in harvest

TC Discussion

	2021-2023 Northern Region	2021-2023 Southern Region	2017-2019 Northern Region	2017-2019 Southern Region
Rolling Average	Reduction	Status Quo	Reduction	Liberalize
95% CI	Status Quo	Status Quo	Status Quo	Status Quo
90% CI	Status Quo	Status Quo	Reduction	Liberalize
85% CI	Status Quo	Status Quo	Reduction	Liberalize
80% CI	Status Quo	Status Quo	Reduction	Liberalize
50% CI	Reduction	Status Quo	Reduction	Liberalize

TC Discussion

TC Observations and Initial Input

- Board's management goals for harvest evaluations and how responsive to be could depend on other factors
  - Frequency of stock assessments could be considered
  - E.g., If average harvests exceed the target and time between stock assessments is long, Board may want to be more responsive given the infrequent updates on stock status

- CI approach would require numerous TC decisions since most years have a PSE between 30-50
  - If PSE is between 30-50, TC discretion on whether to include that year in the evaluation

PSEs by Region

	Northern Region RI-VA	Southern Region NC-GA
2014	42.5	30.1
2015	49.3	22.6
2016	18.8	38.6
2017	42.3	46.1
2018	35.2	27.7
2019	22.6	33.8
2020	24.4	27.1
2021	21.2	23.6
2022	23.7	32.7
2023	34.0	42.6

TC Discussion

- **The TC notes that more time to consider this approach would be beneficial, including discussion by the Board of how the rolling average and confidence interval approaches would align with their management goals.**

QUESTIONS?